

Classification System (CA-CL)



HELP.CACL

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Classification System (CA-CL)

Purpose

The classification system allows you to use characteristics to describe all types of objects, and to group similar objects in classes – to classify objects, in other words, so that you can find them more easily later.

You then use the classes to help you to find objects more easily, using the characteristics defined in them as search criteria. This ensures that you can find objects with similar or identical characteristics as quickly as possible.

Integration

The classification system allows you to classify all types of object. First, you must define certain settings in Customizing for the classification system. For more information, see Customizing for the *Classification System*.

SAP has predefined a number of object types (for example, materials, and equipment). The settings for these object types have already been defined in Customizing, so you can start to set up your classification system for these object types without defining further settings.

Features

Before you can use classification functions, you need to set up your classification system.

There are three steps to setting up a classification system:

1. Defining the Properties of Objects

You use characteristics to describe the properties of objects. You create characteristics centrally in the SAP R/3 System.

See the SAP Library, *Characteristics (CA-CL-CHR)*.

2. Creating Classes

You need classes to classify objects. These classes must be set up. During set up you must assign characteristics to the classes.

3. Assigning Objects

Once you have created the classes you require for classification, you can assign objects to these classes. You use the characteristics of the class to describe the objects you classify.

This completes the data you require to use your classification system. You can then use your classification system to find objects that match the criteria you require.



For hints on setting up your classification system so as to optimize system performance for finding objects, see [System Performance \[Seite 137\]](#).

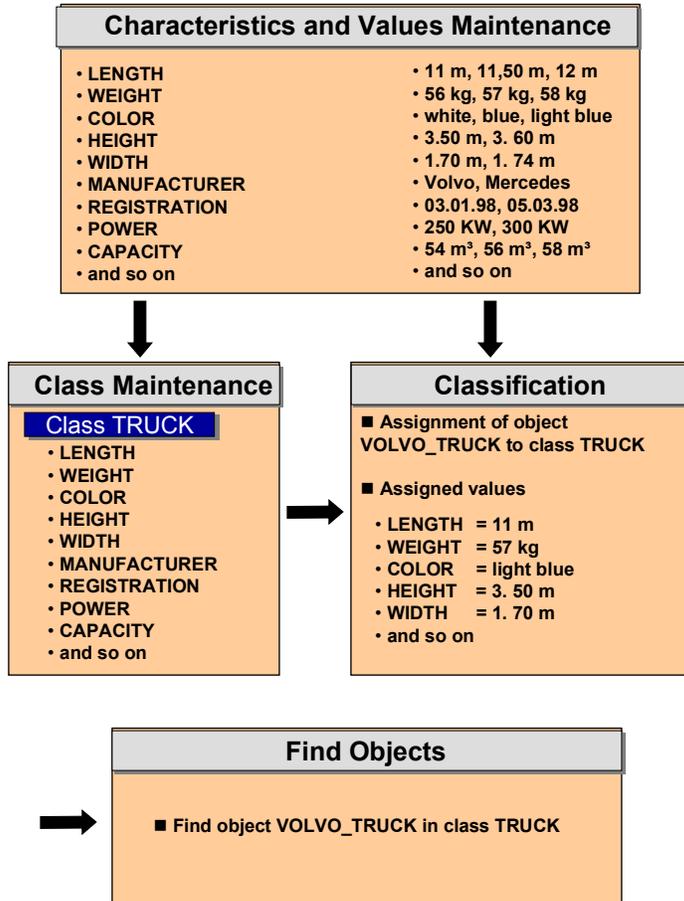
Once you have set up the classification system you can use it to find certain objects. To do this:

- Find a class in which objects are classified
- Find the object(s) you require in the class

Classification System (CA-CL)

When you use classification to find objects, you use the characteristics as search criteria, and the system compares the values you enter with the values of the classified objects.

The following graphic is an overview of the functions of the classification system.



Class Types

Purpose

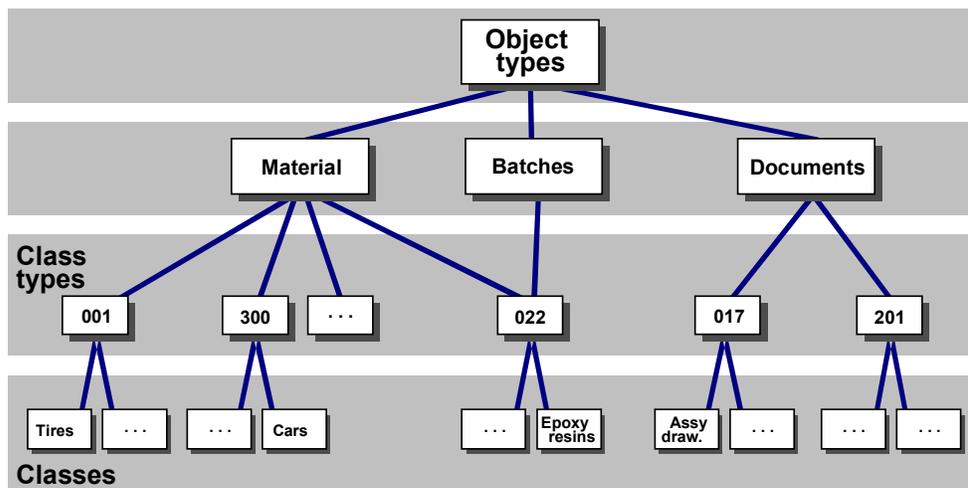
The class type is a central concept in the classification system. The class type determines how classes are processed, and how objects can be classified and retrieved in these classes. In Customizing for *Classification*, you define the settings for a class type. You define class types for a specific object type, such as materials. You can then use classes of this class type to classify objects of this object type.

When you first create a class, you must enter a class type for the class. Each class type is a closed system. There is no link between the different class types.

Features

The class type determines the following:

- Which object types you can assign to a class
- Which class maintenance functions you can process
- Whether you can classify objects in more than one class
- Which class statuses, organizational areas, and text types are supported in class maintenance functions
- Whether you can use engineering change management for classification
- Which filter functions you can use to restrict the search result



Class types 001, 300, and 200 are defined for materials. In Customizing for *Classification*, you define the settings for a class type.

Class Types

All materials can be classified with class type 001. Class type 300 is for variant configuration. Class type 200 is for classes that are used as class items in bills of material. You can classify the same materials separately in these class types.

You can use class type 012 to classify characteristics. This class type is defined only has the *Keywords*, *Characteristics*, and *Texts* screens in class maintenance functions. You can only classify characteristics in characteristics maintenance functions –you cannot use the assignment functions in the classification menu. In this case the indicator *Classify master record only* was set. No organizational areas were maintained for the characteristics. For this reason, if you create a class of class type 012, you cannot select any organizational areas.

Selecting a Class Type

Procedure

You can restrict the scope of the displayed object types and class types on the dialog box. The following possibilities are available to you:

- If you have not yet worked with classification the menu *Settings* in the class menu is available:
 1. From the classification menu, choose *Environment* → *Settings*.
 1. You see a list of all classifiable objects with the class types defined for them.
 2. Select the class types you want to see in the dialog box for selecting a class type.
 3. Save your settings.

You can change the settings of the restricted class types at any time. You can deselect objects or class types, or select additional ones.



- You can change settings at any time but you can no longer create complete new ones.
- You can also delete all your settings by using the pushbutton *Delete settings*.
4. In the dialog box of the class type in class maintenance you now see only the restricted range of object types and class types. This makes it easier to find what you are looking for in the dialog box. You see only the class types that you need day to day.

However, if you want to see the complete list of classifiable objects and class types by using the pushbutton *All values* in the dialog box.
 - You can copy call types directly into your *Personal list of values* from the dialog box in class maintenance for later use.

Classes

Classes

Purpose

Classes allow you to group objects together according to criteria that you define.

- You create classes for certain object types for example, material, workplace, equipment.
- You use the class type to determine which object types can be classified in a class.
- You can assign characteristics to your class. These describe the objects that you classify in your class. When you assign a characteristic to a class, you can adapt (overwrite) the characteristic.

Creating, Changing, and Displaying Classes

Procedure

From the classification menu, choose *Master Data* then *Classes*.

1. Enter a class name and class type. Choose  *Last classes* to choose one of the last ten classes you have processed. These can also be classes that were processed with different applications.
2. Choose one of the following processing types:

 Create class

 Change class

 Display class

 [Create class with template \[Seite 28\]](#)

3. Start processing on the *Basic data* tab:

Enter a description of your class and check the status. You can only assign objects to a class if the class is released (see [Maintaining Basic Data \[Seite 15\]](#)).

You can save your class once you have entered this data.

Processing on the other tabs in class maintenance is optional:

- [Keywords \[Seite 19\]](#)
You can assign keywords to your class, to help you to find the class more easily using a matchcode.
- [Characteristics \[Seite 20\]](#)
You can assign characteristics to your class. These describe the objects that you classify in your class.
- [Texts \[Seite 22\]](#)
You can enter texts for your class.
- [Documents \[Seite 23\]](#)
You can link documents to your class.
- [Standard \[Seite 24\]](#)
You can create a class to match a specific standard (for example, DIN, ISO, or ANSI).
- [Additional Data \[Seite 25\]](#)
You can specify that your class can be used as a BOM item for a configurable material.

Creating, Changing, and Displaying Classes

By choosing *Environment* → *Product structure*, you can display the [Product Structure Browser \[Extern\]](#) to see which objects are assigned to the class, for example.

Maintaining Basic Data

Procedure

The class name and class type on the *Basic data* tab page are copied from the initial screen.

1. Enter a language-dependent description for your class. The description is automatically the first keyword of the class.
2. Check the class status.

The class status determines whether objects can be assigned to the class. The status is class-type dependent. You define statuses for classes in Customizing for *Classification*.

The following statuses are defined for the class types in the standard system:

Status	Maintaining Classes	Classification	Finding Objects
Locked	YES	NO	NO
Released	YES	YES	YES
In preparation	YES	NO	YES

You can enter the following data if you require:

- Group

Here, you can assign the class to a class group. A class group is used to group together classes that are related to each other. This makes it easier to find the class you are looking for via a matchcode. You can define groups in Customizing for *Classification system*.
- Organizational Areas

Here, you can enter the organizational areas you want for the characteristics of the class (see [Selecting Organizational Areas \[Seite 17\]](#)).
- Local class

This indicator is used on distributed system where a part of the object classification is maintained on a central system and another part on a local system.
- Valid from/Valid to

This is where you define when the class is valid for classification. If you create a class using engineering change management, the valid-from date is copied from the change master record.

You can use the valid-to date to restrict the validity period of your class. The class is no longer valid after this date, so you cannot process the class after this date. Assignments to the class still exist after this date, but you can no longer assign any more objects to the class.

You can reactivate a class that is no longer valid. To do this, choose *Create class*.
- Same classification

Maintaining Basic Data

This determines what happens if you try to assign 2 objects with identical characteristic values to the class (see [Check for Same Classification \[Seite 59\]](#)).

- Authorizations

You can enter authorization groups to restrict access to your class for changing the class, and for classifying, and finding objects.

If you try to change the class, or to use the class to classify or find objects, the system checks these values against the values stored in your user master record. If the value in the class is not in your user master record, you cannot use the class for this purpose.

Choose Organizational Area

Use

You can use organizational areas to structure the characteristics of a class according to application areas in your company.

There are three steps to maintaining organizational areas:

1. In Customizing for the *Classification System*, you define organizational areas for each class type.
2. You enter the organizational areas of the class type in a class.
3. You assign the organizational areas of the class to the characteristics of the class.

The following graphic shows an example of organizational areas in a class, with the characteristics of the class and the objects assigned to the class.

Class 1			
Organizational area A (Engineering/Design)			
Object 1	Object 2	Object 3	
Diameter 40	Diameter 50	Diameter 70	
Drawing no. 94-AP-24	Drawing no. 93-AP-88	Drawing no. 94-AP-24	
Length 140	Length 160	Length 220	
Color black	Color black	Color gray	
Price/ea 6.80	Price/ea 7.10	Price/ea 8.20	
Guarantee 6 months	Guarantee 6 months	Guarantee 6 months	
Organizational area B (Sales)			

Procedure

Restricting the Characteristics Displayed

To restrict the range of characteristics displayed in functions for classification and finding objects, choose *Extras* → *Organizational area*.



If you work in purchasing, you can display characteristics for organizational area PURCHASING. You only see the characteristics that are relevant to purchasing.

Choose Organizational Area

Required Characteristics

If you only display the characteristics that are relevant to your application, characteristics that have the *Entry required* indicator may be hidden. You can save your classifications by setting *Incomplete* status. The assignment cannot have *Released* status until values are assigned to all characteristics with the *Entry required* indicator, regardless of the organizational area.

Authorization Objects for Organizational Areas

While Displaying and Maintaining Characteristics

The two authorization objects C_TCLS_BER and C_TCLS_MNT are for organizational areas:

- On the value assignment screen, you only see characteristics for the organizational areas that are entered in your user master record for authorization object C_TCLS_BER.



If this authorization object is not in use, you see characteristics for all organizational areas.

- You can only set or change values for these characteristics if your user master record contains authorization object C_TCLS_MNT with activity 23 for the organizational area.

Keywords

Definition

You can enter several keywords for your class on the *Keywords* tab. On this screen, you can define several keywords for your class. You can use these keywords to find your class again later using a matchcode. The description you entered on the basic data screen is used as the first keyword. You can enter up to 99 keywords for a class.



You might need several keywords if your classifiable objects have several different names. A class for hexagonal bolts has the keyword "Allen bolts" and "hexagonal bolts".

Entering Characteristics

Entering Characteristics

Use

On the *Characteristics* tab, you can enter the characteristics you want to use for classifying objects in your class. These characteristics already exist in your system. For more information, see the SAP Library *Characteristics (CA-CL-CHR)*.



If you enter a characteristic that does not yet exist, you automatically see a dialog box asking whether you want to create the characteristic.

Characteristic Status

- You can only use characteristics with *Released* status in classes.
- You cannot use characteristics with *In preparation* status in classes. However, you can change the status of a characteristic to *Released* by choosing *Environment* → *Change characteristic*.
- You cannot use a characteristic in new classes once the characteristic has *Locked* status. However, if you have used a characteristic in a class, and then set *Locked* status for the characteristic, this does not affect the characteristic in the class. You cannot change the status from a class.

Procedure

Characteristics Sequence

The order in which you enter characteristics is also the order in which the characteristics appear for value assignment when you classify or find objects.

You can define the sequence of characteristics yourself:

1. To move a characteristic, select the characteristic that you want to move.
2. Place the cursor where you want the characteristic moved to.
3. Choose  *Move*. The characteristic is inserted before the cursor.

To insert a new characteristic at a specific place in the sequence, select a characteristic and choose  or *Edit* → *Insert*. The new characteristic is inserted before the characteristic you select.

Characteristic Description

You see the characteristic description in your logon language.

To display the description in another language, choose *Extras* → *Change language*.

Required Entry

If you select *Entry required* in the basic data of the characteristic, the characteristic is marked as a required entry in the class.

Organizational Areas

If you specified organizational areas in the *Basic Data* of your class, you can assign these organizational areas to the characteristics of the class.

If you do not enter any organizational areas for a characteristic, the characteristic is displayed for all organizational areas of the class. See also: [Choose Organizational Area \[Seite 17\]](#).

Standard Code Letter

If you have transferred characteristic data records to the SAP System, you see the key of the industry standard data.

Overwriting Characteristics

You can change the attributes of a characteristic for the class by choosing  *Overwrite char.* If a characteristic has been overwritten, the *Overwritten* indicator is selected. See also: [Overwriting Characteristics \[Seite 33\]](#)

Inherited Characteristics

If a class is part of a class hierarchy, the characteristics tab may show characteristics that are assigned to superior classes in the hierarchy, not directly to the class.

The *Inherited char.* indicator is selected for these characteristics. To see which class a characteristic is inherited from, choose *Extras* → *Inheritance*. See also: [Inherited Characteristics \[Seite 81\]](#)

Origin

This shows whether a characteristic was transferred from a data medium with standards data.

Relevancy Indicators for Characteristics

You can define the characteristics of a class as print-relevant search-relevant, or display-relevant.

You can determine that a characteristic is only used when displaying, printing, or finding objects for an application.

Before you can do this, the application program must query the indicator internally. These indicators are only read if they are set for one or more characteristics of a class. Otherwise, all characteristics are displayed.

Index Characteristics

If this indicator is set for a characteristic, an index is created for the characteristic in table generation. Table generation is relevant to the object search. It lets you find objects faster. See also: [Setting up Tables for Finding Objects \[Seite 145\]](#)

Entering Texts

Entering Texts

Procedure

You can enter texts in several languages on the *Texts* tab. Choose *Extras* → *Change language*. The source language text is always shown, so that you can translate it into any other language.

To create a new text, choose  *Create*:

1. Select a text type from the dialog box. You have the following options:

- Class long text

In a long text, you can enter general information on the class.

- Standard description

Identification of a specific part of the standards data record of DIN standard 4001.

- Standard title

Title of a DIN 4001 standard.



The system does not check the text types. You can enter a text for any of the text types.

2. Select a text type. You see the editor, in which you can enter your text.

You define settings for text types in Customizing for the *Classification System* by choosing *Maintain Object Types and Class Types*. You can specify which of the three possible text types are shown for the class text screen.

Creating Texts with a Template

If you want to maintain a text with a specific template, choose  *Create by copying*. You see a dialog box for selecting the class you want to use as a template.

Displaying Texts

Select the text and choose  *Choose*.

Linking Documents

Prerequisites

Customizing for the *Classification System* allows the *Document* tab for processing the class.

Procedure

1. In class maintenance, choose the *Document* tab.
2. Enter the key of the document you want to link to the class.

You can use this document to store information on the class and the objects assigned to it. By linking a drawing or graphical information to this document, you can make this information available to the class.



You can choose *Document link* to link several documents at once to a class.

You can display the document by choosing  *Document*. You can display the linked graphic by choosing  *Doc. graphic*.

If you select *Always display document*, the linked document is always displayed in the object search as soon as you enter the class.

Result

You can display the document in the object search by choosing *Extras* → *Display document graphic*, or *Display document links* if several documents are linked to the class.

Standards

Standards

If you want to create classes according to a specific standard (for example, DIN, ISO, or ANSI) you can enter data about the standard on the *Std* tab. The fields on this screen only apply to DIN standards.



If you create a DIN class by copying DIN 4001 data, the system automatically makes entries in the following fields on this screen: *Class*, *Class type*, *Standard*, *Standard number*, *Version date*, and *Chars table*. The standard title and standard description are copied to the class as keywords. If required, you can maintain the standard title and standard description manually as long texts on the standards data screen.

The *Std* tab contains the following fields:

Standard

shows the standards organization, such as DIN, ISO, or ANSI.

Standard number

Number of the standard that this class describes, such as DIN 933 (hexagonal bolts), or ANSI B18.6.1 (wood screws).

Standard description

Short text describing the class in DIN 4001. The standard description is stored as a long text. You can enter or display the standard description on the *Texts* tab well as on the *Std* tab.

Standard title

Long text describing the standard. You can enter or display the standard title on the *Texts* tab well as on the *Std* tab.

Issue date

Date on which DIN issued the standard.

Version date

Number of the current standard version.

Chars table

Name of the relevant characteristics table according to DIN.

Additional Data

The *Addnl data* tab only appears if the class type allows you to use the class as a class item in bills of material (BOMs). Classes like this are used in variant configuration.

You can maintain the following data on the *Addnl data* tab:

- **Allowed in BOMs**

If you set the *Allowed in BOMs* indicator, you can use the class in BOMs.

The following data is copied to the BOM item as default data when you use the class in a BOM. However, you can overwrite the default data if required.

- **Base unit of measure**

You can enter a base unit of measure for the BOM item.

This unit of measure must be capable of being converted to the unit of measure of the objects you classify in the class.

- **Res. item category**

Specify an item category for the BOM item.

- **Organizational area**

If the class type has organizational areas, you can enter organizational areas to restrict the characteristics of the class in configuration.

- **Required component**

If you set this indicator, the configuration is not complete until a component is selected from this class item.

- **Multiple selection**

You can specify whether it is possible to select more than one object from this class.



This indicator is only read in configuration simulations, not when the BOM is exploded in material requirements planning (MRP).

Creating a Class (Example)

Creating a Class (Example)

In this example, we will create a class for classifying bolts.

To create this class, proceed as follows:

1. Enter the name of the class you are creating in class maintenance. Call your class **ANSI_BOLTS**.
2. Because the class is for classifying bolts, choose object type "Material" and class type **001**.
3. To do this, choose processing type  *Create class*. The tab page *Basic data* appears.
 - Enter a language-dependent description for your class.
 - Assign your class to class group "Bolts". This group must be defined in Customizing for *Classification*.
 - Display the organizational areas defined for class type **001**. Choose P for purchasing and D for design. These organizational areas can now be assigned to the characteristics of the class.
 - In the *Same classification* dataset, determine that the system is to check whether an object you are classifying has identical characteristic values to an object already assigned to the class. If an object does have identical values, you are to see an error message and cannot classify the second material in this class. If this is the case the system will react with an error message and refuse classifying the second material in this class.
 - In the *Authorizations* dataset, define different authorizations for class maintenance, classification, and finding objects.
4. Choose the tab page *Keywords*.

You can enter keywords for your class here. Enter keywords for the class, to use as search criteria for finding the class using a matchcode. The description you entered on the basic data screen can also be used as a keyword.
5. Choose the tab page *Characteristics*. Enter the characteristics you want to use in your class.

Enter several characteristics that describe properties of the objects to be classified. You have either created the characteristics in the characteristics maintenance or you can create them directly in characteristics maintenance. Enter the name of the characteristic you are creating. Confirm the question in the dialog box whether you want to create a characteristic.

Some characteristics are only relevant to purchasing; others are only relevant to design. For these characteristics, enter the organizational area P or D, as selected on the basic data screen. On the characteristic value assignment screen of the functions for classifying and finding objects, you can restrict the characteristics according to organizational area.
6. Once you have maintained class characteristics select the tab page *Texts*.

You can enter different types of text. You can enter a general long text for your class, a standard description, or a standard title.

Creating a Class (Example)

7. You want to create a long text for the class, so click the pushbutton  *Create*. You see a dialog box from which you select text type *Long text*. Enter a description of the text, then you can enter your text in the editor.
8. Save your text. It is saved as long text.
9. Choose the tab page *Document*.
You can link your class to a document.
10. Choose the tab page *Standard*.
You can enter standard data for your class here.
11. After you have maintained all your data, save it.

Creating a Class Using a Template

Creating a Class Using a Template

Use

You can use a template to help you create a new class. The system copies the data from the source class (template) to the new class as default values.

Procedure

To create a class by copying an existing class:

1. Enter the name of the class you want to create.
2. Choose  *Create with template* and enter the class whose data you want to copy.

You see a dialog box in which you select the screens in the existing class that you want to copy to the new class.

The data is proposed in your logon language. If you select *All languages*, you copy keywords, class texts, standard description, and standard title in all languages in which they have been maintained.
3. Confirm your entries.

You see data from all the screens you selected in the source class on the screens of your new class. You can overwrite these default values as required.
4. When you reach the last screen, you see a dialog box. Save your data.

You return to the initial screen, where you can create another class if required.

Renaming a Class

Procedure

1. Enter the name of the class you want to rename in class maintenance.
2. Choose processing type  *Change*.
3. On the *Basic data* tab choose *Class* → *Rename*.

You see a dialog box in which you can enter the new name of the class.

Confirm your entry. The system changes the name of the class.



If you want to use classes in dependencies you cannot use a hyphen (-) in their names. You can use this function to rename a class with a hyphen, so that the class can be used in dependencies.

Deleting a Class

Deleting a Class

Procedure

When you delete a class, the system checks whether objects are assigned to the class. You cannot use the delete function to delete a class that has assignments. You must choose *Edit* → *Special functions* → *Delete class w. vals.*



If the class is part of a class hierarchy, and characteristics of the class are inherited and used to classify objects in subordinate classes, you cannot delete the class.

Deleting a class without classified objects:

1. Enter the name in a class type of the class you want to delete in *Classes*.
2. If you have processed the characteristics of the class with engineering change management, enter a change number. This is because the characteristics are affected when you delete a class.
3. Select the pushbutton  *Delete*.
4. Confirm the message in the dialog box.

Deleting a class with classified objects:

5. Enter the name in a class type of the class you want to delete in *Classes* and Select *Edit* → *Special functions* → *Delete class w. vals.*
1. You see a screen for deleting classes with classified objects. If you have processed the characteristics of the class with engineering change management, enter a change number. This is because the characteristics are affected when you delete a class.
2. Execute the function.
3. You see a message telling you that the class has been deleted. The object assignment records and the assigned values are deleted at the same time.

Deleting a class with engineering change management

- When you delete a class, this affects the characteristics of the class. Once you have processed the characteristics of the class using engineering change management, you can only delete this class using a change number. If you try to delete the class without a change number, the function is terminated.
- Before you can delete a class with objects assigned to it using engineering change management, the change number must be active for classification.

You can reactivate a class that has been deleted using engineering change management. To do this, choose  *Create class*. You do not need to enter a change number. However, the characteristics of the class are still deleted. You can only enter characteristics in the class again if you use a change number.

See also:

[Inconsistencies in a Class Hierarchy \[Seite 87\]](#)

Deleting a Characteristic with Assigned Values

Deleting a Characteristic with Assigned Values

Procedure

You can still delete a characteristic from a class, even if classification records exist for this characteristic. The classification records are automatically deleted with the characteristic.



If a characteristic is inherited by subordinate classes in a class hierarchy, where objects are classified with the characteristic, you can no longer delete the characteristic from the class.

Once more than 400 objects have been classified in a class, you can no longer delete a characteristic that has values assigned by using the delete function. Instead:

1. On the initial screen, enter the class from which you want to delete characteristics and choose *Edit* → *Special functions* → *Delete char. w. vals.*
2. Enter the characteristic you want to delete from the class.
3. If you want to work with engineering change management, enter a change number. The change number must be active for both *Characteristic* and *Classification*.



Once you have processed a characteristic with a change number, you can only delete the characteristic using a change number.

4. Execute the function.
5. You see a message telling you that the characteristic has been deleted from the class.

The characteristic and the values assigned to it are also deleted from classification records. The assignment of object to class is not deleted.

See also:

[Inconsistencies in a Class Hierarchy \[Seite 87\]](#)

Overwriting Characteristics

Use

The characteristics you assign to a class are all defined in characteristics maintenance functions (see the R/3 Library *Characteristics*). In characteristics maintenance, you store all the details of a characteristic, such as the data type, the length, and the allowed values, globally.

You can then use this information in any class you like. This also ensures that an individual characteristic is the same for all users of all classes.

However, in some cases this global definition of a characteristic may not be quite what you want. Sometimes, the attributes of a global characteristic are essentially suitable for your requirements, but you want to change some details. For example, in one specific class, you may want a characteristic to always have values assigned to it. You may also want different values to be allowed for the characteristic in one specific class.

For this reason, you can change the attributes of a characteristic when you assign the characteristic to a class. These changes to the characteristic are then valid for this class only. The changes do not affect the attributes of the characteristic in other classes. These changes to characteristic attributes or characteristic values for a specific class are made using the *Overwrite* function in the Classification System.



If you classify objects in multiple classes, it may cause problems to have different attributes for a characteristic in different classes (see [Inconsistencies in Multiple Classification \[Seite 89\]](#)).

Features

You can change the following characteristics data for a specific class:

Basic data tab

Here, you have the following options:

- You can define whether you must assign a value to the characteristic in this class (*Entry required* field)
- You can define whether intervals are allowed as values for numeric characteristics (*Interval vals allowed* field)
- You can assign dependencies to the characteristic for use in this class



You cannot overwrite the value assignment attribute of a characteristic (single-value, multiple value, restrictable). These settings apply to the characteristic wherever it is used.

Values tab

If you want to overwrite the values of a characteristic, the values are saved for the overwritten characteristic. There is no longer any connection to the values of the global characteristic. If you include new values in the global characteristic, these are not shown in the overwritten

Overwriting Characteristics

characteristic. However, you can update the values of the overwritten characteristic with values from the global characteristic.

Here, you define which values you are allowed to assign to the characteristic in this class. You have the following options:

- You can define whether values other than the allowed values can be assigned to the characteristic in this class (*Additional values* field)
- You can define additional specific values as allowed for the characteristic in this class
- You can assign dependencies to characteristic values for use in this class

Addnl data tab

Here, you can define how the characteristic is displayed in characteristic value assignment functions. For example, you define:

- Whether you see a 30-character field for entering your characteristic value (*Unformatted entry* field)
 - Whether you see the template for entering a value (*Propose template* field)
- Whether you see the allowed characteristic values below the characteristic description in characteristic value assignment functions (*Display allowed values* field)
- Whether the characteristic is available for entry (*Not ready for input* indicator)
- Whether a characteristic is displayed (*No display* indicator)

See also:

[Overwriting a Characteristic \[Seite 35\]](#)

[Updating Overwritten Values \[Seite 36\]](#)

Overwriting a Characteristic

Procedure

To change a characteristic for a specific class:

1. In class maintenance, enter the name of the class and choose  *Change class*.
2. Choose the *Char.* tab and select the characteristic you want to overwrite.
 - Choose  *Overwrite char. or Edit → Characteristic → Overwrite characteristic* to change basic data, additional data, or values.

This takes you into the characteristic, where you can change the attributes of the characteristic for this class. Make your changes on each tab.

You can assign dependencies to the characteristic for the class by choosing *Extras → Object dependencies*.
 - To overwrite characteristic values, choose *Overwrite vals or Edit → Characteristic → Overwrite values*.

If you want to link object dependencies to a value, select the value with the cursor and choose *Extras → Object dependencies*.
3. Make your changes and go back to the *Char.* tab of the class.

The *Overwritten* indicator is selected automatically for the overwritten characteristic.

Update Overwritten Attributes

1. To do this, choose processing type  *Change class*.
2. Go to the *Char.* tab and place the cursor on the characteristic for which you want to delete the overwriting.
3. Choose  *Overwrite char. or Overwrite vals*. You see the characteristics maintenance function, where you can overwrite characteristic attributes or characteristic values.
4. Select the characteristic or value for which you want to delete the overwriting, and choose *Extras → Overwrite → Delete*.

Choose *Extras → Overwrite → Delete all* to delete all of the overwriting.

Updating Overwritten Values

Updating Overwritten Values

Use

Once you overwrite the values of a characteristic in a class, the overwritten characteristic is no longer linked to the global characteristic. Any changes you make to the values of the global characteristic do not apply to the overwritten characteristic. However, if you define new values or change value descriptions for global characteristics, you may want these changes to be made in the overwritten characteristic, too. This is what the *Update values* function is for.

You can update the following:

- New values
- Value descriptions



You have entered a new value for a global characteristic, and have entered descriptions in additional languages for an existing value. The characteristic is used in a class where the characteristic values have been overwritten. You can use the update values function to copy the new value and the new descriptions from the global characteristic.

Procedure

To do this, proceed as follows:

1. On the characteristics tab of the class, choose *Edit* → *Characteristic* → *Overwrite vals*.
You see the characteristic values of the overwritten characteristic.
2. Choose *Extras* → *Overwrite* → *Update values*. You see a dialog box that shows the allowed values of the global characteristic.
3. Select the *Description* indicator if you want to copy a new value with its description, or if you want to copy a new or changed description for an existing value.

Splitting and Merging Classes

Purpose

You can reorganize your classification system by splitting or merging classes.

Prerequisites

- The characteristics structure of the classes must be identical
- If the classes have different class types, the objects cannot be classified in any classes of the target class type except for the target class itself
- You can only split and merge classes that do not have a variant class type or a class type in which you can classify objects of different types
- The classes can have different class types
 - If the class is part of a class hierarchy and the objects have inherited characteristics, the inherited characteristics are deleted from the classification when you reassign the objects
- If an object to be reassigned has been classified in more than one class, the classifications in these other classes are not affected by the reorganization
- Assignments of classes to the class are not changed. These remain in the initial class. Only assigned objects that are not classes are reassigned.

Procedure

Merging Classes

When you merge classes, all the objects assigned to the first class (the one you enter in the *From class* field) are reassigned to the second class (the one you enter in the *To class* field) and deleted from the first class. However, the first class still exists after you have reassigned the objects.



If you want to merge several classes, you need to execute a merge for each class.

To merge the objects of two classes, proceed as follows:

1. From the Classification System menu, choose *Environment* → *Reorganization* → *Split/merge*.
2. Select *Merge*.
 - Enter the class you want to merge with another class and the class type under *Source*.
 - Enter the class and select a class type under *Target*.
 - If you want to merge the classes on a specific date, enter a change number with the date you require.
3. Choose  *Execute*.
 - You see a message telling you that the objects have been reassigned.

Splitting and Merging Classes

Splitting Classes

When you split a class, all the objects you select from the first class (the one you enter in the *From class* field) are reassigned to the second class (the one you enter in the *To class* field) and deleted from the first class.

To assign specific objects from one class to another class, proceed as follows:

1. Choose *Environment* → *Reorganization* → *Split/merge*.
2. Select *Split*.

In the *From class* field, enter the class from which you want to delete objects.

In the *To class* field, enter the class to which you want to assign the objects.

Enter the class type of both classes.

If you want to split the class on a specific date, enter a change number with the date you require.

3. Choose *Execute*.
4. You see the value assignment screen of the initial class. You can use the values to find the objects you want to reassign to the target class.

Choose  *Find in initial class*.

5. You see the search result. In the search result, you can select the objects you want to reassign to the target class.

6. Choose  *Copy*.

You see a message telling you that the selected objects have been reassigned to the target class.

Calling a Class List

Procedure

1. On the initial class maintenance screen, choose *Environment* → *Class list* to find a class or the class type of a class.
2. Enter the special character * for the class name or the class type and select  *Execute*. You can also search for a character string.

You can also enter additional selection criteria that define which information you see on the result screen:

- The status of the class
- Whether the class has characteristics
- The class group
 - Whether objects are assigned to the class
- The organizational areas

You can also define the language and date for reporting.

The resulting list shows you the classes found. You can select one of these classes and copy it to your application.



If you make a generic entry on the initial screen of a class maintenance function, then confirm, you also go into the *Class list* function, which you can use as described above.

Producing a Where-Used List

Producing a Where-Used List

Use

You can use a class in object dependencies and as a class item in the BOM of a configurable material. You can produce a where-used list for classes in these objects:

Procedure

1. Choose  *Class where-used* or *Environment* → *Where-used list* in class maintenance.
Enter the name of your class and the class type.
You can also select the object types you want to know about:
 - Use in object dependencies
You can use classes in dependency type *Constraint*. In constraints, you can refer to an object by specifying the class in which it is classified.
 - Use in configurable objects
You can use a class as a class item in the BOM of a configurable material or in other configurations.
For more information on these uses of classes, see the R/3 Library *Variant Configuration (LO-VC)*.
2. When you execute this function, you see a list of the objects in which the class is used.

User Settings

Purpose

If authorized to do so, the system administrator can define a profile in Customizing that contains all the necessary settings for roles or individual users.

See [Creating / Changing User Profiles \[Seite 42\]](#)

However, in class maintenance you can still change user settings for your own user or assign your user to another profile.

The user settings are for finding objects and assigning characteristic values.

More under:

[User Settings: Finding Objects \[Seite 43\]](#)

[User Settings: Value Assignment \[Seite 45\]](#)

[Defining How Default Values Work \[Seite 48\]](#)

Creating / Changing User Profiles

Use

Predefined User Profiles in Customizing

The functions of the user profile are based on the definition and assignment of suitable roles to user master records in the R/3 System. The settings are defined by the system administrator in profiles and assigned to roles. The link between the user and the role forms the link to the profile.

Procedure

In Customizing for the *Classification System*, choose *Classes* then [Maintain User Profile \[Extern\]](#). For more information on how to proceed, see the documentation of the Customizing transaction.

The following authorization object is for defining profiles: C_CLA_PROF.

Changing Profiles When Finding and Classifying Objects

You can change the user profiles created in Customizing when finding and classifying objects, by choosing *Extras* → *User settings*.



However, you can only create profiles in Customizing.

To change the user settings for the roles, choose *Enter/change profile*, then *Save*.

User Settings: Finding Objects

Use

You can define user settings for finding objects centrally on the *Search sett* tab.

For information on settings for display variants, see [Settings in Search Results \[Seite 130\]](#).

Features

- **Display options**

Object key and/or description	You can define whether object numbers and/or object descriptions are displayed.
Object type and classification status	You can determine that the object type and classification status are displayed.

- **Scope**

Objects with characteristics but no values	<p>The objects that have no value assigned to characteristics do not appear in the search result.</p> <p>If you select <i>Objs with chars but no values</i>, objects that have no assigned values are displayed.</p> <p> This makes the search result longer, so response times will also be longer. For this reason, please check carefully whether you really need to set this indicator.</p>
Locked / incomplete / released assignments	The standard settings for the search result display all objects with released classification. However, you can define user-specific settings to display objects with locked or incomplete classifications, too.
Maximum hits	<p>In the search result, you see a list of the objects that match your search criteria, up to this number of objects. If more than this number of objects match your search criteria, start the search again and increase this number.</p> <p>The default setting in the standard system is 100.</p>

- **Sorting of search result**

Sort ascending / sort by object type first / not sorted	You can define that objects are sorted according to object number or object description, that objects are sorted according to object type first, or that objects are in random order. You can also define your own strategies for sorting objects. See also: Settings in Search Results [Seite 130]
Sorting by object key or description	You can define whether objects are sorted alphabetically according to object keys or object descriptions.

- **Find objects**

User Settings: Finding Objects

Default find string	<p>If you want to use a character string to search in the Classification System (for example, all values that start with DA), you must select this indicator. You can only use a string search for characteristics that have data type <i>character</i>.</p> <p>For example, enter DA* (asterisk) for your search. All words that start with DA are listed. See also: Defining the Comparison Type [Seite 122]</p>
Display class hierarchy	<p>The hierarchy of the class you enter is displayed as an expanded structure tree. You can double-click a subordinate class to start searching for objects in subordinate classes. See also: Find Objects in Subordinate Classes [Seite 141]</p>

Features

To define settings, choose *Extras* → *User settings* in the menu for finding objects.

Choose *Continue* to change the user settings temporarily. Choose *Save* to make long-term changes.

User Settings: Value Assignment

Use

You can define user settings for value assignment centrally on the *Value assgmt* tab.

- **Display options**

Standard	The allowed values are displayed as defined in the characteristic. If the <i>Value assignment</i> indicator is not set in the characteristic, you can set the indicator here. Then all values are displayed in value assignment.
Without values	Allowed values are not displayed in value assignment, regardless of the settings in the characteristic.
With values without page editing / with values and one char. per page	You can define whether all characteristics and their allowed values are displayed on one page or whether each characteristic is displayed on a separate page.
All assigned values	If this indicator is selected, all assigned values are displayed. Otherwise, you only see the first value assigned to each characteristic, and an indication that further values exist.
Additional information	In value assignment, there is an additional column that shows whether a characteristic was inherited or has dependencies. To see the information in detail, place the cursor on the characteristic and choose the F1 help.
Display reqd chars	Characteristics that are required are marked as such in an additional column.

- **Scope**

Required / optional characteristics	<p>For required characteristics, you must assign a value when you classify an object to complete the classification. The <i>Entry required</i> indicator is set for these characteristics in a characteristics or class maintenance function.</p> <p>This is what happens when you assign values to characteristics:</p> <ul style="list-style-type: none"> • If you try to leave the value assignment screen without assigning a value to a required characteristic, you see the possible entries dialog box for the required characteristic, and can select a value. • If you want to leave the value assignment screen without assigning a value to a required characteristic, set the classification status to <i>Incomplete</i>. You can exclude objects with incomplete classifications when you use classes to find objects. <p>You do not have to assign a value to optional characteristics.</p> <p>To display the required and optional characteristics in value assignment, the indicators must be set in the user settings.</p>
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User Settings: Value Assignment

With assigned values / without values	You can decide whether the characteristics that have assigned values or the characteristics that do not yet have assigned values are displayed.
With inherited chars	Characteristics inherited from superior classes or characteristics from multiple classification are displayed.
With additional characteristics	The Reference Characteristics [Extern] that are assigned to a class or class type are displayed on the value assignment screen of the find objects function, where you can assign values to them.
With excluded chars	All characteristics that are excluded by dependencies are displayed.

Features

In the classification menu, choose *Extras* → *User settings*. A dialog box with tabs appears, where you can enter the settings.

Choose *Continue* to change the user settings temporarily. Choose *Save* to make long-term changes.

General Settings

Use

You can define general settings for classifying and finding objects in the user settings.

General Settings Tab

General language settings	You can enter the language you want to use in the system.
Display characteristic/value	<p>You can specify whether you prefer the language-dependent description or the language-independent name of characteristics and values.</p> <p> The standard language setting shows the language-dependent descriptions of characteristics and values in your logon language on the value assignment screen. If there is no description in your logon language, you see the language-independent characteristic name or value instead.</p>
DIN identifier	Set this indicator if you are working with a DIN identifier. It is then displayed in an additional column in value assignment.
Do not display document for class	You can set the <i>Always display document</i> indicator in a class, to determine that an assigned document is displayed automatically as soon as you enter the class in the object search. If you set this indicator, you switch off automatic display.
Parameters	You can define SET/GET parameters (user-specific default values) for class, class type, and organizational area.

Features

In the function for classifying or finding objects, choose *Extras* → *User settings*, then the *Default values* tab.

See also:

[User Settings: Value Assignment \[Seite 45\]](#)

[User Settings: Finding Objects \[Seite 43\]](#)

Defining How Default Values Work

Defining How Default Values Work

Use

In the user settings, you can define how the system interprets the default values defined for characteristics in characteristics or class maintenance functions.

You have two options:

- The system interprets the default values as if they were initial values. This means that the values are treated as user entries. Technically, the characteristic has an assigned value.
- The default values are only proposed as defaults. This means that the values are not treated as user entries until the user has confirmed them. If you do not confirm a default, value, the characteristic technically has no assigned value.

Procedure

To define settings for default values:

1. In the function for classifying or finding objects, choose *Extras* → *User settings*, then tab *Default values*.
2. You can make the following entries:
 - To use default values as user entries, select *Yes* and *Copy*.
 - To hide default values, select *No* and *Copy*.
 - To use default entries only once the user has confirmed them, select *Yes* and *Confirm*.

Classification

Purpose

Classification is the process of assigning objects to classes and using the characteristics of the class to assign values to these objects.

You classify objects so that you can use the classification system to search for them.

Integration

Classification is part of the classification system. Before you can classify objects, you must create classes.

Features

There are different ways to classify objects:

- You can classify objects from the object maintenance functions, where you can assign the object to one or more classes.
 - Some object types can only be classified from their master record. In Customizing for the *Classification System*, the *Class. in master rec.* indicator is set for these object types.
- You can use the assignment functions in the classification menu to classify objects.
 - You can assign an object to one or more classes. See: [Assigning an Object to Classes \[Seite 50\]](#)
 - You can assign one or more objects to a class. See: [Assigning Objects/Classes to a Class \[Seite 53\]](#)

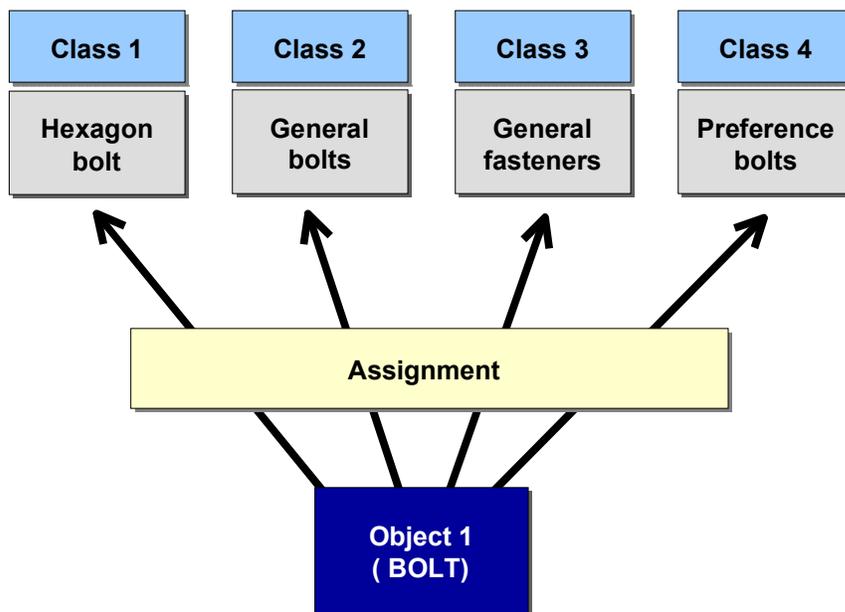
Assigning an Object to Classes

Assigning an Object to Classes

Use

You can use this function to assign an object to one or more classes (multiple classification). The following graphic shows how an object (a bolt in this case) is assigned to several classes.

You can also classify an object from the object maintenance functions, where you can also assign the object to one or more classes (see: [Classifying a Material \(Example\) \[Seite 52\]](#)).



Procedure

To assign an object, such as a material, to one or more classes, using the classification functions:

1. In the *Classification* menu, choose *Assignment* → *Assign Object to Classes*.
Enter the object you want to classify. Select a class type.
Confirm your entries.
2. Enter the class or classes to which you want to assign your object. If the object already has assigned classes, choose *Edit* → *New assignments*.
3. If you want to assign values to characteristics, position the cursor on a class. Double-click on the class or select  *Values for assignments*.
You see a list of the characteristics of all the classes to which the object is assigned. This list is based on the user settings you made in *Extras* → *User settings*, on the *Values* tab.
4. Save your assignment(s).

See also:

[Multiple Classification \[Seite 94\]](#)

[User Settings: Value Assignment \[Seite 45\]](#)

Classifying a Material (Example)

Classifying a Material (Example)

The previous section tells you how to use the assignment functions in the classification menu to assign an object to a class. The following example describes how to create a material and classify this material from the object maintenance function.

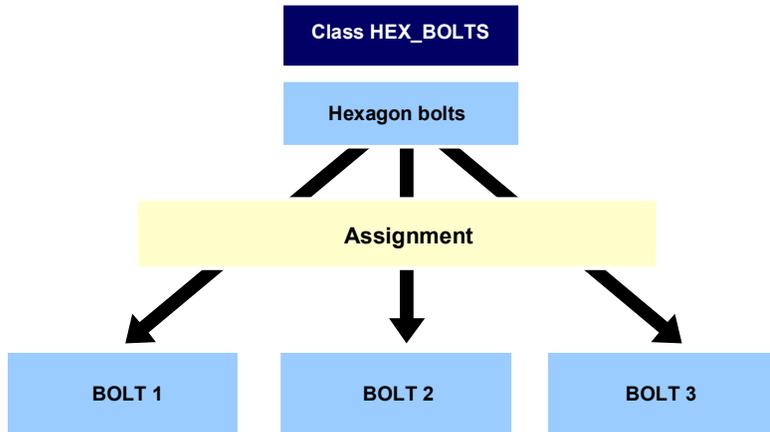
To create and classify a material, proceed as follows:

1. In the material master menu, choose *Material* → *Create general*.
2. Enter a material number, an industry sector, and a material type. Confirm your entries.
In the dialog box, select the views you want to create for the material. Select **Classification** and choose *Continue*.
3. Enter a description and the required engineering data and confirm your entries.
Enter one or more classes in which you want to classify the material.
4. To assign values, place the cursor on the class in which you want to assign values and choose  *Values for assignments* or double-click on the class.
You see a list of characteristics. To see the allowed values for a characteristic, place the cursor on the characteristic and display the possible entries.
5. Assign values to the characteristics, by selecting one or more values.
6. Save the values or go to other views on the material.

Assigning Objects/Classes to a Class

Use

You can use this function to assign several objects to one class at the same time. This can substantially reduce the workload for classifying objects. The following graphic shows the assignment of three objects (bolts) to class HEX_BOLTS.



Procedure

To assign several objects to one class in the classification system:

1. In the *Classification* menu, choose *Assignment* → *Assign objects/classes to a class*.
Enter the name of the class and choose the class type for the classification.
Confirm your entries. Choose *Edit* → *New assignments* or  *New assignments*.
You see a dialog box, asking whether you want to assign a class or a specific object type (such as material) to the class. Select the object type you require.
2. Enter the objects you want to assign to your class.
3. If you want to assign values to characteristics, position the cursor on a class. Double-click on the class or object or choose  *Values for assignments*.
You see a list of the characteristics of the class/object. This list is based on the user settings you made in *Extras* → *User settings*, tab page *Value assignment*.
4. Save your assignments.



If the class you enter is part of a class hierarchy, you can choose *Environment* → *Class hierarchy* to see the other classes in the hierarchy in tree form.

See also:

Assigning Objects/Classes to a Class

[User Settings: Value Assignment \[Seite 45\]](#)

Classification Status

Definition

You can assign various statuses to a classification record. These statuses are defined separately for each class type in Customizing for *Classification*. The R/3 System contains the following settings as standard:

- **Released**

This status is assigned when the assigned values are complete, which means that values are assigned to all the characteristics that have the *Entry required* indicator.

- **Incomplete**

A classification is incomplete if not all characteristics with the *Entry required* indicator have a value assigned to them. To save the values assigned so far, set the status to *Incomplete*.

If you assign an object to a class that has required entry characteristics, but do not assign characteristic values, the system sets 'Incomplete' status automatically.



The system can release classifications automatically, if you change an incomplete classification so that it is complete. To make this happen, the *Automatic release* indicator must be set for the classification status in Customizing for *Classification*.

- **Locked**

If you want to ensure that the characteristic values assigned to an object are checked again, for example, you can set this status.

The classification status is relevant to the find objects function. You can exclude locked and incomplete classifications from your search.

See also:

[Settings in Search Results \[Seite 130\]](#)

Mass Release of Classifications

Mass Release of Classifications

Use

You can call this function within classification functions.

You can release locked and incomplete classifications for a class collectively, once the classifications have been completed and made consistent. The system checks whether the following conditions for release are fulfilled. For example:

- All required characteristics have a value
- No values are inconsistent due to dependencies
- No two classifications are the same, if this is checked with an error message

If not all selected assignments could be released, you see a message. You can process the assignments that were not released afterward.

Activities

Choose one of the classification functions from the *Classification System* menu. Select the assignments you want to release and choose *Edit* → *Collective release*.

Mass Release of Classifications

Use

The mass release function lets you release all classifications for a class or class type that were previously locked or incomplete. The system checks whether the following conditions for release are fulfilled. For example:

- All required characteristics have a value
- No values are inconsistent due to dependencies
- No two classifications are the same, if this is checked with an error message

Selected assignments that could not be released are highlighted in color and can be processed manually afterward.

Features

This function also lets you display assignments that are not valid in the selection context you chose (change number and date).

This lets you see the other change numbers that have been used to process an assignment, and why the assignment cannot be released in a specific context.

You can only release individual assignment records in the context that is defined by the change number and date:

- Enter selection date (without change number)
 - All assignments that are not released and have not been processed with a change number on the date you enter are selected. You can release these assignments.
- Enter selection date (without change number) and *Display invalid* indicator
 - All assignments that are not released and have not been processed with a change number on the date you enter are selected. You can release these assignments.
 - All assignments that are not released and have been processed with a change number that has a valid-from date before or on the date you enter are also selected.
 - All assignments that are not released and have been processed with a change number with parameter effectivity are selected.
 - You cannot release the assignments that have been processed with engineering change management.
- Enter change number with date effectivity
 - All assignments that have been processed with this change number or without a change number are selected. You can release these assignments with the change number you entered.
 - If the *Display invalid* indicator is set, you also see change statuses from before the selection date and assignments with a deletion indicator. You cannot release these assignments.
- Enter change number with parameter effectivity and date
 - All assignments are selected, if:

Mass Release of Classifications

- They have been processed with the change number you entered
- They have been processed with several change numbers that have the same effectivity type, and that have a lower rank than the change number you entered
- They have been processed with a change number with date effectivity, and the valid-from date is before or on the selection date you entered
- They have not yet been processed with a change number

You can release these assignments with the change number that has parameter effectivity.

If the *Display invalid* indicator is set, all change statuses are selected if:

- They are before the selection date
- They have been processed with change numbers of the same effectivity type
- The change numbers have a lower rank than the assignments with a deletion indicator

You cannot release these assignments.

Activities

From the classification menu, choose *Assign* → *Collective release*.

You must enter a class type, but only enter a class if you want to.

Check for Same Classification

Use

On the *Basic data* tab page of a class, you can define that a check is made when you classify objects, to see whether objects already classified have the same characteristic values. You have the following options:

- Do not check
- Warning message
- Check with error

Features

The following restrictions apply to the check:

- The system does not check for identical values until values are assigned to all characteristics of the class. If you do not assign values to all characteristics, no check for identical classifications is made.
- Inherited characteristics are not checked.
- The system does not check the values of reference characteristics.
- The check is not a cross-class check – it only applies to the assignment to one class. The program does not check for identical assignments within a class hierarchy.
- The warning or error message only appears when you classify an object. If the values assigned to two objects become identical subsequently, there is no warning or error message. For example, this could happen if two objects have different values for one characteristic only, and you delete this characteristic from the class.
 - The system only checks the values that are valid on the date you enter. If you use engineering change management to classify an object, the system does not check whether another object has the same values on a different date, so you do not see a warning or error message.

Defining a Standard Class

Defining a Standard Class

Use

If an object is classified in more than one class, you can define a standard class for the object. The standard class then serves as the default class for an object. If you call classification data for an object, you see the assignment to the standard class unless you enter a different class.

Procedure

You define a standard class when you assign an object or a class to one or more classes.

1. You can select the column for the standard class indicator as soon as you assign an object to a class. The indicator is available for entry at this stage.



You can only define one standard class!

2. If you want to change the standard class for an object once you have set it, you must delete the indicator for the existing standard class before you can select the indicator for the new standard class.

Classifying Different Object Types

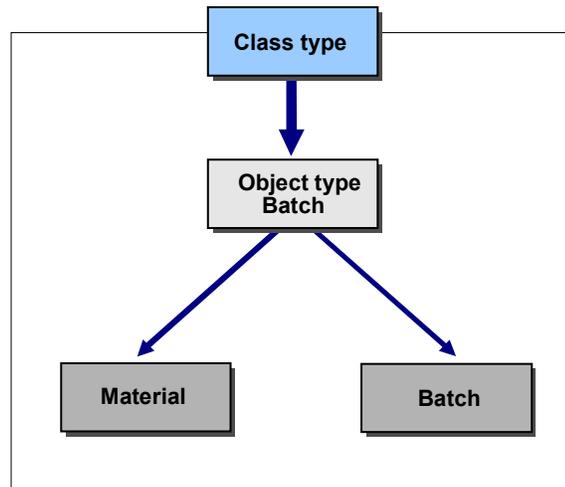
Use

You need a class type to create a class. The class type defines which object types you can classify in the class, for example only materials, or only documents.

However, when you create or maintain a class type in Customizing for *Classification*, you can define a class type that lets you classify objects of different types in the same class. This allows you to classify objects that are logically related to each other in one class.



A batch and the material for which it is created are logically related. For this reason, there is a class type for both batches and the materials to which they belong. In class type **023**, the *Multiple objs allowed* indicator is set, and the object type 'material' is defined as an additional object type. If you create a material for which batches are required, you can classify the material and the batches created for it in one class.



Features

In Classification

- Displaying object types

When you display classified objects in the assignment functions, you can define which object types are displayed. To do this, choose *Extras* → *Set object type*. You see a list of object types that can be classified in the class type concerned, and can enter the object types you want to see on the assignment screen.

- Classifying different object types

To select the object type you want to classify, choose *Extras* → *Change object*.

If different object types can be classified in a class, it is possible to set up an object hierarchy for the objects. This object hierarchy works like a class hierarchy (see [Object Hierarchy \[Seite 96\]](#)).

Classifying Different Object Types

Change Documents

You can activate either change documents or engineering change management in Customizing for *Classification*.

If you activate change documents, every change that you make to classification data is logged in a change document. You can use change documents to find out when the classification of an object was changed. You can no longer display the classification as it was.

Before you can set the *Change documents* indicator, you must set the *Multiple objs allowed* for the class type in Customizing. This indicator is only a tool in this case.

For more information, see the documentation for IMG activity *Maintain Object Types and Class Types* in Customizing for *Classification*.

Entering Values

Entering Values

Use

The values of characteristics are displayed for characteristic value assignment in one of the following ways, as defined in either characteristics maintenance or your user settings:

- As a list of values
- As an interval value
- As a combination of list and intervals
- As a value hierarchy
- Without allowed values

There are different ways to assign values to characteristics:

- You can type in an allowed value for a characteristic.
- You can select a value from the F4 help (possible entries).



Tip:

You can select a value by double-clicking in the F4 help.

- For single-value characteristics, the value is copied directly to the value field.
- For multiple-value characteristics, double-clicking selects or deselects the value, then you copy the values to the value fields by choosing *Continue/Enter*.
- You can restrict an interval.

Values must match the format defined for the characteristic.

You can use object dependencies to infer a value for a characteristic.

Additional Values

You can only assign a value that is not in the allowed values if the *Additional values* indicator is set on the *Values* tab of the characteristic. In the possible entries, you see an additional field where you can enter an additional value.

The indicators you set in a characteristic determine how the characteristic is handled in value assignment functions:

- Characteristics are usually available for entry – you can assign a value.

The following exceptions apply:

- The *Not ready for input* indicator is set in the characteristic. This means that you cannot enter a value for the characteristic. However, you can use object dependencies to infer a value.
- Reference characteristics are not available for entry, because the value is taken from a table field and displayed on the value assignment screen (see the section on *Reference Characteristics* in the SAP Library, *Characteristics (CA-CL-CHR)*).
- You can define that you must assign a value to a characteristic when you classify an object.

- You can define a characteristic as either single value or multiple value.

See also:

[Restricting Intervals \[Seite 66\]](#)

[Entering Multiple Values \[Seite 67\]](#)

[Single-Value and Multiple-Value Characteristics \[Seite 71\]](#)

[Object Dependencies in Classification \[Seite 98\]](#)

[User Settings: Value Assignment \[Seite 45\]](#)

Restricting Intervals

Restricting Intervals

Procedure

On the characteristic value assignment screen, you can restrict an interval by displaying the possible entries.

1. You cannot overwrite the interval at first.
2. Select the field and choose *Value entry*.
3. You can then enter values in this field. You can enter an interval or single value that is within the original interval.

Prerequisites

Interval values are only allowed if the characteristic has the *Interval vals allowed* indicator.

Entering Multiple Values

Use

You can assign several values to a multiple characteristic when you classify objects. On the characteristic value assignment screen, you can select a value from the possible entries or just type it.

Procedure

To assign several values to a characteristic on the value assignment screen:

1. Enter your values, separated by a semicolon.

Confirm your entries.



COLOR: red;green;yellow

2. The individual values are listed on the screen, one below the other.

Inserting a Line

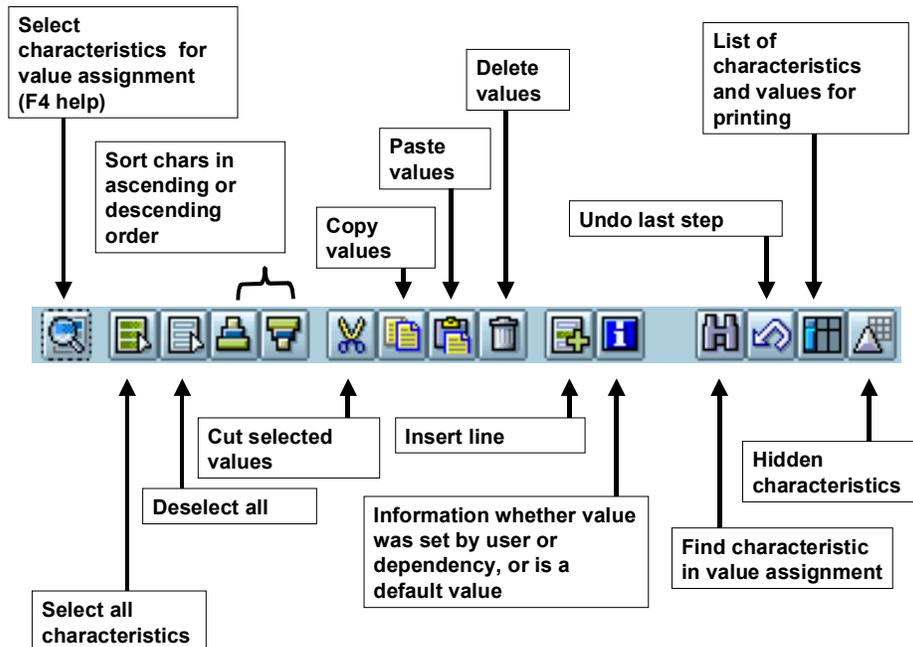
Choose  *Insert line*.

Value Assignment Functions

Value Assignment Functions

Use

The following functions are available in characteristic value assignment:



Features

Value assignment functions are used for both classification and finding objects.

Copying Characteristic Values to the Clipboard

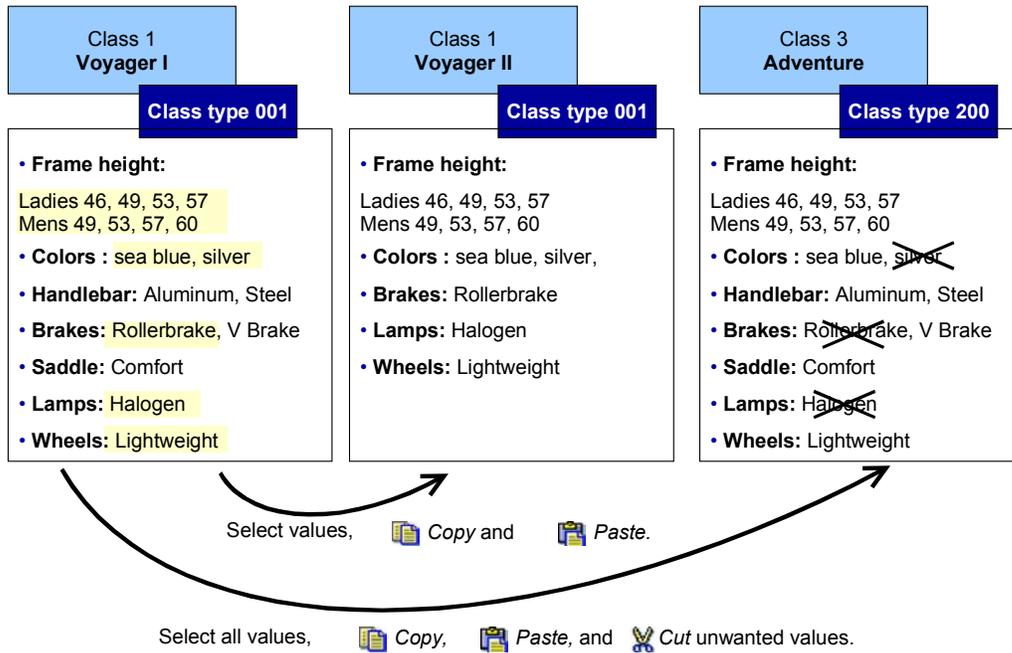
You can copy values to a clipboard and paste them in the same characteristics in either the same class or a different class. This function can be used across different class types, transactions, and sessions. The characteristics must be identical.

If you cut values, they are also saved to the clipboard and can be pasted in again.

When you paste values from the clipboard, the existing values are overwritten and therefore deleted. If you use this function on a multiple-value characteristic, you process all of its values. You cannot select individual values.

Value Assignment Functions

 The following example shows three models of bike with the same or similar features. To save time, you can copy characteristic values within the same class or to different classes, provided that the characteristics are identical.



Printing Assigned Values

You can print the values that you assign when you classify an object. If you use object dependencies in classification, you can print the dependencies for characteristics and characteristic values.

Choose  *List*. You see a dialog box showing you the characteristics and the values you assigned. If there are object dependencies, you can display the dependencies for characteristics and characteristic values.

To print the list, choose  *Print*.

Hidden Characteristics

Characteristics and characteristic values are sometimes hidden on the value assignment screen. This can be for the following reasons:

- Organizational areas
 - If the characteristics of a class are assigned to organizational areas, you can restrict the characteristics displayed according to organizational area (for more information, see [Choose Organizational Area \[Seite 17\]](#)).

Value Assignment Functions

To do this, choose:

Extras → *Organizational areas* in the classifications.

- Characteristics

You can set the *Hidden* indicator either in the characteristic or in the class (by overwriting the characteristic). You do not see the characteristic on the value assignment screen.

You can use object dependencies to infer a value for the characteristic.

- Dependencies

You can use dependencies to exclude characteristics and characteristic values from the value assignment screen. For example, a precondition can determine whether a characteristic or characteristic value is displayed for value assignment (for more information, see [Object Dependencies in Classification \[Seite 98\]](#)).

To show the characteristics or values that are hidden by object dependencies, choose *Extras* → *User settings*, then select *With excluded chars*. You see the characteristics on the screen, but you cannot assign or select values.

Inconsistent Characteristic Values

Values can be inconsistent with other values in a class hierarchy or multiple classification.

More under:

[Inconsistencies in a Class Hierarchy \[Seite 87\]](#)

[Inconsistencies in Multiple Classification \[Seite 89\]](#)

Single-Value and Multiple-Value Characteristics

Definition

Single-value

Some properties of an object are unambiguous. For example, the **Length** of a bolt can only be one value, such as 2 inches or 4 inches. It cannot be both 2 inches and 4 inches. You define this kind of characteristic as a single-value characteristic.

Multiple values

Some properties of an object can have several values. For example, the **Package size** of a bolt can be both boxes of 500 and boxes of 1000. You define the package size as a multiple-value characteristic, so that the values "500" and "1000" can be assigned at the same time.

See also:

[Entering Multiple Values \[Seite 67\]](#)

[Restricting Intervals \[Seite 66\]](#)

Creating / Changing Characteristic Groupings

Use

You can use this function to group characteristics together and define your own value assignment screen with pushbuttons or tabs for groups of characteristics.

You use the characteristic grouping function to group together specific characteristics. You can define a pushbutton or an additional tab for each grouping and arrange the characteristics and characteristic values as you wish (for pushbuttons only).

Procedure

Creating a Characteristics Group

1. Choose *Value assignment* → *Characteristics grouping* → *Create*.

You see a dialog box in which you enter a name for your characteristics group. The combination of characteristics is saved under this name.

- You can define that characteristics groupings are displayed as pushbuttons or tabs in value assignment. You can define up to 15 pushbuttons and 9 tabs.
- If you select *Summarize*, the characteristics you grouped together are no longer displayed individually on the main characteristic value assignment screen.
- If you do not select either of the display options, the characteristics you select in the interface design are grouped together on the general tab.

Confirm your entries.

2. You see the processing screen on which you can design the interface for the characteristics you grouped together.

Displaying / Changing a Characteristic Grouping

1. Choose *Value assignment* → *Characteristic grouping* → *Display / change*. Enter the name of the characteristic grouping you want to change or display.
2. You see the processing screen for interface design, on which you can make the changes you require.

Deleting a Characteristic Grouping

1. Display/change the characteristic grouping that you want to delete and go to the processing screen for interface design.
2. Choose *Goto* → *Chars group* on the processing screen for interface design.
3. Delete the characteristic grouping.

For more information on designing the interface for characteristic groupings, see [Processing the Interface Design \[Seite 73\]](#).

Processing the Interface Design

Use

When you create a [Characteristic Grouping \[Seite 72\]](#), you can design an interface for the characteristic grouping.



Characteristics that are hidden in value assignment by organizational areas, dependencies, or the *Extras* → *User settings* function are not shown on the processing screen for interface design (see *Hidden Characteristics* under [Value Assignment Functions \[Seite 68\]](#)). There is an empty space on the screen for such characteristics. The other characteristics are not moved up, so that the display is not changed on any forms that exist.

Procedure

Choose *Characteristics*. You see a dialog box with all the characteristics created, in which you select the characteristics you want to group together.

Inserting or Deleting Characteristics

Choose *Characteristics* and select the characteristics you want to insert or delete.

Moving Characteristics or Defining the Sequence of Characteristics

You can move the characteristics and/or values (only for pushbuttons) to define your own sequence of characteristics.

1. Select the characteristic or value you want to move.
2. Place the cursor where you want the characteristic or value moved to.
3. Choose *Move*. The characteristic or value is moved to the new position.

The following functions only apply to interface design for pushbuttons!

Settings for Characteristics and Characteristic Values

To define whether a characteristic and its values are processed as a unit or separately (for example, when you want to move them), choose *Settings*.

Defining a Border

You can put a border around characteristics or values. To do this:

1. Place the cursor where you want the top left-hand corner of the border.
2. Choose *Border*.
3. Enter a description of the border. You can also maintain language-dependent descriptions for the border, by choosing *Descriptions*.
4. Confirm your entries.

You see a message telling you to select the lower edge of the border. Confirm this message.

5. Place the cursor where you want the bottom right-hand corner of the border.
6. Choose *Select*.

Processing the Interface Design

The characteristics are surrounded by the border, which has the description you entered. If you want to delete a border, select the border with the cursor and choose *Delete*.

Inserting or Deleting a Row

To insert rows, choose *Edit* → *Insert*. To delete rows, choose *Edit* → *Delete*. Rows are always inserted above the cursor.



Authorization for Processing Interface Design

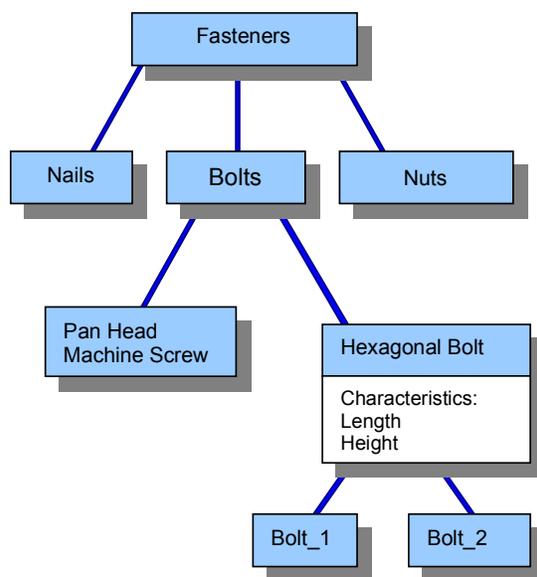
You can only process an interface design if your user master record contains authorization object C_CACL_DSG.

Class Hierarchy

Purpose

You can set up your classification system as a hierarchical structure, to help you target your searches for objects.

For example, instead of classifying all of the nails, bolts, and nuts in your company in one class for FASTENERS, you assign other classes to FASTENERS, such as NAILS, BOLTS, and NUTS, and other classes to these classes, if required. You only use the classes on the bottom level to classify objects.



You can start your search for objects with class FASTENERS, and continue your search down the different levels of the hierarchy.

Integration

In Customizing for the *Classification System*, in activity *Maintain Object Types and Class Types*, you define whether hierarchies are supported for each class type.

If the class type allows you to set up a hierarchy, you do not define classes as hierarchy classes. You can assign both objects and classes to any class

Features

Class Hierarchies Without Inherited Characteristics

In a class hierarchy without inherited characteristics, you do not assign characteristics to the classes on higher levels. Only the classes that you use to classify objects have characteristics, which describe the objects you classify.

Class Hierarchy

Class Hierarchies With Inherited Characteristics

In a class hierarchy with inherited characteristics, you assign characteristics to the classes on higher levels. All classes lower down in the hierarchy inherit these characteristics. If you want to use a characteristic in all of the classes in a hierarchy, you only need to enter the characteristic once on the top level.

You can use inherited characteristics to restrict your search for objects to specific classes. You can then select a class and continue your search in this class.

See also [Inherited Characteristics \[Seite 81\]](#).

Class Hierarchies as Graphics

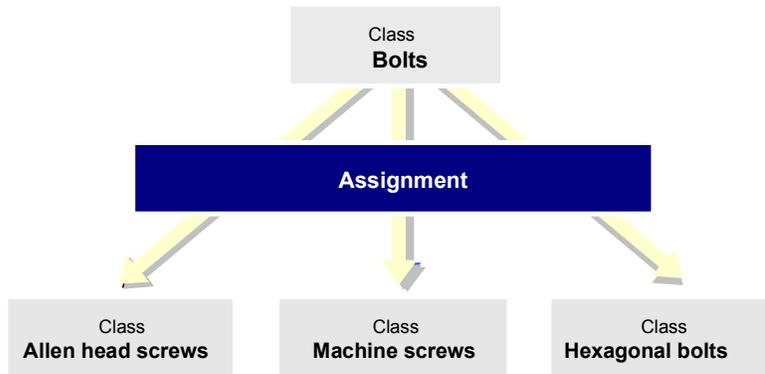
You can also display and maintain a class hierarchy in graphical form. For more information, see [Displaying a Class Hierarchy \[Seite 166\]](#).

Assigning Classes to a Class

Use

You can also use the *Assignment* → *Assign objects/classes to a class* function to set up a class hierarchy by assigning several classes at once to **one** superior class.

The graphic below shows an example.



Procedure

To assign a class to another class, proceed as follows:

1. In the classification system menu, choose *Assignment* → *Assign objects/classes to a class*.
2. Enter a class name and class type. Choose  *Last class processed* to choose one of the last ten classes you have worked. These can also be classes that were processed with different applications.



If the class you enter is part of a class hierarchy, you can choose *Environment* → *Class hierarchy* to see the other classes in the hierarchy in tree form.

3. Choose *New assignments*.

You see a dialog box, asking whether you want to assign a class or a specific object type (such as material) to the class. Choose *Classes*.

4. Enter the classes you want to assign to your class.

These classes are assigned to the class you started with.

5. If you want to assign values to characteristics position the cursor on a class. Double-click on the class or select  *Values for assignments*.

You see a list of the characteristics of all the classes to which the object is assigned. This list is based on the user settings you made in *Extras* → *User settings*, tab page *Value assignment*.

Assigning Classes to a Class

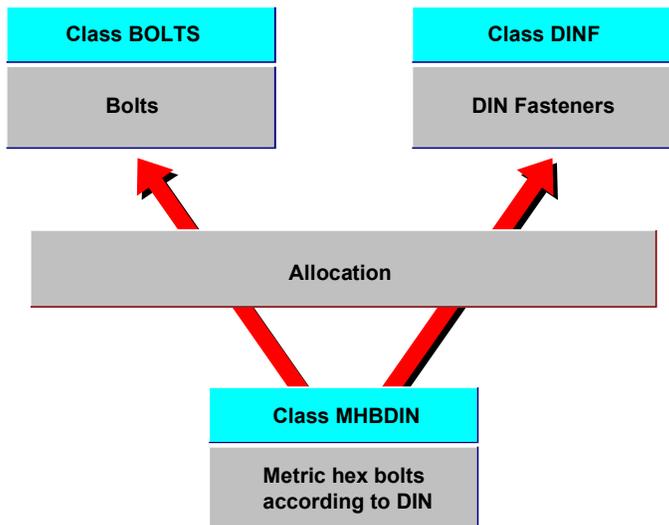
When you assign classes to a class, you can restrict the allowed values of the characteristics. This means that only values from the restricted allowed values are allowed when you classify objects in these classes.

6. Save your assignment(s).

Assigning Classes to Superior Classes

Use

This function enables you to set up your class hierarchy as a class network by assigning a class to several superior classes. The following graphic shows how class MHBDDIN is assigned to 2 classes. This makes it easier to find this class, because you can access the class using one of two different paths.



Procedure

To maintain one or more superior classes for a class within a hierarchy, proceed as follows:

1. Choose in the *Classification* menu *Assignment* → *Assign class to superior classes*.
2. Enter the name and class type of the class you want to include in the hierarchy. Use the pushbutton  *Last processed classes* to choose one of the last ten classes you have worked. These can also be classes that were processed with different applications.



If the class you enter is part of a class hierarchy, you can choose *Environment* → *Class hierarchy* to see the other classes in the hierarchy in tree form.

Confirm your entries.

3. Enter one or more superior classes.

When you assign classes to a class, you can restrict the allowed values of the characteristics. This means that only values from the restricted allowed values are allowed when you classify objects in these classes.

Assigning Classes to Superior Classes

4. If you want to assign values to characteristics and at the same time set restrictions for the values you must first position the cursor on a class. Double-click on the class or select  *Values*.

You see a list of the characteristics of all the classes to which an object is assigned. This list is based on the user settings you made in *Extras* → *User settings*, tab page *Value assignment*.

5. Save your assignment.

Inherited Characteristics

Purpose

When we say that characteristics are inherited, we mean that a class passes down its characteristics and their values to all its subordinate classes in a class hierarchy. The subordinate classes do not contain the characteristic.

The advantage of characteristic inheritance is that you only need to enter a characteristic once, in a class at the top of a hierarchy, and it is used in all classes in the hierarchy. This saves your having to enter the characteristic separately for each class.

When you set up a class hierarchy, the subordinate classes in the hierarchy inherit the characteristics of the superior classes. On the characteristic value assignment screen, you see characteristics that are inherited from superior classes, as well as the characteristics that are assigned directly to the class.

Procedure

Choose *Extras* → *User settings*, tab page: *Value assignment* to hide inherited characteristics on the screens for assigning characteristic values and finding objects.



The following example shows three classes in a hierarchy. The top class for FASTENERS contains characteristic THREAD_TYPE.

Class BOLTS does not contain characteristic THREAD_TYPE, but it inherits this characteristic from class FASTENERS.

The next class down inherits characteristic THREAD_TYPE from class FASTENERS, and characteristic HEAD_SHAPE from class BOLTS.

Restricting the Allowed Values

Restricting the Allowed Values

Purpose

In a class hierarchy, characteristics of superior classes are inherited by subordinate classes. The allowed values of inherited characteristics can be restricted dynamically.

The *Single-value* indicator does not apply

When you set up a class hierarchy, the *single-value* and *multiple-value* indicators of a characteristic do not apply. You can systematically restrict the allowed values from level to level down the hierarchy, entering several values per level even for single-value characteristics.

- You can select several values from a list.
- You can restrict an interval value, regardless of whether the characteristic is a multiple-value characteristic or has the *Interval vals allowed* indicator.

In subordinate classes and in functions for classifying objects, only the restricted allowed values are displayed. You cannot enter values that are outside the restricted allowed values.

See also:

[Restricting Intervals \[Seite 66\]](#)

[Entering Multiple Values \[Seite 67\]](#)

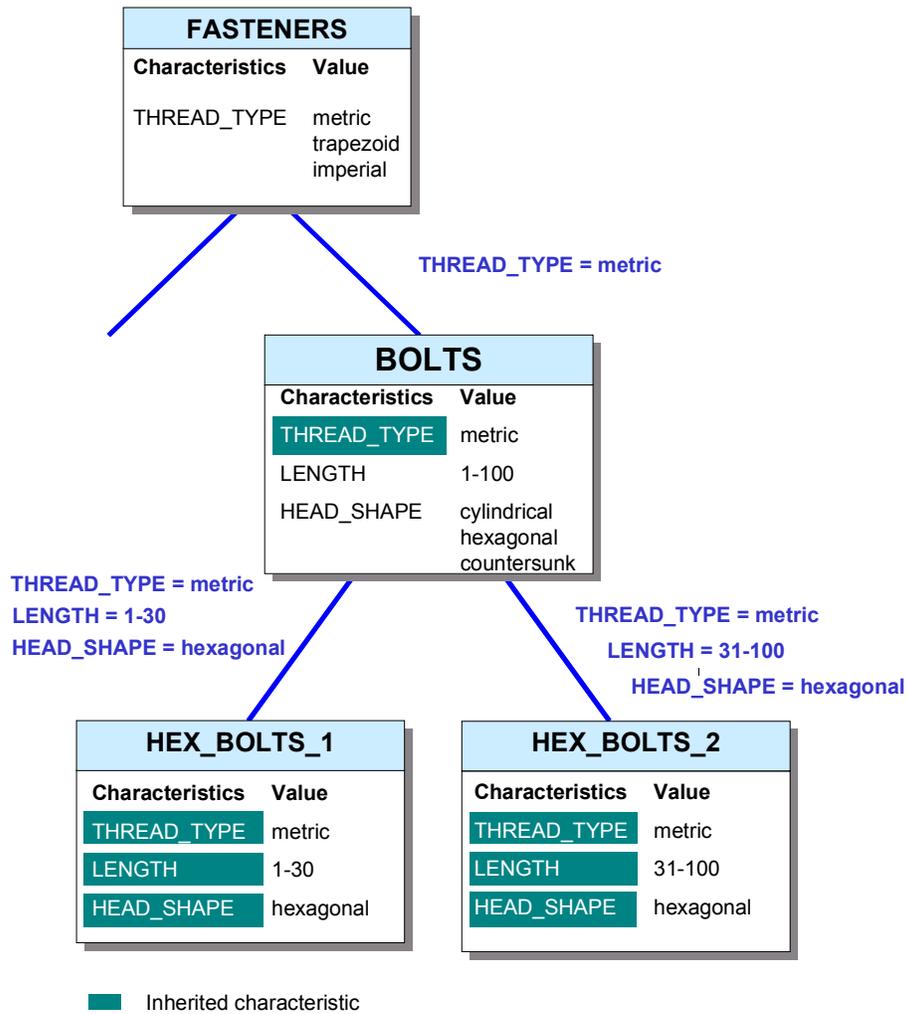


All bolts must have metric thread. Characteristic `THREAD_TYPE` is assigned to class `FASTENERS`. When you assign class `BOLTS` to class `FASTENERS`, you restrict the allowed values to "metric". Any classes below `BOLTS` can only have "metric" `THREAD_TYPE`.

Two classes are defined for hexagonal bolts. Both classes have `HEAD_SHAPE` "hexagonal".

You classify all hexagonal bolts with a length between 1 and 30 in class `HEX_BOLTS_1`. You classify all hexagonal bolts with a length between 31 and 100 in class `HEX_BOLTS_2`. Characteristic `LENGTH` is assigned to class `BOLTS`. When you assign the two classes for hexagonal bolts to class `BOLTS`, you restrict the allowed values for characteristic `LENGTH` accordingly. In these classes, you cannot assign values that are not in the restricted allowed values to the characteristic.

Restricting the Allowed Values



Restricting the Allowed Values Dynamically

Restricting the Allowed Values Dynamically

Purpose

When you define a *Class to class* assignment, and a characteristic has different allowed values in the two classes, the allowed values are automatically restricted by the system.

The system always restricts the allowed values to the lowest common denominator. The restricted allowed values are always an intersection of the values assigned in the hierarchy and the values that are allowed in the class.

The principle of the lowest common denominator also applies to the attributes of the characteristic:

If the attributes of a characteristic are different in the two classes, because the characteristic has been overwritten (see [Overwriting Characteristics \[Seite 33\]](#)), the restricted attributes are also an intersection. For example, if interval values are allowed in class **A** but not in class **B**, then interval values are not allowed.

The following constellations are possible when restricting the allowed values of a characteristic.

- The characteristic has the same allowed values in both classes. When you assign values to the characteristic, the allowed values are restricted for the subordinate class.

See [Same Allowed Values \(Example 1\) \[Seite 85\]](#).

- The characteristic has different allowed values in the two classes. The allowed values in the subordinate class are restricted to an intersection of the values allowed in the class and the values assigned to the characteristic when you created the assignment to a superior class.

See [Different Allowed Values \(Example 2\) \[Seite 86\]](#).

Same Allowed Values (Example 1)

Class **CL1** has characteristic **C1** with allowed values **10-50**. Class **CL2**, which has the same characteristic with allowed values **10-50**, is assigned to class **CL1**. When you assign class **CL2** to class **CL1**, you restrict the allowed values to **10-20**. When you assign object **O1** to class **CL2**, you see the allowed values of characteristic **C1** as **10-20**. You can assign a value from this range of allowed values to the object.

Same Allowed Values (Example 2)

Same Allowed Values (Example 2)

However, you can also define allowed values for class **CL2** that are different to the allowed values for class **CL1**, by overwriting the characteristic for class **CL2**, for example. In **CL2**, characteristic **C1** has the allowed values **15-20**. When you assign class **CL2** to class **CL1**, you restrict the allowed values for characteristic **C1** to **10-20**. The system calculates the subset of the allowed values for the characteristic in class **CL2** and the values you entered when you classified the class, so the allowed values are now **15-20**. You can only assign these restricted values to object **O1**.



If you restrict allowed values after you have assigned objects to the class, this can lead to inconsistencies. For example, if you restrict the allowed values further to **17-20**, the value **16** for object **O1** is no longer valid.

Inconsistencies in a Class Hierarchy

To ensure that values assigned to characteristics are consistent across a hierarchy, the system makes checks. The following activities can cause inconsistencies:

- Changing the allowed values

If you change the allowed values for a characteristic, so that the value assigned to an object is no longer valid, you see an inconsistency message. You must delete your change.
- Deleting an assignment

If you delete an assignment in a class hierarchy, and a subordinate class no longer contains an inherited characteristic that has been used to classify objects, this causes inconsistency. You cannot delete the assignment until you have deleted values for the characteristic for classified objects.
- Deleting a characteristic from a class

If a characteristic is inherited by subordinate classes in a class hierarchy, where objects are classified with the characteristic, you can no longer delete the characteristic from the class. You can only delete the characteristic if you delete all the assigned values for the characteristic first.
- Deleting a class in a class hierarchy

If a class is part of a class hierarchy, and characteristics of the class are inherited and used to classify objects in subordinate classes, you cannot delete the class.

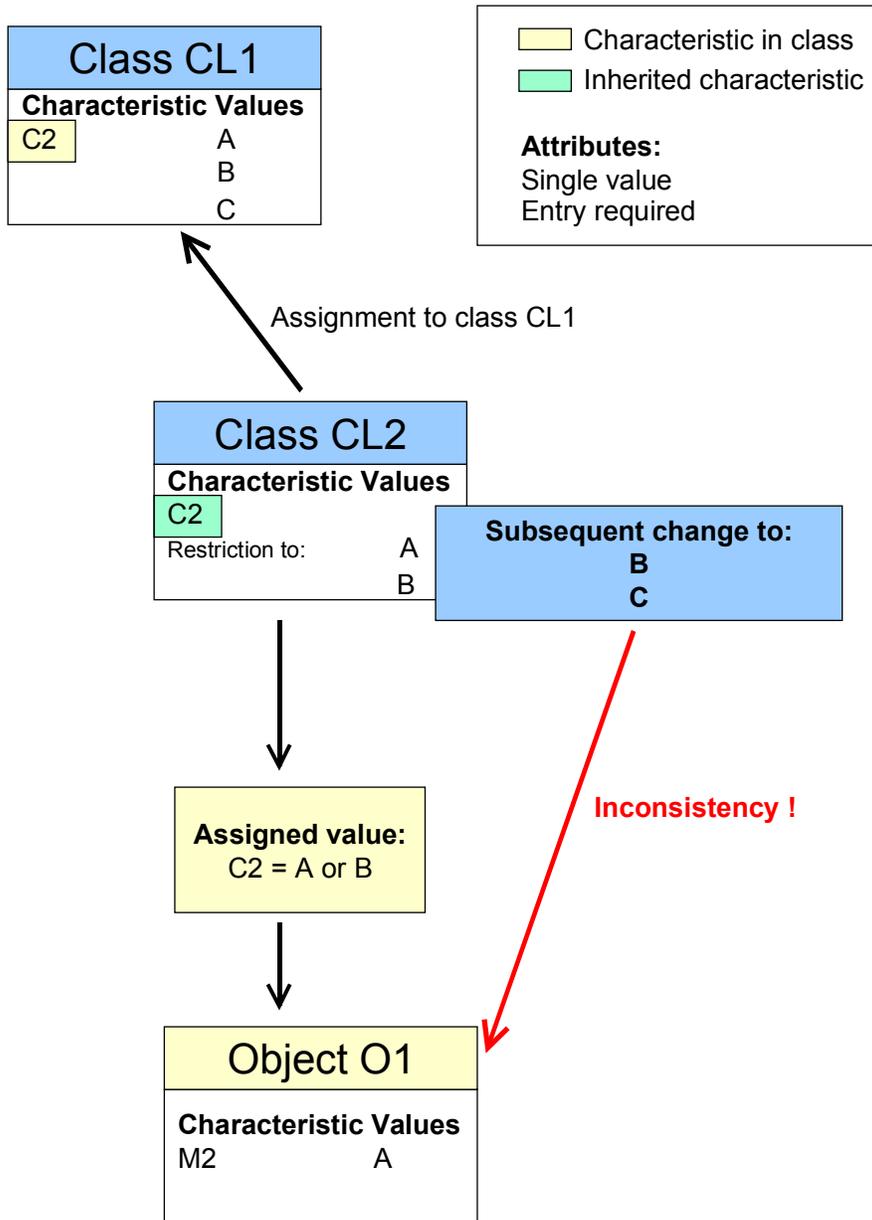


You assign class CL2 to class CL1, restricting the allowed values for characteristic C2 to A and B. When you classify object O1, you can only assign one of these values. If you assign value A to object O1, but change the value set for the assignment of CL2 to CL1 to B and C, the value assigned to object O1 becomes inconsistent. You see an inconsistency message, telling you that you cannot change the allowed values.

As long as object O1 has an assigned value for characteristic C2, the following restrictions apply:

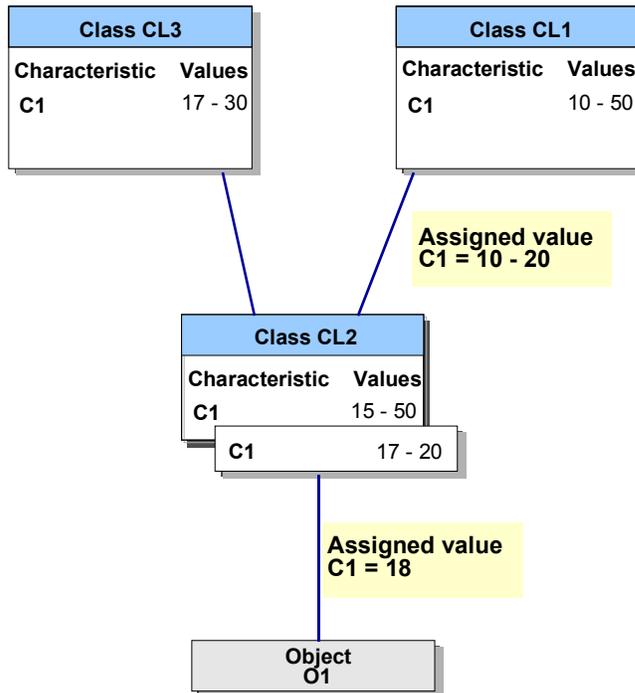
- You cannot delete the assignment of CL2 to CL1
- You cannot delete characteristic C2 from class CL1
- You cannot delete class CL1

Inconsistencies in a Class Hierarchy



Inconsistencies in Multiple Classification

If a characteristic has different allowed values in different classes, and you classify a class or object in more than one class, there may be inconsistencies:



When you assign class CL2 to class CL1, you restrict the allowed values for characteristic C1 to 10-20. Then you assign class CL2 to class CL3, which also has characteristic C1. In class CL3, however, the characteristic has allowed values 17-30.

The system calculates the allowed values as a subset of the allowed values in the two classes. When you assign CL2 to CL3, you see an inconsistency message, because the values 10-16 for the assignment of CL2 to CL1 are outside the allowed values for CL3.

After the assignment of CL2 to CL3, the system automatically updates the allowed values for the assignment of CL2 to CL1.

Graphical Maintenance of Class Hierarchies

Graphical Maintenance of Class Hierarchies

Use

You can also use graphical maintenance to assign classes to superior classes. In a tree, you can set up complex class hierarchies without losing an overview. Each step is logged, so you can undo each step.

While you work, a [Recursion Check \[Seite 93\]](#) ensures that inconsistencies are avoided.

Features

On the initial screen, choose  *Last objects* to call one of the last 10 classes you processed. If you have defined layouts for processing hierarchies and want to use one, choose  *Select layout*.

After selecting a class, choose  *Change*. To display the hierarchy, choose  *Display*.



All classes in the class hierarchy you want to process are locked for other users for as long as you process the hierarchy. This includes classes you insert by creating assignments, even if you undo the assignment again. The classes are not released again until you exit the transaction.

For this reason, we recommend that you keep the class hierarchy you are processing as small as possible.

Upper Screen Area

 *Other object*: You can choose this pushbutton to select another initial class.

 *Previous hierarchy level*: You can choose this pushbutton to call the superior class(es) and restart the transaction with a class you select.

 *Undo last step*: You can undo all the steps you have taken since starting the function, in chronological order.

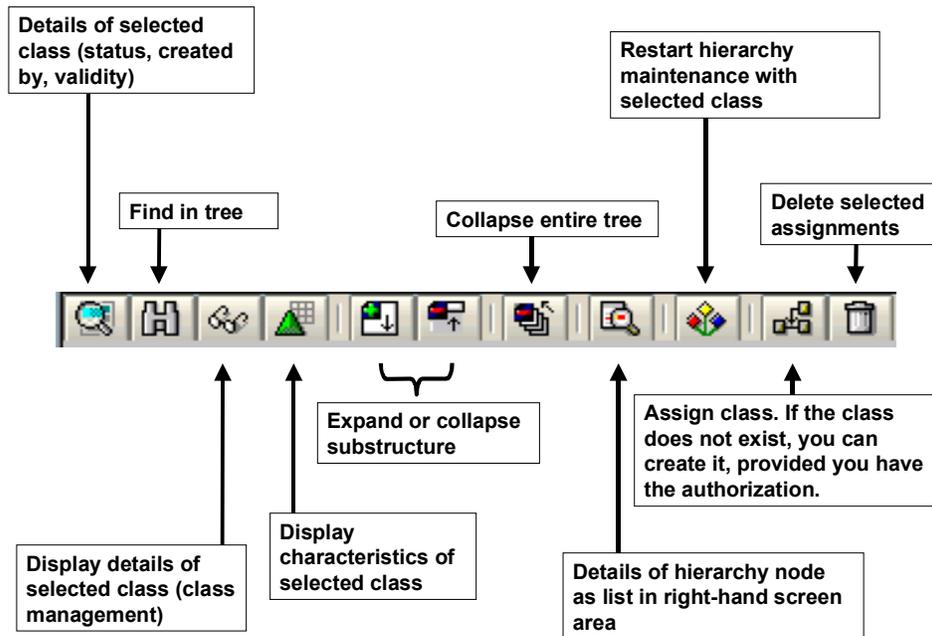
 *Display steps so far*: You can choose this pushbutton to display the log. This records all the steps you have taken while maintaining the hierarchy.

Left-Hand Screen Area: Tree

You can use drag & drop to copy or move individual assignments or complete substructures within the tree.

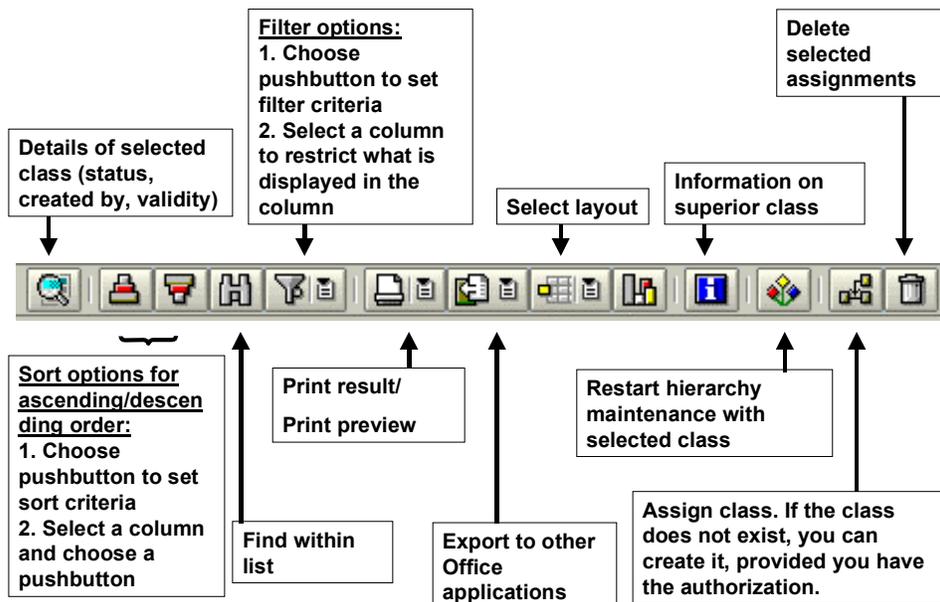
The following functions are available in the application toolbar:

Graphical Maintenance of Class Hierarchies



Right-Hand Screen Area: List

The following functions are available in the application toolbar:



For more information on the pushbuttons, see [ABAP List Viewer \(ALV\) Grid Control \[Extern\]](#).

Graphical Maintenance of Class Hierarchies



You can only create a new class in this function if you have the authorization to create classes. You can then enter the most important data for your class. Otherwise, you see a message telling you that the class does not exist.

Activities

From the classification menu, choose *Classification* → *Master Data* → *Graphical Hierarchy Maintenance*.



In hierarchy maintenance, almost all functions can be used in several ways: by double-click, pushbutton, menu, or context menu (right-hand mouse button).

Checks in Hierarchy Maintenance

The steps you take are visible on the screen immediately. All steps (for example, new class assignments or deletion of assignments) are only processed in main memory until the final update. Changes are not saved to the database until the update is finally triggered.

Each step in hierarchy maintenance is checked automatically as you work. If the system finds inconsistent data, you see an error message, which interrupts the current step. For example, this may occur with classes that already have assignments. This may lead to problems with inheritance.



Very complex class hierarchies may slow down system performance. For example, if you start at the top class node in a large hierarchy tree, and copy or reassign subtrees in the hierarchy, the checks on the individual steps take longer than in smaller class hierarchies.

For this reason, we recommend that you keep the class hierarchy you are processing as small as possible.

Recursion Check

If you copy subtrees in complex class hierarchies and reassign them within the hierarchy tree, an assignment may unintentionally lead back to itself. The recursion check prevents this. The assignment that is recursive is rejected by the system, and the other assignments are copied.

Multiple Classification

Multiple Classification

Purpose

You can assign objects either to one class or to several classes. Classifying an object in more than one class is known as multiple classification.

Classification in Different Class Types

If you classify an object in classes of different class types, there is no link between the characteristic values assigned in the different classes. This means that, in two classes with different class types, you can assign completely different values to the same characteristic for the same object.

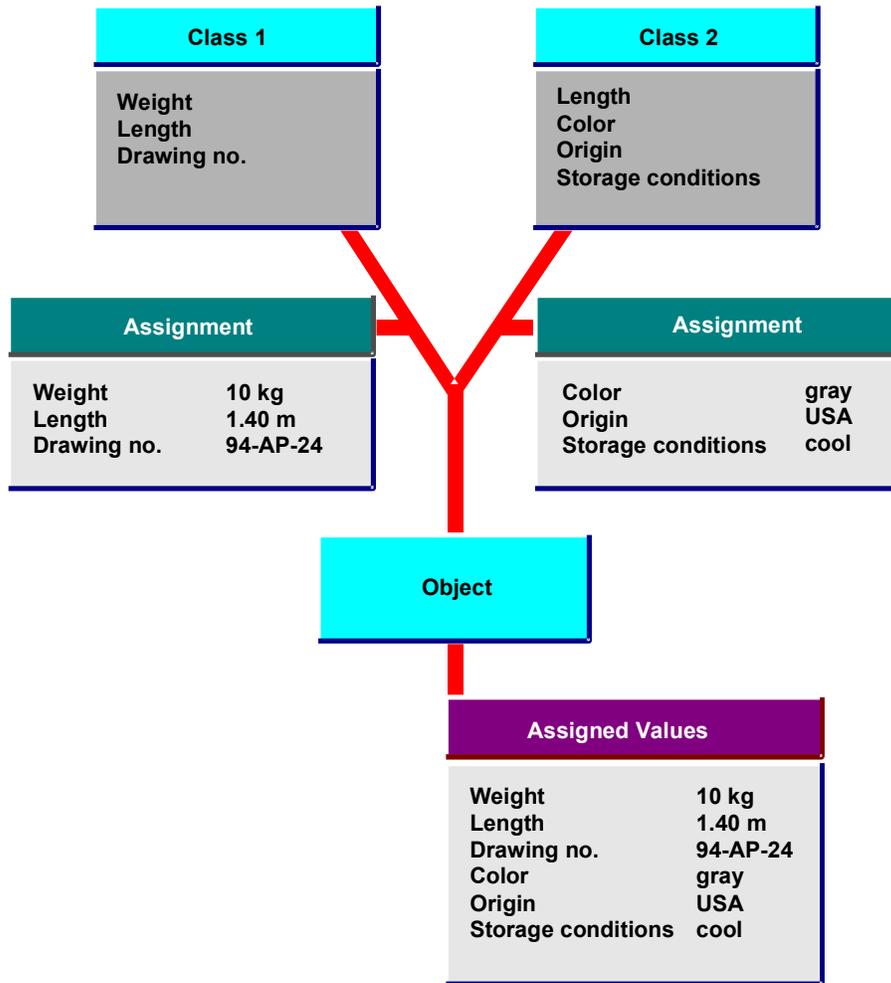
Multiple Classification in One Class Type

If you classify an object in several classes of the same class type, you can use various paths to search for the object later. You can use either of the classes in the graphic below to find the object.

- Before you can classify objects in several classes of the same class type, you need to set the multiple classification indicator in Customizing for *Classification* for the class type.
- If an object is classified in several classes of the same class type, the object inherits all characteristics of all the classes in which it is classified. You see the characteristics of all the other classes in which the object is classified, as well as the characteristics of the class you started with.
- In one class type, you can only assign one value or set of values to any one characteristic for an object. You cannot assign different values to a characteristic in different classes of the same class type. If you enter 4 as the length of a bolt, this is a central property of the bolt, which is the same in every class (see also [Inconsistencies in Multiple Classification \[Seite 89\]](#)).

The graphic below shows an object that can be found in two different classes.

EMBED PowerPoint.Show.8



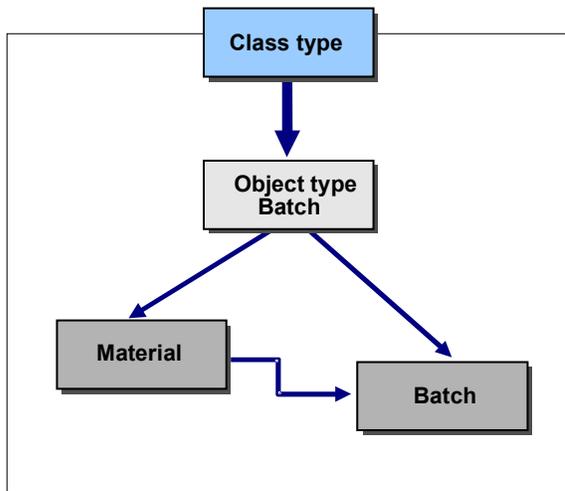
Object Hierarchy

Object Hierarchy

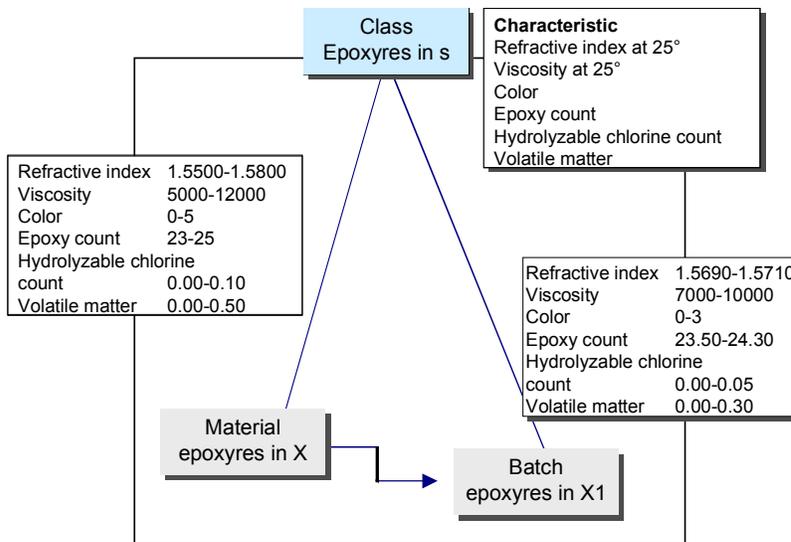
Definition

As a special feature of the classification system, class type 023 has an object hierarchy for object types *Material* and *Batch*. In this object hierarchy, materials function like classes. When you assign a material to a class of class type 023, you can restrict the allowed values of the characteristics. You can only assign allowed values from this restricted range to a batch.

You cannot set up an object hierarchy for other objects without changing the program code.



Example: The allowed values for characteristic VISCOSITY are restricted to 5000 - 12000 for a material. You can only assign values within this range to the batches you create for this material .



Object Hierarchy

This restriction of the allowed values for subordinate objects ensures that the values assigned to subordinate objects are consistent with the values assigned to the superior object.



If the allowed values for characteristic VISCOSITY are changed from 5000 - 12000 to 5000 - 8000 for your material, but the value 10000 has been assigned to a subordinate batch, the classification is no longer consistent, as the values assigned to the batch and the material no longer match up.

For more information on classifying different object types in a class type, see [Classifying Different Object Types \[Seite 61\]](#).

See also:

LO Batch Management

Object Dependencies in Classification

Object Dependencies in Classification

Purpose

You can use dependencies as an aid to entry for classifying objects. For example, you can ensure that a racing handlebar can only be selected for a racing bicycle.

Dependencies are only effective for classifying objects. They are not used for classifying classes or finding objects via classes.

Using object dependencies

Classification system function	Dependencies
Classifying objects	YES
Assigning classes	NO
Finding objects	NO

You can assign dependencies to characteristics and characteristic values for classification. You can use the following dependency types:

Using Dependency Types

Dependency type	Object
Preconditions	Characteristic, characteristic value
Selection conditions	Characteristics
Actions	Characteristic, characteristic value
Procedures	Characteristic, characteristic value



Object dependencies can be used in classification and in variant configuration. In variant configuration, they are used to make it easier to create an order for a complex product with a large number of variants.

If both applications are in use in your company, you may find that object dependencies are used for two completely different purposes. However, it is not currently possible to separate the use of object dependencies in classification from their use in variant configuration.

The object dependencies assigned to characteristics or characteristic values apply in both classification and variant configuration functions. For this reason, we recommend that you create dependencies as general rules that apply to both classification and variant configuration.

See also:

LO Variant Configuration

Local and Global Object Dependencies

Definition

We make a distinctions between local and global dependencies:

- You create **global dependencies** independently of any specific object.
 - You can then link the global dependency to any characteristic or characteristic value.
 - You assign an external name to identify a global dependency.
 - Global dependencies are maintained and managed centrally. Changes to a global dependency affect the dependency wherever it is used.
 - For more information on creating global dependencies, see the R/3 Library *Variant Configuration (LO-VC)*.
- You create **local dependencies** for a specific characteristic or characteristic value.
 - You can only use a local dependency for the object for which it is created.
 - The system assigns an internal name to identify a local dependency.
 - For more information on creating local dependencies for a characteristic or characteristic value, see the R/3 Library *Characteristics (CA-CL-CHR)*.

Object Dependencies for Characteristics

Use

Preconditions for characteristics:

You can define a precondition for a characteristic to determine when a characteristic appears on the characteristic value assignment screen. For example, you can define that characteristic TACHOMETER for a bicycle only appears if a specific model of bicycle, such as racing bicycle, is selected.

You can display a characteristic that is hidden by a precondition by choosing the *Hidden characteristics* button.

See [Characteristic Preconditions \(Example\) \[Seite 106\]](#).

Selection conditions for characteristics:

You can use a selection condition to make a characteristic into a required characteristic under certain circumstances. The characteristic then behaves as if the *Entry required* indicator is set. You cannot exit the characteristic value assignment screen without assigning a value to the characteristic or assigning *Incomplete* status to the characteristic.

You can use a selection condition in conjunction with a precondition. For example, if characteristic **Tachometer** appears for a bicycle (possibly because a precondition was fulfilled), you can define a selection condition for characteristic TACHOMETER to ensure that you assign a value to this characteristic.

See [Characteristic Selection Conditions \(Example.\) \[Seite 107\]](#).

Actions for characteristics:

Actions are used to infer characteristic values. An action is processed as soon as the characteristic to which it is assigned has a value assigned.

For example, if a value is assigned to characteristic EXTRAS, the value \$100 is automatically assigned to characteristic SURCHARGE.

If an action sets a value, this value cannot be overwritten either manually or by other actions.

See [Characteristic Actions \(Example.\) \[Seite 108\]](#).

Procedures for characteristics:

You can use a procedure in the same way as an action, to infer a value for a characteristic. The values are determined by calculations, sums, or analysis. Unlike actions, procedures can overwrite values that another procedure has set. For this reason, you can define several procedures that infer different values for a characteristic.

See [Procedures for Characteristics \(Example\) \[Seite 109\]](#).

Object Dependencies for Characteristic Values

Use

Preconditions for a characteristic value:

You use a precondition to define that you can only select the characteristic value if a certain value is assigned to another characteristic.

You can use a precondition to define that you can only select the value RACING_HANDLEBAR for characteristic HANDLEBAR if you select RACING_BICYCLE as the model.

If values are selected that are inconsistent with preconditions, you see an inconsistency message.

See [Characteristic Value Preconditions \(Example.\) \[Seite 110\]](#).

Actions for a characteristic value:

You can define actions for individual characteristic values. If you select a value for which an action is defined, the action is processed automatically.

You can use an action to define that the value 21_GEAR is assigned to characteristic GEARS if you select the model RACING BICYCLE.

See [Actions for a Characteristic Value \(Example.\) \[Seite 111\]](#).

Syntax of Object Dependencies

A range of language elements is supported for dependencies. The language elements that are relevant to classification are described briefly below. For more information on dependencies, see the SAP Library *Variant Configuration (LO-VC)*.

General Rules

- Put character strings used in dependencies in single quote marks ('). Example: COLOR = 'red'
- When you refer to a characteristic or a characteristic value in a dependency, use the language-independent key (name).
- You cannot use characteristic names that contain a hyphen in dependencies.

Tables and Functions

In dependencies, you can refer to tables or functions created in the variant configuration menu, as well as to characteristics and characteristic values. You can use tables to specify allowed combinations of characteristic values. You can use these tables to check the consistency of the values assigned or to infer values. You can use functions to call your own function modules to copy characteristic values to a dependency.

For more information on creating and using tables and functions, see the SAP Library *Variant Configuration (LO-VC)*.

Comparison Operators

As a rule, a condition consists of one or more comparisons. You express these using the operators in the table below:

Operator 1	Operator 2	Operator 3	Description
<		LT	less than
<=	=<	LE	less than or equal to
=		EQ	equal to
>		GT	greater than
>=	=>	GE	greater than or equal to
<>	><	NE	not equal to



Example

COLOR = 'red' or COLOR EQ 'red'
 LENGTH > '100' or LENGTH GT '100'

Logical Operators

To combine conditional expressions, you can use the logical operators AND, OR, and NOT.

Syntax of Object Dependencies



LENGTH EQ '300' AND WIDTH LT '200'

This condition is fulfilled if LENGTH has a value of exactly 300 and characteristic WIDTH has any value that is less than 200.

Arithmetical Expressions

You can also include calculations in conditions. You can use any of the arithmetical expressions shown in the table below:

Expression	Description
+	Addition
-	Subtraction
/	Division
*	Multiplication
sin	Sine function
cos	Cosine function
tan	Tangent function
exp	Exponent for base e
ln	Natural logarithm
abs	Absolute
sqrt	Square root



LENGTH * WIDTH + 4

LENGTH * SIN(0.5)



1. The only decimal point allowed in figures with decimal places is a period ('.'). Settings in your user master record are not relevant.
2. You must make all your entries for trigonometric functions (cos, sin, or tan) in radian measure.

Special Expressions

- **IN**

You use IN to express that the characteristic value is within the allowed values defined. This allows you to express an OR relationship.

- COLOR IN ('red', 'blue', 'green')
This dependency is only processed if characteristic COLOR has one of these values.
- LENGTH IN (250 - 350)

Syntax of Object Dependencies

This dependency is only processed if the value of characteristic LENGTH is within the closed interval from 250 to 350.

- **SPECIFIED**

The condition is fulfilled if the characteristic has any assigned value. You can only use the expression **NOT SPECIFIED** in procedures.



SPECIFIED EXTRAS

The dependency is only processed if a value is assigned to characteristic EXTRAS.

- **\$SELF**

In actions, you must declare exactly which object the action refers to. In classification, an action always refers to the object being classified, so you must start the source code of each action with the expression **\$SELF**.



```
$SELF.MODEL EQ 'Childrens_bike'
```

- **IF**

You can include a condition in an action. You use **IF** to connect the condition to the action.



```
$SELF.QUANTITY = '6' if LENGTH > 200
```

Characteristic Preconditions (Example)**Characteristic Preconditions (Example)**

You want to define that characteristic BACKPEDAL_BRAKE for a bicycle only appears if the model 'Standard' is selected. All other models are supplied without a backpedal brake. A standard bicycle can be supplied with or without a backpedal brake.

To do this, you allocate a precondition to characteristic BACKPEDAL_BRAKE.

1. On the Class screen choose the tab page *Characteristics*. Select characteristic BACKPEDAL_BRAKE and choose *Characteristic* → *Change*.
2. On the basic data tab, choose *Extras* → *Object dependencies* → *Editor* to create a local dependency.
3. You see the dialog box for selecting the dependency type. Select *Precondition*.
4. Enter the following source code in the dependency editor:

```
MODEL EQ 'Standard'
```

5. Save your source code.

On the basic data tab page of the characteristic, you see a pushbutton labeled *Dependencies*.

6. Save your characteristic.

You only see the characteristic on the value assignment screen if you select the model 'Standard' first.

Characteristic Selection Conditions (Example.)

If the standard model of bicycle is selected, you must assign a value to characteristic **BACKPEDAL_BRAKE**. To do this, you assign a selection condition to characteristic **BACKPEDAL_BRAKE**.

1. Choose the tap page *Characteristics* in Class and the function *Change characteristic*.
2. You are on the *Basic data:* tab page
 - If the characteristic has no dependencies so far, choose *Extras* → *Object dependencies* → *Editor*.
 - If the characteristic has dependencies, choose *Extras* → *Object dependencies* → *Assignments*.

You see the screen for assigning object dependencies. Choose *Edit* → *New dependency* → *Local*.

3. You see the dialog box for selecting the dependency type. Select *Selection condition*.
4. In the editor, enter the following source code for your dependency:

```
Model EQ 'Standard'
```

5. Save your source code.

On the basic data tab page of the characteristic, you see a pushbutton labeled *Dependencies*.

6. Save your characteristic.

If the model of bicycle is **Standard**, you must enter a value for characteristic **BACKPEDAL_BRAKE**.

Conditional Action for a Characteristic (Example)

Conditional Action for a Characteristic (Example)

You can use an action for a characteristic in order to set the value “leather“ for the characteristic “Saddle“ when the model **trekking bike** or **mountain bike** is chosen. To do this, maintain an action for the characteristic **Model**.

1. On the Class screen choose the tab page *Document*. Mark the characteristic Model and call the function *Characteristic* → *Change*.
2. On the basic data tab page, choose *Extras* → *Object dependencies* → *Editor*.
3. You see the dialog box for selecting the dependency type. Select *Action* as type of object dependency.
4. Enter the following source code for your dependency:

```
$SELF.Saddle EQ 'Leather' if Model in ('Tr', 'Mo')
```

5. Save your dependency and save the characteristic.

If the model of bicycle is trekking or mountain bike, the value 'Leather' is selected for characteristic **Saddle**.

Characteristic Procedures (Example)

You can use procedures to define, for example, that the weight of a bicycle is dependent on the material used for the frame and the components selected for the bicycle.

Part 1

You define a procedure for characteristic FRAME_MATERIAL. The value assigned to characteristic FRAME_MATERIAL automatically infers a value for characteristic WEIGHT.

1. On the Class screen choose the tab page *Characteristics*. Select characteristic FRAME_MATERIAL and choose *Characteristic* → *Change*. The *Basic data* tab page appears.
2. Choose *Extras* → *Object dependencies* → *Editor*.
3. You see the dialog box for selecting the dependency type. Select *Procedure*.
4. Enter the following source code for your dependency:

```
$SELF.WEIGHT = 10 if FRAME_MATERIAL = 'aluminum',  
$SELF.WEIGHT = 14 if FRAME_MATERIAL = 'steel'.
```

5. Save your source code.

On the basic data tab, you see a pushbutton labeled  *Dependencies*.

6. Save your characteristic.

Part 2

The weight of the bicycle also depends on which components are selected. For example, if mudguards are selected, the weight increases by 0.5 kg.

You define a procedure for characteristic value 'mudguard' of characteristic EXTRAS.

1. On the Class screen choose the tab page *Characteristics*. Select characteristic EXTRAS. Choose *Characteristic* → *Change*. Select the value 'mudguard'.
2. Choose *Extras* → *Object dependencies* → *Editor*.
3. You see the dialog box for selecting the dependency type. Select *Procedure*.
4. Enter the following source code:

```
$SELF.WEIGHT = $SELF.WEIGHT + 0.5
```

5. Save your source code.

The O indicator is selected for this value.

6. Save your characteristic.

If you assign value 'aluminum' to characteristic FRAME_MATERIAL, the value 10kg is entered for characteristic WEIGHT. If you then assign value 'mudguard' to characteristic EXTRAS, 0.5kg is added to the WEIGHT.

Characteristic Value Preconditions (Example)**Characteristic Value Preconditions (Example)**

You can define that you can only select 21 gears for a bicycle if characteristic MODEL has the value 'Racing'. To do this, you assign a precondition to characteristic value '21_Gears' of characteristic GEARS.

On the Class screen choose the tab page *Characteristics*. Select characteristic GEARS and choose *Characteristic* → *Change*.

Choose the *Values* tab and select the value '21_gears'.

Choose *Extras* → *Object dependencies* → *Assignments*.

Choose *Edit* → *New dependency* → *Global* to create a global dependency.

Enter the name PRE_RACING_BICYCLE for your dependency.

You see the basic data screen for object dependencies. Select *Precondition* as the dependency type. Enter a description for your dependency.

Go to the dependency editor. Enter the following source code:

```
MODEL EQ 'Racing'
```

Save your source code.

Check the status of your dependency. The dependency does not have any effect unless it has 'released' status.

Save your entries. Your new dependency is automatically assigned to the characteristic value.

The O indicator is selected for this value.

This precondition means that you can only select the value 21_gears for characteristic GEARS if characteristic MODEL has the value Racing.

Action for a Characteristic (Example)

You can define actions so that the model selected always determines which handlebar is selected. For example, a racing handlebar is always selected for a racing bicycle.

You create an action for characteristic **Model**.

7. On the Class screen choose the tab page *Characteristics*. Select the characteristic **Model** and call the function *Characteristic* → *Change*.
8. Choose the tab page *Values*.
Select the value **Racing bicycle**.
9. You want to create a local dependency for this value. Choose *Extras* → *Object dependencies* → *Editor*.
10. You see a dialog box for selecting the dependency type. Select *Action* as type of object dependency.
Confirm your entry.
11. You see the dependency editor. Enter the following source code:

```
$SELF.Handlebar eq 'Racing_handlebar'
```
12. Save your entries.

As soon as you assign the value **Racing_bicycle** to characteristic **Model**, the action assigns the value **Racing_handlebar** to characteristic **Handlebar**.

Finding Initial Classes

Finding Initial Classes

Use

The purpose of a classification system is to allow you to find objects easily according to the search criteria you know, so that you can process these objects in another context.

However, before you can search for the object you want, you need to find a class in which the object is classified.

Activities

The following options for finding an initial class are supported:

[Finding a Class via Generic Entry \[Seite 113\]](#)

[Finding a Class via Matchcode \[Seite 114\]](#)

[Finding a Class via Characteristics \[Seite 115\]](#)

[Finding Root Classes of a Class Type \[Seite 117\]](#)

[Starting the Find Object Function \[Seite 119\]](#)

Finding a Class via Generic Entry

Procedure

You can find a class for finding objects from the *Class* field.

1. To do this, enter ' * ', to see all classes of one class type. You can also restrict the search by using a character string.



You only see the classes that have objects assigned to them.

2. You can choose a class for the object find function from the list of displayed classes. Place the cursor on the class and then choose the button  *Select*.

Finding a Class via Matchcode

Finding a Class via Matchcode

Procedure

Use input help next the field *Class* to find a class using Matchcodes. The following search possibilities are supported in the standard R/3 System:

- Find using key word
 - If you know one of the keywords of the class you require, you can use this catchword to find the class.
- Find using class number
 - Enter the number or the name that you used to identified class.
- Find using class groups
 - If you have assigned classes to a class group, you can enter the class group to display a list of all classes assigned to this class group.
- Find using DIN class
 - You can display a list of all classes that were created by copying DIN data.
- Find using standard
 - You can display a list of all classes that have a standard defined on the standards data screen.
- Find using document
 - You can display a list of all classes to which a specific document is linked.

Finding a Class via Characteristics

Procedure

To find the class you require on the basis of one or more of its characteristics, proceed as follows:

1. Enter ****** in the *Class* field.
2. Choose the function *Goto* → *Find in start class by characteristics*.
3. You see a screen on which you can enter the characteristics you want to use in your search.
 You can display the characteristic by choosing *Environment* → *Display char*.
4. You can choose between the following search strategies by choosing *Chge srch criteria*.
 - A Class contains all given characteristics
 - B Class contains one of the given characteristics
 - C Class does not contain all given characteristics
 - D Class contains none of the given characteristics
5. To see a list of all the classes that fulfill your search criteria, choose *Proceed*.



The characteristics must have been entered in the class directly, in a class maintenance function. Inherited characteristics are ignored in the search.



This example illustrates the differences between the different search strategies.

The following classes and characteristics are available for the example search:

Class	Characteristics
CL1	C1
K2	C2
CL3	C3
CL4	C4
CL5	C1, C2

If you enter characteristics C1 and C2 as search criteria, the results of the search are as follows:

Search strategy	Classes found
A (all characteristics entered)	CL5
B (one of the characteristics entered)	CL1, CL2, CL5
C (not all characteristics entered)	CL1, CL2, CL3, CL4
D (none of the characteristics entered)	CL3, CL4

Finding a Class via Characteristics

You only search in one class type. You can change the class type by choosing *Extras* → *Change class type*. If you want use a class type to find a class use *Extras* → *All class types*. The search then covers all available class types.

Finding Root Classes of a Class Type

Procedure

You can find an initial class for finding objects by displaying a list of all classes that are not assigned to a superior class.

You can use this search function if you know that the class you are looking for is not in a class hierarchy, or is at the top of a hierarchy.

To display all classes without a superior class, proceed as follows:

1. From the classification menu, choose *Find* → *Objects in class*. Enter ****** in the *Class* field.
2. Choose *Environment* → *Find root class of class type*.
3. Choose  *Execute*.

You see a list of all classes that are not assigned to a superior class. You can copy a class from the list to your application.

Finding Objects

Finding Objects

Purpose

Finding objects is part of the classification system. Once you have set up a classification system in your company, you can search for the objects you have classified.

You use the classes in which you classified objects to find the objects. You use the characteristics of the class as search criteria.

In the [Search Result \[Seite 128\]](#), you see a list of all the objects that match your search criteria.

Implementation Considerations

System performance is an important consideration when you are finding objects in classes. We strongly advise you to take note of certain points before you start, so that the result of your search can be produced in the best possible time. For this reason, please read [System Performance \[Seite 137\]](#).

Integration

Before you can find objects, you must create classes and use these classes to classify objects.

Starting the Find Object Function

Use

You use the characteristics of the class to find the objects you require. The search criteria you enter (characteristics and the values assigned to them) are compared with the characteristic values assigned to objects. You can search in the initial class only or in subordinate classes as well.

The screen for finding objects is divided into three areas: overview tree of class hierarchy, characteristic value assignment, and search result.



In the standard system, the indicator for the overview tree is set as a default. You can deactivate this by choosing *Extras* → *User settings*, *Search sett* tab and deselecting the *Display class hierarchy* indicator.

Procedure

To start the find objects function in a class, proceed as follows:

4. In the user menu, choose *Classification Find* → *Objects in Class*.
5. Enter the class and select a class type. Use the pushbutton  *Last class processed* to choose on of the last ten classes you have worked. These can also be classes that were processed with different applications.
 - If engineering change management is activated for classification, you can enter a date or effectivity parameter for your search.
6. Choose *Continue*.
 - You can define user-specific settings such as the display options and scope of the search by choosing *Extras* → *User settings*. **See also:** [User Settings: Finding Objects \[Seite 43\]](#)
7. Assign the values you want to use as search criteria to the characteristics of the class.
8. You have the following options for starting the search:
 - Choose  *Find in initial class* to get a search result for the class you started from and for which you assigned characteristic values.

Choose  *Include subordinate classes* to get a search result for the class hierarchy from the initial class downward. **See also:** [Find Objects in Subordinate Classes \[Seite 141\]](#)

Result

In the search result, you see a list of all the objects that match the search criteria you entered.

Please see also [Performance \[Seite 137\]](#).

See also:

[Settings in Search Results \[Seite 130\]](#)

Finding Objects in Other Applications

Finding Objects in Other Applications

Purpose

You can start the find objects function either in the classification system, or from another application.

You can use this function to find classified objects in any situation.

If you start the find objects function from another application, you can copy an object from the search result to the application you started from, then process the object. You can only select one object for each search to copy to your application.



In the standard system, object types vendor, material, and work center can be classified. If you need a specific work center in a routing, you can use the *Find via class* function to find classified work centers, and copy the work center to your routing.

Procedure

1. Use the possible entries to choose the search function *Find via classes*.
You are now in the find objects function.
2. Enter a class.
You have various options for finding an initial class for your search (for more information, see [Finding Initial Classes \[Seite 112\]](#)).
3. Enter your search criteria in the value assignment screen area.
4. In the search result, select the object you want to copy to your application.
5. Choose *Copy*. This pushbutton is only active if the function was called from a matchcode.

The object is copied to your application.

See also:

[Settings in Search Results \[Seite 130\]](#)

Using Additional Characteristics to Find Objects

Use

You can create characteristics for an object type that refer to a field in an object table. These characteristics are known as reference characteristics (for more information, see the R/3 Library *Characteristics*). Reference characteristics can also be used for finding objects.

Prerequisites

In the user settings, select *With additional Characteristics* on the *Value assgmt* tab. In the find objects menu, choose *Extras → User settings*.

Procedure

1. To use additional characteristics in your search, choose *Extras → Additional reference characteristics* from the find objects function. If no characteristics referring to the fields of your object type have been defined, this function is not active.
2. You see a dialog box with a list of the fields from the appropriate object table for which reference characteristics are defined.

Select the additional characteristics you want to use in your search, and choose *Continue*.

The additional characteristics are copied across and put at the end of the list of characteristics.



You have created reference characteristics that refer to the fields *Basic material* and *Volume* in the material master table MARA. These reference characteristics have not been assigned to the class you are using to find a material. You know that the material you are looking for is made of aluminum. You choose *Extras → Additional reference characteristics*, and see reference characteristics BASIC_MATERIAL and VOLUME. If you select reference characteristic BASIC_MATERIAL, this characteristic is displayed on the characteristic value assignment screen, and you assign the value Aluminum to it. This characteristic is then used for finding objects.

Defining the Comparison Type

Defining the Comparison Type

Use

You can define separately for each characteristic how the value you enter or select is handled by the *Find Objects* function.

Procedure

1. Select the characteristic for which you want to define a comparison type.
2. Choose  *Comp. type*.
3. You see a dialog box in which you define a comparison type.

For numeric formats:

- Comparison type: Inclusive (1): you see a list of all the objects that match your search criteria
- Comparison type: Exclusive (3): you see a list of all the objects that do not match your search criteria

For character formats (with string search):

- Comparison type: Inclusive (2): you see a list of all the objects that contain a string of characters in the sequence you enter
- Comparison type: Exclusive (4): you see a list of all the objects that do not contain a string of characters in the sequence you enter



If you do not select a comparison type for a characteristic, the setting *Inclusive* applies.

String Search for Character Formats

The find string function gives you the following options for entering a character string:

- If the position of the string is not relevant, enter the string with the special character *:

Example: S*	Finds all values that contain an 'S' at any point.
-------------	--

- If the position of the string is relevant, enter + for each variable character.

Example: +O++	Finds all values that are four characters long and contain an 'O' as the second character.
---------------	--

Executing a String Search

Use

If you want to use a character string to search in the Classification System (for example, all values that start with DA), you must change the comparison type first.

The standard settings do not allow a string search.

Prerequisites

You can only use a string search for character characteristics.

Procedure

1. Select the value entry field for the characteristic for which you want to execute a string search.
2. Choose *Comp. Type*.
You see a dialog box.
3. In the dialog box, select *Inclusive* and *Find string*.
Confirm your entries.
4. In column *T* after the characteristic values, you see a 2.

Result

For this characteristic, you can enter a character or character string with an asterisk (for example, DA*) as a search criterion.

Find with Filter

Find with Filter

Use

You can define your own filters for finding objects. These filters restrict the search result. For example, you can define a filter that restricts the search result to objects that have physical inventory of at least 50 pieces.

Features

1. You create filters per class type, in Customizing for the classification system.

First, create the report program in the *ABAP Workbench*.

You can use the sample report RMCLSFIL, supplied by SAP, to help you design your own filters.

2. If you have entered a filter report in customizing, you see the  *Find with filter* pushbutton on the value assignment screen.

You see a dialog box in which you can enter the name of the report. The filter report is run in addition to the find objects function.

On the search result, you can enter your filter criteria subsequently by choosing  *Filter*.

Find by Class Type

Use

You can search for classified objects by using the class type, as well as the class. Using a class type to search is useful if the object you are looking for could be classified in one of several classes.



You can only use this search for objects. For information on finding classes, see [Finding Initial Classes \[Seite 112\]](#).

Prerequisites

Classes have been created and objects have been assigned to these classes.

Features

A search by class type has the same function as searching by class.

If you want to define [User Settings \[Seite 41\]](#) for finding objects, choose *Extras* → *User settings*.

Activities

1. From the classification menu, choose *Find* → *Find Objects in Class Type*.
2. On the *Select chars* tab, enter the characteristics you need to describe the objects you are searching for.

For information on assigning values to characteristics, see [Value Assignment Functions \[Seite 68\]](#).

3. On the *Selection criteria* tab, you can use the F4 help to select values.

If you have defined default values, you can get these values for all characteristics or selected characteristics by choosing *Value assignment* → *Default values*. For information on setting default values, see [Defining How Default Values Work \[Seite 48\]](#).

You can display the predefined templates and your own templates for the different data types by placing the cursor on the characteristic and choosing *Value assignment* → *Propose template*.

4. To start the object search, choose  *Find in class type*.

For information on the search result, see [Functions in Search Results \[Seite 130\]](#).

Finding Objects in Third-Party Catalogs

Finding Objects in Third-Party Catalogs

Use

When you search for objects in the classification system, you can use a third-party catalog to find objects and use them in the SAP System, instead of using classes and their characteristics. These catalogs are provided by partners or third-party suppliers, not by SAP. Object numbers are transferred in tables, so that one or more objects can be searched for and returned.

Prerequisites

The catalog supplier only needs to write a function module that starts the catalog search.

SAP wrote the code for *Aspect*, and supplies this function module as standard.

The catalog supplier's database must be installed on a server in the network. The catalog supplier determines which software is used.

Features

First you assign a catalog to the class. The class is then called using the possible entries (matchcode search), and the catalog search is started automatically. System users can now search, compare, replace, and select the objects (components) they require, and copy them to the SAP System. The vendor evaluation data and alternative sources for procurement are also managed centrally in the catalog, so that you can place orders online. However, the exact scope of functions depends on the catalog supplier.

Activities

1. In the SAP System, enter transaction SM59 (*Tools → Administration → Administration → Network → RFC Destinations*). Define a connection to the catalog. Choose *Create* and enter the following data:
 - Name of the RFC destination
 - Type T
 - Start on frontend workstation
 - Program and path
2. Start transaction SE16 (*Tools → ABAP Workbench → Development → ABAP Dictionary*).
 - Enter **TCLAT** in the *Database table* field.
 - Choose *Display*. Enter further data by choosing *Utilities → Table contents → Create entries*.
 - Freely definable catalog name
 - Classifiable object table from Customizing for the *Classification System* (for example, MARA for the material master)
 - Function
 - RFC destination: NONE
3. Assign a class of class type 001 to the catalog. You can also use another class type for classifying materials.

Finding Objects in Third-Party Catalogs

SAP System objects can then no longer be assigned to the class. The class is only for the catalog connection.

4. Search for a material using the third-party catalog:
 - Display the material (transaction MM03).
 - Choose the possible entries, then *Materials for class*.
 - Enter the class with your catalog assignment, and choose *Continue*.
 - This opens the object search in the classification system. Choose *Find in initial class*.
 - This calls the search in the third-party catalog, and you can navigate to the class you require.
 - You can then select an object from this class. However, you will only want to do this if the object has an SAP material number, and the material exists in the appropriate SAP System client.

You can also use SAP report programs to find materials in catalogs. If the report program supports multiple selection, you can transfer several numbers to the material fields in the matchcode search.

Search Result

Search Result

Definition

An object appears in the hit list if the characteristic values assigned to the object match the search criteria you entered.

The Search Result for Single-Value Characteristics



If you are searching for an object using characteristics LENGTH, MATERIAL, and COLOR, the values you enter for these characteristics in the find object function must match the characteristic values assigned to the object. If you enter the value IRON for characteristic MATERIAL, but an object has the value STEEL, the object is not found, even if the other values you entered match the values assigned to the object.

The Search Result for Multiple-Value Characteristics



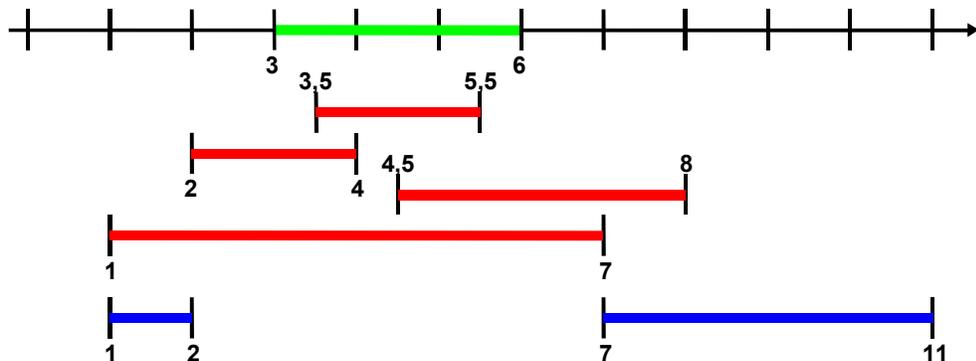
If you enter the values **red**, **green**, and **blue** for characteristic COLOR, objects that have the value **red** or **green** or **blue** are found.

The Search Result When Using Intervals

If intervals are assigned to objects as characteristic values, the search also finds objects whose characteristic values are partly within the interval you are searching for.



An interval of 3-6 was assigned to an object. If you enter any of the following intervals as search criteria, you find this object: 2-4, 3.5-5.5, 4.5-7, or 1-7



█ Object
█ Hits
█ No hits

Functions in the Search Result:

Find Object by Matchcode

This pushbutton is activated if you start an object search in the classification system by using matchcodes in other functions. You can then copy the results to your function by choosing this pushbutton.

Define Layout

If no layout is defined, the search characteristics and object fields from the user-specific settings are displayed.

1. Choose the pushbutton to determine which characteristics you want to display in the screen area for the result.
2. The dialog box contains the following fields: *Object*, *Object type*, *Description*, *Status*, *Class*, with a list of characteristics that you can select for your display variant. You can also define the sequence of characteristics.
3. Choose *Transfer*.
4. To save the layout, choose the arrow  next to the pushbutton, or choose  *Save layout* in the dialog box.



You can use drag & drop to change the sequence of characteristics.

Find Within the Search Result

You can search the entire search result using descriptions or values in selected columns or lines. We recommend that you follow some of the following tips.

Filter Result

If you want to define filter criteria for objects, object types, or object descriptions, select the fields you require and choose this pushbutton.

If you want to define and save general filter criteria, choose  *Change Layout* then the *Filter* tab.

To delete the filter definition, select the arrow next to the pushbutton.

Sorting Objects

The standard user settings sort objects in ascending order, according to object type, then according to object number. If the result is sorted in ascending order, classes are displayed before objects, whereas descending order displays classes after objects.

Use the pushbuttons *Sort in ascend. order* and *Sort in descnd order* to determine which fields you want to sort by in the search result.

- Select the columns and choose one of the pushbuttons. This sorts the contents of the columns in either ascending or descending order.
- If you select no columns, you see the dialog box for sorting. You can define sort criteria in this dialog box.

Functions in Search Results

Export to Other Office Applications

You can insert your result in a word processing document or a spreadsheet by choosing the *Export* pushbutton.

Expand or Collapse Multiple-Value Characteristics

Multiple-value characteristics are displayed in a different color. You can expand or collapse characteristics by choosing the pushbuttons or by double-clicking on a characteristic.

Compare Objects

Select the objects that you want to compare with each other, then choose *Compare objects*. To compare all objects with each other, choose  *Display* in the dialog box. The differences between the objects are highlighted in color.

You can also select one or more reference objects to compare against other objects. Select the reference objects and choose  *With reference objects* in the dialog box. The reference objects are highlighted in green and moved to the top of the list, to make things clearer. A value is shown in red if it does not occur in any of the reference objects.

You can use the sorting function here, too. In addition to the usual functions, you can choose *Default sequence* to show the original sequence again.

Save Result

You can save the results under a name. You can then choose  *Open search result* to display the search result again.

If you want to delete the search result, open the search result, then choose  *Delete search result*. To delete several search results, choose *Open search result*, then choose *Extract management*.

Frequently Used Transactions or Report Programs as a Pushbutton

1. Choose *Environment* → *Define function*.
2. Enter a transaction or a report program name in the dialog box, then choose *Continue* to use it only once or *Save* to use it multiple times.
3. The transaction or report program can now be executed by choosing the pushbutton that now appears.

You can also display a list of the transactions or report programs that you use most frequently by choosing *Environment* → *List functions*. The prerequisite for this is maintaining the list in Customizing. **More under:** [List of Frequently Used Functions \[Seite 134\]](#)

Tips and Tricks

Selecting Fields in Search Results

You can select fields in the result screen area in the same way as in Office applications:

- *Selecting individual lines or columns:* Hold down the *Control* key on the keyboard and use the mouse to select the lines or columns you want to select.
- *Selecting a larger section:* Hold down the *Shift* key and use the mouse to select the beginning and end of the section.

Functions in Search Results

- *Select all*: Choose the button representing an empty box in the top left-hand corner of the search result.

Column Width in Search Results

Use the context menu of the right-hand mouse button to set the width of the columns.

Display Options: SAP List Viewer (ALV)

The search result display is a list viewer (ALV). For details of the individual functions of the list viewer, see [SAP List Viewer \(ALV\) Grid Control \(BC-SRV-ALV\) \[Extern\]](#).

List of Frequently Used Functions

List of Frequently Used Functions

Use

You can use report programs or transactions to process objects in your search result. You define these functions in Customizing for *Classification*.

You define these functions per object type in Customizing. You can create your own reports in the *ABAP Workbench*.

You can enter an individual function in the search result itself. For example, you can display the stock/requirements overview for a material. Select *Environment* → *Define function*. An icon is then activated in the search result.

Features

List Standard Functions

1. In the search result, select the objects you want to process.
2. Choose *Environment* → *List functions*. You see a list of all the transactions and report programs that are defined in Customizing for the *Classification System*.
3. With the cursor, select the function you want to execute, and choose *Execute*.

Processing Logic

When you execute a function, the objects you selected are always processed with the function one at a time, one after the other.

However, in certain situations you may want to forward the selected objects for processing in a bundle. In this case, you must create your own function. To do this, you create an additional report program, so that all the selected objects can be processed at the same time. Your report program calls the original report program that you want to use to process objects.

Prerequisites

- From the result, an internal OBJEK table containing the object numbers of the objects found by the search is loaded to memory. This table must be imported from memory.
 - The parameter 'material' must be defined as a SELECT-OPTION in the called report program 'zzzzzzzz'.

Example of code for a report that processes objects as a bundle:

```
data:
    begin of objek occurs 100.
    include structure clobj. data:
    end of objek,
ranges: matnr for mara-matnr.
import objek from memory id sy-uname.
matnr-sign = 'I'.
matnr-option = 'EQ'.
```

List of Frequently Used Functions

```
loop at objek.
```

```
matnr-low = objek-obj.
```

```
append matnr.
```

```
endloop.
```

```
submit zzzzzzzz with material in matnr
```

- * *zzzzzzzz = report program for processing objects This can be a report program that you write yourself, or a report program that already exists in the R/3 System. See Prerequisites above.*

```
via selection-screen and return.
```

- * *To ensure that the function is only called once, program the following line immediately before you close the report program.*

```
export flg_exit_function from 'X' to memory id sy-uname.
```

You enter this report program as the function of the search result.

Reselect

Reselect

Purpose

If you want to restrict the search result further, choose *Reselect*.

This function ensures good system performance, because the search is executed in the existing search result. It does not read the database again.

Procedure

You can restrict the characteristics and characteristic values further for reselection.

1. Assign values to the characteristics again, restricting the scope of the values in comparison to before.
2. Choose *Reselect*.
3. You see a list of the objects that match your new search criteria.



To display the previous search result, choose  *Previous result*.

System Performance

System performance is an important consideration when you are finding objects in classes. However, there are no hard and fast rules for achieving the best response times. You constantly need to work out a compromise between getting the most out of the functionality and maintaining system performance.

The factors that influence system performance are described below:

System Environment

- Load on database server

Only use your database server as a database server. Run any batch jobs or other mass-processing functions on an application server.

- Characteristic value statistics

If frequent changes are made to your object assignments, we advise you to get the system to generate value statistics. For more information, see [Creating Value Statistics \[Seite 140\]](#).

It is not possible to say exactly how often you should do this. However, if you are having runtime problems, or if you have the impression that response times are getting longer, we advise you to create value statistics as a first step to solving the problem.



The data storage concept you use does not affect system performance. The assigned value data produced when you classify an object is stored independently of the classes. This is advantageous for the multiple classification of objects.

Characteristics Maintenance

- Definition of allowed values

The more values you define as allowed when you maintain the characteristic, the heavier the load on the system when you retrieve or process this information when finding objects.

- Multiple-value characteristics

If multiple values are allowed for a characteristic, the load on the system is greater in order to read these values.

- Interval values

We advise you to allow interval values for characteristics only where it is really necessary. If you start the find objects function with a characteristic for which interval values are allowed, for example, it is not possible to target reading of the database. All assignment records for this characteristic must be read sequentially.

- Case-sensitive characteristics

If you use case-sensitive, alphanumeric characteristic in your search, avoid using the text search option (finding via a character string).

System Performance

Use of Characteristics

- Characteristics maintained globally

Theoretically, there are two extremes:

- a) In each class, only characteristics created especially for this class are used.

This situation is good for runtimes, but does not take advantage of global characteristics maintenance. For example, if you maintain multiple classifications of an object, you can no longer ensure that the object always has the same value assigned to the same characteristic within a class.

- b) The characteristics are used in all classes.

This situation takes full advantage of global characteristics maintenance, but the response times for finding objects could be too long to be useful. When you first start the search, all values assigned to a characteristic are read, regardless of the class.

It is up to you how many classes you use your characteristics in. Important points to consider are how many objects in total are assigned to classes with the same characteristic, and how selective are the values assigned to objects (see *Search Criteria* below). A characteristic that has few allowed values and is used in a large number of classes is not selective.

Class Maintenance

- Using reference characteristics only (dummy class)

This constellation cannot access the database directly to read the assignment records. All classified objects are processed sequentially.

Classification

- Number of assignments to each class

The number of objects assigned to a class makes no difference if the objects have different characteristic values (see *Search Criteria* below), so that the list of objects produced from the search criteria is not too long.

Search Criteria

- Quality of search criteria

Finding objects without restricting the search criteria can take a long time. The response time is only limited by the number of characteristics and the number of objects assigned to the class. Wide intervals as search criteria can have a similar effect.

To limit the size of the hit list, thereby ensuring good response times, you need to run a qualified search in the SAP R/3 System. On the value assignment screen for finding objects, assign values to as many characteristics as possible.

- Selectivity of values assigned to individual characteristics

The more different values are assigned to objects for a characteristic, the higher the selectivity. High selectivity is a prerequisite for good response times.

Characteristics that have only two possible values, such as Yes/No, are not very selective.

Presentation of the Search Result

- Displaying objects with no value for a characteristic
We advise you not to activate this function, except in exceptional circumstances, because the load on the system for finding these objects is heavier.
- Number of sorted columns in the search result
The more columns in the result you decide to sort by, the heavier the system load for doing the sorting.

Creating Value Statistics

Creating Value Statistics

You can improve system performance if you regularly run value statistics for classes with a large number of objects assigned to them. The value statistics can be used in decision making when setting up database accesses.

The system creates the statistics internally. All you need to do is call the function for creating value statistics.



The more frequently you create, change, and delete object assignments, the more frequently you should refresh your value statistics.

Structure of the Statistics

The characteristics are sorted according to the number of assigned objects with identical values for the characteristic. Characteristics that have different values assigned to different classified objects are more selective than characteristics that have the same value assigned to a large number of classified objects. The most selective characteristics are at the top of the statistics.

The statistics are based on the number of times a characteristic is used in a class type.

The statistics also provide information on the distribution of values. The value that has the least identical assignments is used to find objects.

Reference Characteristics

Reference characteristics are not normally included in value statistics, because the value for a reference characteristic is stored in a master data table, not in classification tables.

1. To create value statistics, choose in the class system menu *Environment* → *Reorganization* → *Create statistics* from the classification menu.
2. Enter the class type and the client for which you want to create the statistics.
3. Choose  *Execute*.

Find Objects in Subordinate Classes

Use

You can search for objects in subordinate classes of the initial class, as well as in the initial class itself.

If you choose  *Find in initial class*, you see only objects that are assigned to this class. If you want to extend your search to subordinate classes, choose  *Include subordinate classes*.

Displaying a Class Hierarchy

In the standard system, you see the overview tree. To deactivate the overview tree, choose *Extras* → *User settings*.

Features

1. Enter an initial class for starting the search, or select an initial class from the overview tree.
2. You see the characteristics of the class for entering your selection criteria.
3. Choose  *Include subordinate classes*.
4. The search result shows the objects in the initial class and its subordinate classes that match your search criteria.

Finding Objects with Inherited Characteristics (Example)

Finding Objects with Inherited Characteristics (Example)

Characteristic THREAD_TYPE is assigned to class FASTENERS. When you assign class BOLTS to class FASTENERS, you restrict the allowed values to "metric". This restriction applies to any classes that are subordinate to class BOLTS.

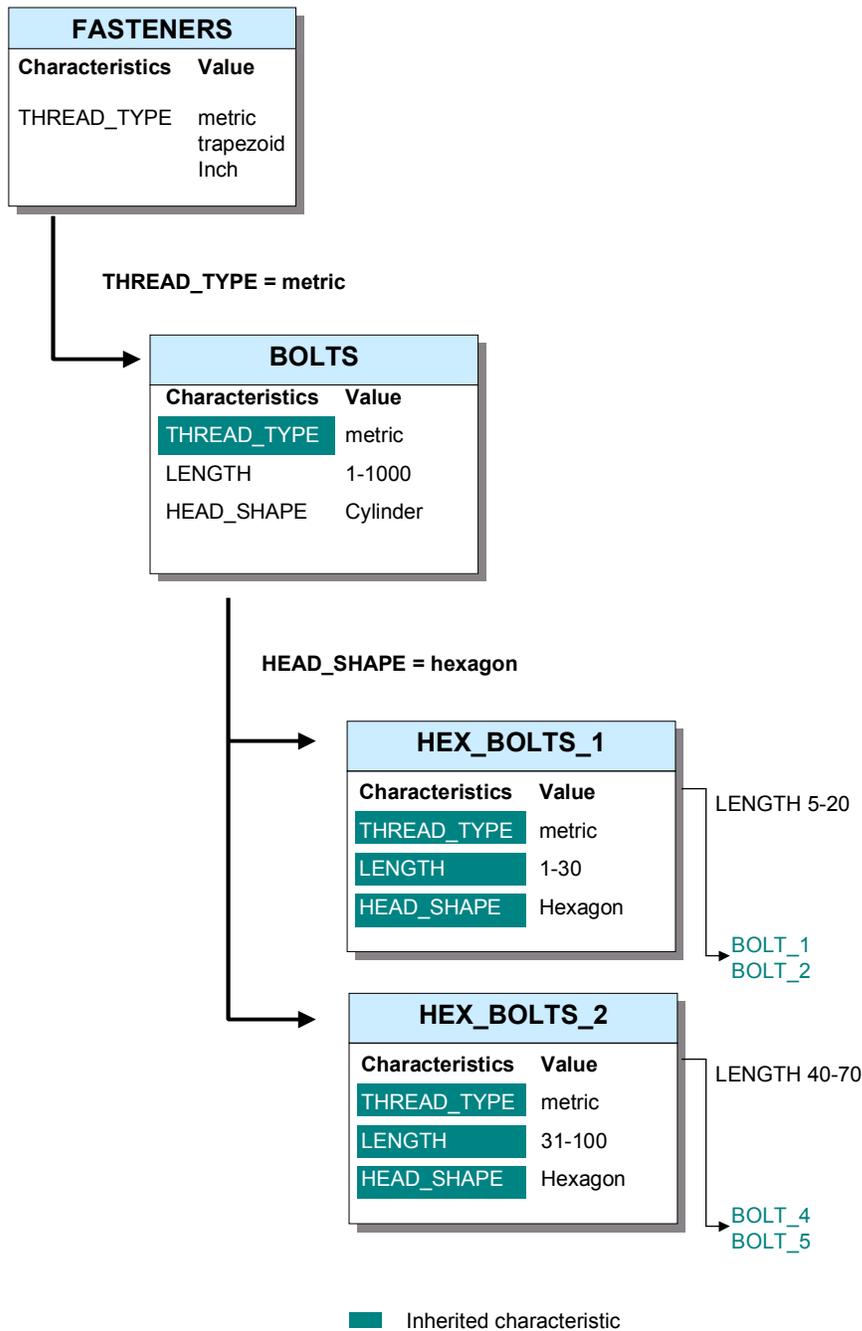
If you use this characteristic to find objects in class BOLTS, or a subordinate class, you can only enter the value "metric" for characteristic THREAD_TYPE.

When you assign classes HEX_BOLTS_1 and HEX_BOLTS_2 to class BOLTS, you restrict the value set for characteristic LENGTH. In class HEX_BOLTS_1, you only classify bolts that are 1-30mm long, and in class HEX_BOLTS_2, you only classify bolts that are 31-100mm long.

If you start searching in class BOLTS and enter a length of 40mm, you only see class HEX_BOLTS_2 in the search result. You can then continue searching in this class with any value from 31-100.

See also: [Inherited Characteristics \[Seite 81\]](#)

Finding Objects with Inherited Characteristics (Example)



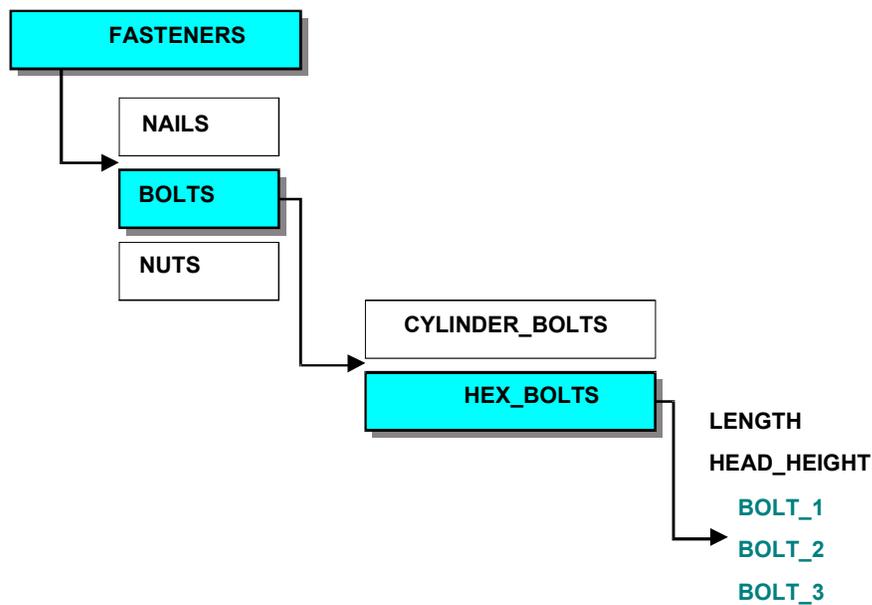
Finding Objects Without Inherited Characteristics (Example)

Finding Objects Without Inherited Characteristics (Example)

Your company has a class hierarchy for fasteners. You want to find hexagonal bolts, but do not know which class they are classified in, so you start your search in class FASTENERS.

The search result shows the classes that are assigned to class FASTENERS. You continue searching in class BOLTS.

The search result shows class HEX_BOLTS. You select class HEX_BOLTS, and use characteristics LENGTH and HEAD_HEIGHT to find the bolt you require.



Setting up Tables for Finding Objects

Use

All assigned characteristic values for all class types are always saved to table A USP. You can also save assigned values to generated tables. This lets you find objects more quickly.

To save the assigned values a second time, you generate a table for the class. The table contains all characteristics that are defined as index characteristics in the class, forming an index for these characteristics, to allow faster access to the assigned values.

The names of the tables are saved to system tables GEN_TABLES_MAIN and GEN_TABLES_SUB.

Prerequisites

- On the *Char.* tab of the class, the *Index relevant* indicator is set for each characteristic you want to include in the generated table.
- The characteristics used are all assigned to the class. Inherited characteristics are ignored. This means that you may need to assign a characteristic to several classes in a class hierarchy, even though it is inherited.
- Settings in Customizing:
In the Implementation Guide (IMG) for cross-application components, choose *Classification System* → *Classes* → *Maintain Object Types and Class Types*. Select the relevant table and choose *Class Types*. Double-click on the relevant class type to go to the details, where you ensure that the following settings are defined:
 - *Generated tables* must be selected.
 - *Multiple objs allowed* must be selected.
 - *ECH (parameter)* must not be set.

Features

1. From the classification menu, choose *Environment* → *Reorganization* → *Set Up Tables for Search*.
2. Enter the class type and the class for which you want to create a table. The valid-from date is only relevant if the characteristics or class have been processed with engineering change management.
3. Choose  *Execute* to generate and fill the table.

Restrictions

- Table generation cannot be used for variant class types (class type 300).
- You can select up to 12 characteristics per table for finding objects.
- You can select reference characteristics, but the search can only use the reference characteristics if data is stored redundantly in table A USP (for example, batches).
- If you change existing index characteristics or create new index characteristics in characteristics management, you must regenerate the table to avoid inconsistencies.

Setting up Tables for Finding Objects

If the *Without values* indicator is set in the user settings, table generation does not improve system performance.

Engineering Change Management in the Classification System

Use

There are two types of engineering change management:

- Engineering change management by *Valid-from* date

In the change master record for a change number, you enter a valid-from date on which changes made with the change number become effective.



You create a change number that has January 1, 2002 as the valid-from date. All changes made with the change number become effective on this date.

- Engineering change management with effectivity

In the change master record for a change number, you enter an effectivity type and the effectivity parameters.



You define effectivity type CUSTOMER for a change number, and enter the customers for which the changes apply as parameters.

Prerequisites

You have created a change master record in the engineering change management menu.

- If you want to work with validity periods, the change master record must have a valid-from date.
- If you want to work with effectivity, the change master record must have the effectivity type, effectivity parameters, and parameter values (for example, parameter CUSTOMER with value CUSTOMER = 'Smith').

For each change master record, you must specify the object types that can be processed using this change number. For the classification system, object types *Characteristic*, *Characteristics of class*, and *Classification* are supported.

The change master record is identified by a unique change number.

Features

You can process the following classification system objects with engineering change management:

Objects	Activity
Characteristics	Create, change, delete
Characteristics of class	Assign, delete from class, overwrite for class
Classification	Create, change, delete classification

Engineering Change Management in the Classification System

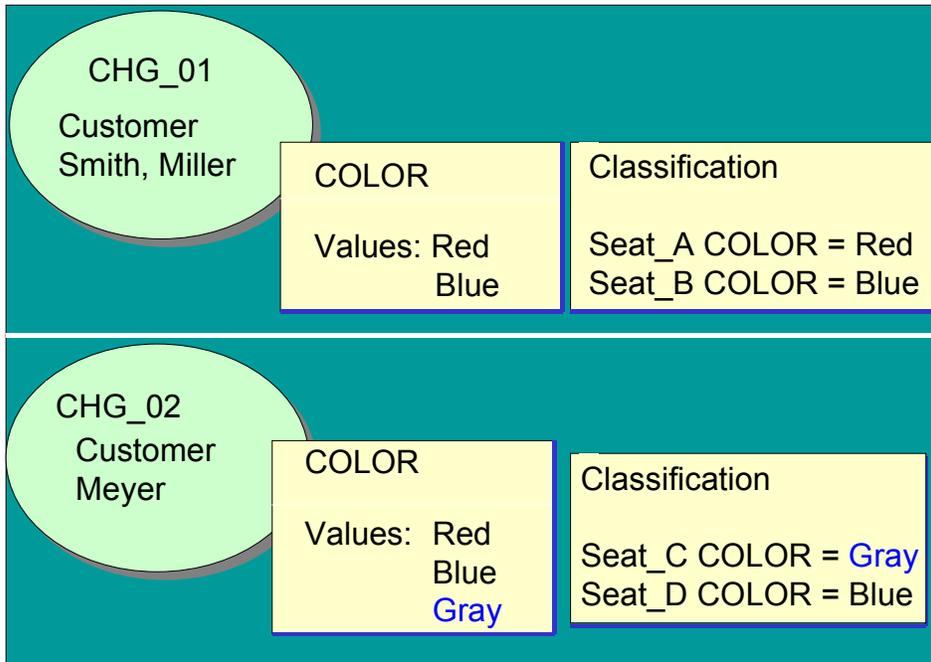
The following restrictions apply:

- Once you have used engineering change management to process characteristics, characteristics of a class, or classifications, you must use engineering change management for all further changes.
- Documentation for characteristics and characteristic values is not subject to engineering change management.

Changes with Effectivity

Use

You can use change numbers that have effectivity to make changes that depend on specific parameters, such as customer or serial number, to characteristics, the characteristics of a class, and classifications. You can define effectivity types in Customizing for *Engineering Change Management*.



Maintenance Values

In the change master record, you define the status on the basis of which changes are made with this change number. For example, changes made to characteristic COLOR with change number CHG_02 are based on the status for customer SMITH. This status determines which “maintenance values” apply.

You must enter a parameter value, because parameter effectivity does not provide a chronological sequence for determining the effective status.

Validity Periods

You can use either valid-from dates or effectivity type DATE to define validity periods for objects.

- Only use effectivity type DATE in combination with other effectivity types, such as CUSTOMER.
- If you want to work with validity periods only, use valid-from dates.

Changes with Effectivity

Changing Objects with Effectivity

If you work with change numbers that have effectivity in the classification system, you can enter a change number and a date.



The date you can enter in addition to the change number is a **selection date**. The effective status is selected according to the change number and date you enter – for example, the status for customer SMITH on January 1, 1999.

Any changes you make are stored for the change number, not the date.

The system uses the change number and selection date you enter to determine the effective status of objects.

- If the objects have only been processed with change numbers that have date effectivity, you see the change status that is effective on the date you entered.
- If the objects have been processed with change numbers that have date effectivity and change numbers that have parameter effectivity, the parameter effectivity has a higher priority than the date effectivity. If no effective status with parameter effectivity is found, the system uses the date to find an effective status.



When you use the date to search, change numbers that have effectivity type DATE (time period) have a higher priority than change numbers that have time effectivity (*valid-from* date). This still applies if the change number that has effectivity type DATE represents an older change status than the change status with a *Valid-from* date.

Creating Characteristics, Classes, and Classifications with Effectivity

Do not create master data such as characteristics and classes with a change number that has an effectivity type, because it may not be possible to determine the effective status if you call the object with another change number (see [Characteristics \(Example\) \[Seite 152\]](#)).

For this reason, only use engineering change management to change existing master records.

Displaying Characteristics, Classes, and Classifications

When you display characteristics, classes, and classifications, you can choose *Parameters* to enter parameters for selecting the relevant status of objects. For each parameter, you can only enter a single value, not multiple values or intervals.



You want to display the status of a classification for customer SMITH. When you display the classification, enter customer SMITH as a parameter.

You cannot display the status for customers SMITH and MEYER at the same time.

Finding Objects

When you search for classified objects, you enter parameters to determine the status of objects that you want to see. You can enter a date as well as parameters.

Prerequisites

You can only use change numbers with effectivity to process classifications if the *ECH (parameter)* indicator is set in Customizing for the class type.

Before you can set this indicator for an existing class type, you must use report program RCLAUSPT to prepare classification table A USP for **each class type**.

Once you have run the report program, the *ECH (parameter)* indicator is available for entry for the class type in Customizing for the *Classification System*. You can only set this indicator if the *ECH (time)* indicator is set.

See also:

SAP Library *LO Engineering Change Management*

Characteristics (Example)

Characteristics (Example)

Characteristic COLOR is created without a change number. It is then changed with the following change numbers.



For change numbers, the rank was activated in Customizing for engineering change management, under the control parameters.

Change no.	Validity	Maint. Value	Rank	Maintenance
CHG_01	Miller, Smith	Miller, Smith	10	Values 'Red' and 'Blue' maintained
CHG_02	Meyer	Smith	20	Value 'Gray' maintained

Change number CHG_01 is only effective for customers SMITH and MILLER. This change number was used to assign values 'Red' and 'Blue' to characteristic COLOR. If you classify an object with change number CHG_01, values 'Red' and 'Blue' are active.

Characteristic COLOR is changed with another change number, CHG_02. The change is made on the basis of effectivity for customer SMITH, so the maintenance value SMITH is entered. The changes are for customer MEYER. When you call the characteristic with change number CHG_02, you see characteristic COLOR with values 'Red' and 'Blue'. You maintain another value, 'Gray' for customer MEYER. If you classify an object with change number CHG_02, values 'Red', 'Blue', and 'Gray' are active.

Under the following circumstances, no valid status of a characteristic can be found:

- Characteristic COLOR is created with a change number. The a change number has a higher rank than the change number you want to use to change the characteristic.

Priority of change numbers:

Change no.	Rank	Maintenance
CHG_01	20	Characteristic COLOR created
CHG_02	30	Value 'Gray' maintained
CHG_03	10	Change statuses of CHG_01 and CHG_02 are not found, because these change numbers have a higher rank. You see a message telling you that the characteristic does not exist or is not valid.

- Characteristic COLOR is created with a change number. The change number contains a parameter value that is not for one of the effectivity parameters that were created when the change number was created.

Change no.	Maint. Value	Rank	Validity	Maintenance
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Characteristics (Example)

CHG_01	Miller, Smith	10	Miller, Smith	Characteristic COLOR created
CHG_02	Smith	20	Meyer	Characteristic changed and value 'Gray' maintained
CHG_04	Cohen	40	Cruz	The initial status with change number CHG_01 cannot be found, because the parameter value COHEN is not one of the parameters values of CHG_01. Characteristic COLOR is not known in this context.

See also:

R/3 Library *LO Engineering Change Management*

- [Rank for Same Effectivity Type \[Extern\]](#)
- [Defining the Rank of a Change \[Extern\]](#)

Assigning Characteristics to a Class (Example)

Assigning Characteristics to a Class (Example)

Class SEATS has the following change statuses:

Change Statuses:

Change no.	Change Master Record	Validity	Maintenance
CHG_01	Effectivity type CUSTOMER Rank 10	Miller, Smith	Assign characteristic COLOR
CHG_DATE	Valid-from dates	01.01.1998	Assign characteristic EXTRAS
CHG_05	Effectivity type CUSTOMER Maint. Value Miller Rank 20	Cohen	Assign characteristic SPECIAL

Selected Change Status

- If you display the class with change number CHG_01 on January 1, 1998, you see characteristics COLOR and EXTRAS.
- If you display the class with change number CHG_05 on January 1, 1998, you see characteristics COLOR, EXTRAS, and SPECIAL.
- If you display the class with change number CHG_DATE, you ONLY see characteristic EXTRAS.
- If you display the class with another change number, CHG_06, which has rank 15, characteristic SPECIAL is not displayed, because the rank of CHG_06 is lower than the rank of CHG_05. Only change numbers whose rank is lower than the selected change number are selected.

Classification (Example)

Displaying the Valid Characteristics and Values

On the value assignment screen, you only see the characteristics of the class that are valid in the context you are working in.

- The rank of the change number cannot be lower than the rank of the change number with which characteristics are assigned to the class.
- The parameter values entered must be defined in the effectivity parameters of the change number used to assign characteristics to the class.

Determining the Valid Change Status

The change status of the characteristics of the class and their values is determined by the change number and the date you enter.

Change no.	Maint. Value	Rank	Validity	Classification of material M_01 in class SEATS
CHG_02	Smith	30	Meyer	COLOR = Gray

The assignment of material M_01 is maintained with change number CHG_02. The changes made with this change number are only valid for customer MEYER. This change number was used to assign value 'Gray' to characteristic COLOR. Value 'Gray' is assigned when classifying material M_01.

Characteristic EXTRAS was assigned to the class with change number CHG_DATE, which has valid-from date January 1, 1999, However, the classification function was called on May 4, 1998. This means that the characteristic is not yet effective in the class.

Characteristic SPECIAL is not displayed either, because it was assigned to the class with change number CHG_05. Change number CHG_05 is only effective for customer COHEN. Change number CHG_02 is based on the status for customer SMITH.

Changes with a Valid-From Date

Changes with a Valid-From Date

Use

If you enter a change number that has a valid-from date on the initial screen of characteristics maintenance, class maintenance, or classification, the valid-from date is copied from the change master record. Changes become effective on this date.

Initial status:

- If the objects have already been processed with other change numbers that have valid-from dates, you see the change status that is effective on the date of this change number.
- If the objects have already been processed with change numbers that have effectivity, no valid change status can be determined.



Example: You create a characteristic with the valid-from date January 1, 2000. To do this, you enter change number CHG_01, which has valid-from date January 1, 2000. You can change the characteristic with another change number – CHG_02, with valid-from date January 1, 2001 – and enter another allowed value.

You use change number CHG_01 to assign the characteristic to a class, then use this change number to classify a material in the class. When you classify the material, you see the characteristic as effective on January 1, 2000.

If you change the classification with change number CHG_02, you see the characteristic as effective on January 1, 2001, so you can assign the additional value to the material.

Prerequisites

You have activated engineering change management for the class type in Customizing for the *Classification System*.

Engineering change management is always active for characteristics and characteristics of a class.

Features

- You cannot assign characteristics to a class if they are not yet effective or no longer effective on the date you enter.
- You cannot classify an object in a class if the class is not yet effective or no longer effective on the date you enter.
- If engineering change management is activated for a class type, you can enter a date for your search in the *Find Objects* function.
- You can only use one change number to change characteristics, the characteristics of a class, or classifications on any one date.

Mass Change for Assigned Values

Purpose

The mass change function lets you change large quantities of existing data. This is particularly useful if you change your classification model.

You simply use the object search or a customer enhancement to find the objects whose values you want to change.

Prerequisites

The selected objects must have the same class type and object type as the initial object.

Procedure

From the classification system menu, choose *Classification* → *Classification* → *Mass Change for Assigned Values*.

There are three mass processing functions:

1. [Copy Values Assigned to Object \[Seite 158\]](#)
You can start with any object. From the characteristics of the object, you select the values you want to copy to target objects.
2. [Set and Change Values \[Seite 160\]](#)
You start with a class type and an object type. You can change characteristic values or set new values. Target objects can be classified, or existing assignments can be deleted.
3. [Assign Values in Matrix \[Seite 162\]](#)
You start with a class. You select the relevant characteristics of the class. You can then assign values to characteristics of target objects in an easy-to-read table.



You can use customer enhancement CLCTMS03 to activate processing of object dependencies when finding objects for mass processing.

Copy Values Assigned to Object

Copy Values Assigned to Object

Use

You can use this function to copy assigned characteristic values for any object to other objects.

Prerequisites

The target objects selected have the same class type and the same object table as the template object, but the target objects and the template object need not be classified in the same class.

The characteristics for the values you want to copy are the same for the template object and the target objects.

The following restrictions apply:

- Interval values are not processed.
- User-defined data types are not supported.
- Reference characteristics are not supported.

Procedure

1. Enter a class type. If the class type is for multiple object types, you see a list of the object types that you can select. Select an object type.

If you have processed the object with a change number, you can enter the change number or a date to determine a valid change status.

2. On the *Values* tab, select the characteristics you want to copy and choose  *Copy char. values*.

Change Values

You can change values for target objects. For example, you can select several values for multiple characteristics. To display the values, choose the possible entries. **This does not change the template object!**

3. On the *Target objs* tab, enter the objects to which you want to copy the values.

Find Target Objects

- You can use the *Find object* pushbutton to select target objects. Select the objects you require in the search result and choose  *Copy*.

See also: [Finding Objects in Other Applications \[Seite 120\]](#)

- You can also use customer enhancement CLMMD001 (Selection of Objects for Mass Processing) to select objects. Choose *Find object: enhancement*. This pushbutton only appears if the customer enhancement is activated.

Change Number

On the tab, you have a second opportunity to enter a change number. If you want to maintain the new values of the target objects with a change number, enter a number here.

Copy Values Assigned to Object

Indicator: Overwrite existing values

If you select this indicator, any existing values for the selected target objects are deleted and overwritten. To see existing values, choose  *Display values*.

4. To copy the assigned values to the target objects, choose  *Carry out a mass change*.

You can test the mass change first, to avoid inconsistency and ensure that the result is what you expect. Choose  *Test*. The test is logged, but it is not written to the database.

Log

Once you have made the change, the log is displayed automatically. If you want to see the log again during further processing, choose  *Display log*.

If you double-click on the step, you see messages that you can postprocess directly in a second screen area. Select the message and choose  *Continue processing objects*. For more information on the log, see the  *Application help*.

More Functions

For a description of the individual pushbuttons on the *Values* tab, see [Value Assignment Functions \[Seite 68\]](#).

On the *Target objs* tab, you see the term *Entry*. This shows you how many objects exist when you are making complex mass changes. You can also go directly to an object by entering the line number.

Set and Change Values

Set and Change Values

Use

You can use this function as an easy way to change, delete, or create large quantities of assigned characteristic values. Target objects can be classified, or existing assignments can be deleted.

Prerequisites

The selected target objects must have the same class type and object type as the template object.

The characteristics must be the same for the target objects and template object.

No interval values are processed. No reference characteristics are processed.

Procedure

4. Enter a class type. If the class type is for multiple object types, you see a list of the object types that you can select. Select an object type.
5. Enter the characteristics whose values you want to change or set. To find characteristics, display the possible entries. To display all the characteristics of a class, choose *Chars of class* and enter the class.

Characteristics: Old and New Values

You can replace old values with new values. You can set completely new values if no value was assigned before, or delete old values. Use the possible entries to select values.



You can only select **one** value for each line. If you want to process several values, you must select the same characteristic several times.

Changing Values with an Operator

If a characteristic has numeric format, you can use an operator to recalculate values. You can add, subtract, multiply, and divide figures. For character format, the operator fields are grayed out.



Example

Characteristic	Old Value	Operator	Operand	Unit	New value is calculated automatically
Screw1	1.2	+	2.2	cm	3.4 cm
Screw2	40.4	/	2	mm	20.2 mm

6. On the *Target objs* tab, enter the objects to which you want to copy the new values.

For more details on this procedure, a description of further functions, and information on the log, see the third and fourth steps in [Copy Values Assigned to Object \[Seite 158\]](#).

Set and Change Values

7. On the *Assignments* tab, you can classify the target objects or delete existing assignments. Enter the class or select one using the possible entries. You can go to class management by choosing  *Display class*.
8. Choose  *Carry out a mass change*.

Assign Values in Matrix

Assign Values in Matrix

Use

You can use this function to assign new values to several objects in a table.

Prerequisites

All characteristics and objects are assigned to the same class, which you specify at the top. Characteristics can be inherited.

Procedure

1. Enter the class type and a class. If the class type is for multiple object types, you see a list of the object types that you can select. Select an object type.
2. Specify the characteristics to which you want to assign values. To find characteristics, display the possible entries. If you want to use all characteristics of the class you specified or another class, choose *Chars of class*.
3. On the *Target objs* tab, enter the objects to which you want to assign values.

For more details on this procedure, a description of further functions, and information on the log, see the third and fourth steps in [Copy Values Assigned to Object \[Seite 158\]](#).

4. To assign values to the target objects in the matrix, choose  *Carry out a mass change*.

Multiple values are displayed in a different color in the matrix, but you can only see one value. Use the possible entries to display further values.

Restrictions

The following functions are not supported:

1. Expanding values on the user interface.
2. Query for required characteristics. If you use required characteristics, the status is automatically set to *Incomplete*.
To release assigned values that are complete, you can define automatic release in Customizing for the *Classification System* by choosing *Maintain Object Types and Class Types*. For classification status 5, set the *Incomplete manual* indicator and *Auto. release*.
3. Displaying and maintaining the classification status.
4. Display of inconsistencies.
If inconsistencies occur during matrix processing, the status is automatically set to *Incomplete*. You can display the errors in the classification transactions CL20N and CL24N, by choosing *Inconsistencies*. In CL24N, you can also start a collective release.

Reporting in the classification system

Use

The classification system supports a number of reporting functions for obtaining information on objects.

The following reporting functions are available to you:

- [Create Class Directory \[Seite 164\]](#)

This function gives you information on the classes you have created and the number of objects assigned to these classes.
- [Display Class without Superior \[Seite 165\]](#)

This function allows you to see which classes are not assigned to any other class. You can select a class to process (assign) if required.
- [Creating Class Hierarchy Directory \[Seite 166\]](#)

This function allows you to explode part of a class hierarchy or network to see how your class hierarchy is structured above or below a specific class.
- [Create Object Directory \[Seite 168\]](#)

This function gives you information on the objects assigned to classes and their classification data.
- [Carry out Object Comparison \[Seite 169\]](#)

This function allows you to juxtapose and compare the classification data of two objects.
- [Display Classification Status \[Seite 170\]](#)

This function allows you to display all the assignments in one class type with a specific classification status.

Features

You can call these reporting functions by choosing *Environment* in the classification system menu.

You can print any of these lists.

Producing a Class List

Producing a Class List

Use

The class list function lets you list classes according to various criteria. You can list:

- All classes whose names you enter, or all classes in a specific name range
- All classes in a class group, all classes created or changed by a specific user, or classes with a specific status
- Only classes with assignments



You can also display a class list in ALV format. For details of ALV and its functions, see [ABAP List Viewer \(ALV\) Grid Control \[Extern\]](#).

Procedure

To produce a class list, proceed as follows:

1. From the classification menu, choose *Environment* → *Reporting* → *Class list* or *Class list (ALV)*.
 - Enter the criteria for the list of classes you want to see.
 - Define your display options.
 - Enter the date on which you want to produce the list.
 - If you have processed the class with change numbers that have parameter effectivity, select *Parameter effectivity*. You see a dialog box where you enter the parameters. The system determines the status of the characteristics that is effective for these parameters.
 - If you choose *Class list (ALV)*, the *Display options ALV tree ctrl* indicator must be selected.
 - Choose *Execute*.
2. You see a list of classes that match the criteria you defined. To see how many objects are assigned to a class, choose *Number of assignments*.

Display Class without Superior

Use

The reporting function *Class without superior* shows you all the classes that have no superior classes. These can be classes that are not in a class hierarchy, or classes at the top of a hierarchy.

Procedure

To display classes that have no superior class, proceed as follows:

1. From the classification menu, choose *Environment* → *Reporting* → *Class without superior*.
2. If you want to see a list of all classes without a superior class in one class type, select the class type and enter "*" in the *Class* field.
 - You can also enter a name range.
 - If you want to produce a list for a specific date, enter the date.
 - If you have processed the class with change numbers that have parameter effectivity, select *Parameter effectivity*. You see a dialog box where you enter the parameters used to define effectivity. The system determines the status of the characteristics that is effective for these parameters.
3. Choose *Execute*.

You see a list of all classes that have no superior class, the class status, and an indicator showing whether objects are assigned to each class.
4. From the result screen, you can go directly to the *Class to classes* assignment function and assign a class to one or more superior classes.

To do this, select a class and choose *Assign*.

Displaying a Class Hierarchy

Displaying a Class Hierarchy

Use

You can use the class hierarchy to see how the hierarchy is constructed above or below a specific class.

Procedure

To explode a hierarchy starting from a specific class, proceed as follows:

1. From the classification menu, choose *Environment* → *Reporting* → *Hierarchy Class Directory*.
2. Select the class type you require. Enter the class for which you want to explode the hierarchy.
Depending on which fields you select, you can explode the hierarchy either upward or downward from the class you enter:
 - To see the classes below your class in the hierarchy, select *Subordinate classes*.
 - To see the classes above your class in the hierarchy, select *Superior classes*.
 - To see the classes below and above your class in the hierarchy, select *Subordinate classes* and *Superior classes*.
3. To display the hierarchy in graphical form, select *Graphical display*.
4. Enter a valid-from date if you want to produce the list on a specific date.
If you have processed the class with change numbers that have parameter effectivity, select *Parameter effectivity*. You see a dialog box where you enter the parameters used to define effectivity. The system determines the status of the characteristics that is effective for these parameters.
5. Choose *Execute*.
You see the hierarchy exploded from the class you entered.

Graphical Display

This function displays the class hierarchy in graphical form. The class you started from is a different color from the others. You see the name and the description of each class. You can display a class from the list by double clicking on the class you require.

- If the class has characteristics or classified objects, you see the fields for objects and characteristics. You can display the characteristics or classified objects by using the dynamic popup menu (right-hand mouse key).
- Classes with other superior or subordinate classes that are not part of the current hierarchy are shown in a different color. You can display these superior or subordinate classes or insert them in the graphic by using the dynamic popup menu (right-hand mouse key).

If all the superior and subordinate classes of a class are displayed in the current hierarchy, the class is not shown in a special color.

Displaying a Class Hierarchy

- If characteristic values are assigned to a classified objects, you see the text *Values* against the assignment arrow. If the classification is not yet complete (classification status 2 or 3), the arrow is shown as a dotted line.
 - In the navigation area, you define which section of the hierarchy is displayed.
- You can increase or reduce the size of the display area, and justify the individual class nodes.

Graphical Maintenance for Class Hierarchy

You can use graphical maintenance instead of the assignment functions in the classification menu to set up or change a class hierarchy.



You cannot create, change, or delete classes using graphical maintenance. You cannot use a class that was created using Engineering Change Management.

If a class is not yet shown in the graphic, you can insert the class as follows:

1. Choose *Edit* → *Insert class*.
2. Enter the class you want to insert. The class must already exist. The class is then shown in the processing area.

To maintain an assignment, proceed as follows:

1. Choose *Assign class*.

The cursor is shown as a pencil.

2. You can assign the class to another class by drawing a line connecting the two classes.

To delete an assignment, select the assignment arrow and choose *Delete assignment*.

Producing an Object List

Producing an Object List

Use

The *Object list* function lets you display a list of objects that are assigned to classes. You can enter a date for the object list.

If you have classified objects using change numbers with parameter effectivity, you can set the *Parameter effectivity* indicator. You see a dialog box where you enter the parameters. The system determines the status of the classifications that is effective for these parameters.



You can also display an object list in ALV format. For details of ALV and its functions, see [SAP List Viewer \(ALV\) Grid Control \[Extern\]](#).

Procedure

To produce an object list, proceed as follows:

1. From the classification menu, choose *Environment* → *Reporting* → *Object list* or *Object list (ALV)*.

- If you choose *Object list (ALV)*, the *Display options ALV tree ctrl* indicator must be selected.

2. On the initial screen, enter your settings for the object list:

If you select *Select characteristics*, you see an additional selection screen, where you can specify which characteristics are displayed in the object list.

You have the following options:

- You can produce a list for a class and class type.

- a. Enter the class and class type.

If you want to list objects of one type, and the class type supports classification of more than one object type, enter the object table you require.

- b. Choose  *Execute*.

You see a list of all the objects that are assigned to this class.

- You can produce a list by entering objects.

- a. Select the *Select objects* indicator on the initial screen, and choose  *Execute*.

- b. You see a screen for entering the objects for which you want to produce a list.

- c. Choose *Continue*.

You see a list of classes that have these objects assigned to them.



If organizational areas are maintained, you only see the characteristics for the organizational area for which you are authorized.

Comparing Objects

Use

You can use an object comparison to juxtapose two objects and compare their classification data.

You can enter a date for the comparison.

If you have classified objects using change numbers with parameter effectivity, you can set the *Parameter effectivity* indicator. You see a dialog box where you enter the parameters used to define effectivity. The system determines the status of the classification that is effective for these parameters.

Procedure

1. From the classification menu, choose *Environment* → *Reporting* → *Object comparison*.
2. You see a dialog box in which you select an object type, such as material or equipment.
3. Enter the objects you want to compare.

If you only want to compare the classification data for a specific class, enter the class you require.

4. Choose  *Execute*.

If you entered a class type but not a specific class, you see a list of classes in which object 1 and object 2 are classified.

5. Select the classes in which you want to compare the classification data of the two objects.
6. Choose *Object comparison*.

You see a two-column list, with the characteristic values assigned to the two objects side by side for comparison.



If organizational areas are maintained, you only see the characteristics for the organizational area for which you are authorized.

Displaying the Classification Status

Displaying the Classification Status

Use

This function enables you to display a list of assignments in one class type with a specific classification status. For example, you can list all objects whose classification data is locked.

Procedure

1. From the classification menu, choose *Environment* → *Reporting* → *Classification status*.
2. Enter the class type for which you want to list assignments according to classification status.
If required, you can also define whether you want to list only assigned classes or only other assigned objects.
3. Choose  *Execute*.
4. You see a dialog box in which you select the classification status for which you want to list the assignments.
5. The resulting list screen shows the assignments with the classification status you selected. You see the assigned classes and other objects, and the class to which they are assigned.

Copying Standards Data

Use

This section describes how to copy standards data to the R/3 System. It is theoretically possible to copy standards data from data carriers of any standards organization. However, the standards organization must first provide information on the structure of the data. The standards data can then be copied from a PC or workstation to the R/3 System.



Currently, the only standards data that can be copied to the R/3 System is from DIN (German Standards Institute).

There are Three Steps to Copying Standards Data

- Copying the standard and creating a standards class with the characteristics that are taken from the table of characteristics in the standard ([Copying DIN Standards \[Seite 172\]](#))
- Copying the characteristic data records that contain the allowed values for the characteristics of the materials you want to create from the standard ([Copying Characteristic Data Records \[Seite 173\]](#))
- Creating a material and classifying this material using the standards data, or classifying an existing material using the standards data ([Creating a Material from a Standard \[Seite 174\]](#) and [Classifying a Material with Standards Data \[Seite 175\]](#))

Copying DIN Standards

Copying DIN Standards

Procedure

To copy standards data to the R/3 System, proceed as follows:

1. From the classification menu, choose *Environment* → *Copy standard* → *Copy DIN standard*.
You see a screen on which you enter the following information:

Class	Name of the class you want to create
Class types	Class type of the class you want to create
Characteristic Description	Description of the class you want to create
Logical file	File that contains the DIN standards data

2. Choose *Execute*.

The system copies the following characteristics data from the file you entered:

- Code letter
- Description
- Format
- Length and
- Unit when available

Individual characteristics

For each characteristic you copy, enter the name you want the characteristic to have in your R/3 System.

You can also define whether you are required to assign a value to the characteristic on the characteristic value assignment screen when you classify an object.

3. Save your data.

From the standards data you copied, the R/3 System creates a class. On the standards data screen of the class, the fields *Standard*, *Standard number*, *Version*, *Issue date*, and *Char. table* are automatically filled by the system. The class has status **0**. This means that you must release the class before you can classify standardized materials in this class.

Copying Characteristic Data Records

Use

Once you have created the class with your standards data, the next step is to copy the characteristic records. A characteristic record contains the values assigned to a specific standardized material and is used later to classify the standardized material in a DIN class.

Procedure

To copy characteristic records to the R/3 System, proceed as follows:

1. From the classification menu, choose *Environment* → *Copy standard* → *DIN* → *Copy char. data*.
2. Enter the following data on the next screen:

Class	Name of the class to which you want to assign the characteristic records you are copying
Class types	Class type of the class you entered
Standards data no.	Number identifying the standard to which the characteristic data refers, used to store the data in the R/3 System
ID numbers	The characteristic records you are copying to the R/3 System
Logical file	The file containing the DIN characteristic records and the exact path

3. Choose  *Execute*.

The program copies the data to the R/3 System, and you see a message telling you how many records were copied.

Creating a Material from a Standard

Creating a Material from a Standard

Use

Once you have created a class with standards data and copied the characteristic records from the standard, you can create materials and classify them in the standards class, using the data from the characteristics records.

Procedure

To create a material, proceed as follows:

1. From the classification menu, choose *Environment* → *Copy standard* → *Material from std.*
2. Enter the following data on the screen:

Material	Number of the material you want to create
Material description	Description of the material you want to create
Material type	Material type of the material you want to create
Industry sector	Industry sector for the material
Base unit of measure	Base unit of measure for the material
Basic material	Material from which the material is made. Here, you can enter the material from which the material is made.
Standards data no.	Number for selecting the characteristic record according to the standard. This number refers to a specific class in which the material is classified.

3. Choose *Create*.

You see the characteristic records saved under this number.

4. Select the record you require by choosing *Choose*.

In the background, the material is classified in the class to which you assigned the characteristic record. The values from the characteristic record you selected are automatically assigned to the characteristics of the class.

5. To check the result, you can display the values assigned to the material.

Classifying a Material with a Standard

Procedure

You may want to change a material that is already classified, in a class without characteristics, for example, by classifying the material in a different class.

You can do this manually in the system at any time. For materials that you want to classify as standard materials, you can also get the system to classify the material.

Procedure

To classify a material as a standard material in a DIN class, proceed as follows:

1. From the classification menu, choose *Environment* → *Copy standard* → *Material from std.*
2. Enter the following data on the next screen:

Material	Number of the material you want to classify
Standards data no.	Number under which you stored the DIN standard number in the R/3 System

3. Enter the standards data number or choose *Find standard number* to select the standard you require. Select the standard by choosing *Choose*.
4. Choose  *Assign*.

You see a list of characteristic records. Choose *Choose* to select a record.

In the background, the material is classified in the class to which you assigned the characteristic record. The values from the characteristic record you selected are automatically assigned to the characteristics of the class. If the material is already classified, this leads to multiple classification.

Enhancements in the Classification System

Enhancements in the Classification System

Use

In order to optimize the business processes in the classification system, you can change some classification functions of the SAP System by using customer exits.



If a user in characteristics maintenance has not maintained default values for finding objects, you can use enhancement CLCTMS01 (*Default values for finding objects*) to define default values in a table or add further values. The enhancement contains the function module EXIT_SAPLCTMS_001. This links to the include program ZXCTMSU01. Enter your program code in this include.

See also:

[Enhancements to the SAP System in the Area of PDM \[Extern\]](#)

[Customer Exits \[Extern\]](#)

Prerequisites

When you use a function exit, you must create a company-specific include program that matches the programming logic of the function module.

Features

The following is an overview of the enhancements supported in the classification system (development class CL).

Description	Enhancement	Function Modules	Include
Default values for finding objects	CLCTMS01	EXIT_SAPLCTMS_001	ZXCTMSU01
Check for same classification	CLCTMS02	EXIT_SAPLCTMS_002	ZXCTMSU02
Change or predefine classification of an object	CLFM0001	EXIT_SAPLCLFM_001	ZXCLFU01
Call before updating classification data	CLFM0002	EXIT_SAPLCLFM_002	ZXCLFU02
Selection of objects for mass processing	CLMMD001	EXIT_SAPLCLMMD_001	ZXCLMMDU01
Manipulation of the search result	CLSC0001	EXIT_SAPLCLSC_001	ZXCLSCU01
Object dependencies in object search	CLCTMS03	EXIT_SAPLCTMS_003	ZXCTMSU03

The documentation on individual customer enhancements is in the SAP System with the enhancements themselves. To display the documentation on a customer enhancement:

1. Choose *Tools* → *ABAP Workbench* → *Utilities* → *Enhancements* → *Definition*.

Enhancements in the Classification System

2. Enter the technical name of the customer enhancement.
3. Select *Documentation* and choose  *Display*.