

SAP Business One How-To Guide



PUBLIC

How to Create User-Defined Fields and Tables

Applicable Release:

SAP Business One 8.8

All Countries

English

July 2009



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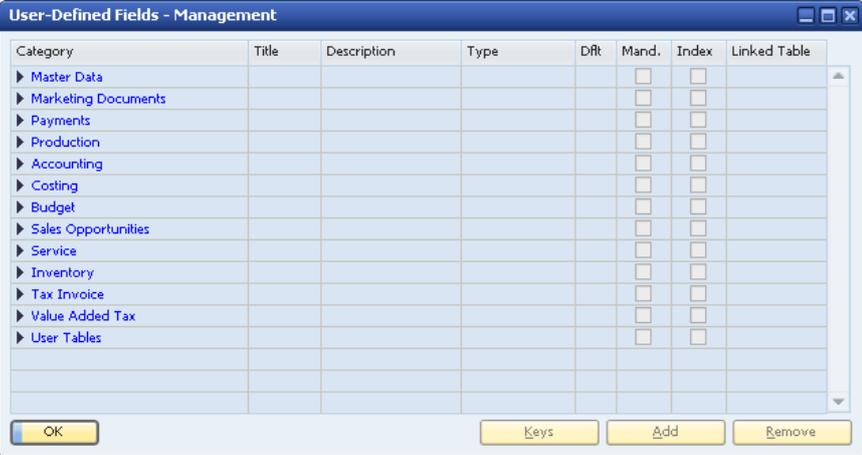
Creating User-Defined Fields and Tables

SAP Business One provides a comprehensive set of tables and fields in each of its modules. However, if your company requires additional tables and fields for its day-to-day work, SAP Business One enables you to create your own user-defined fields in existing system tables or your own user-defined tables.

User-defined fields, as described in [Managing User-Defined Fields](#), enable you to add fields to existing tables to keep track of additional information. For example, you can add a field called *CarNumber* to the *Employee Master Data* table to keep track of the license plate number for each employee.

User-defined tables, as described in [Managing User-Defined Tables](#), can be used in one of the following ways:

- To represent business objects, such as vehicle master data, or to group logical sets of user-defined fields
- To hold valid values for other user-defined fields. You can link user tables to user-defined fields, and require users to select from the values in the tables.

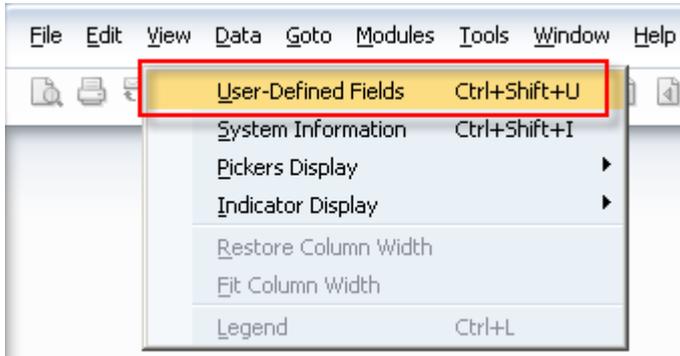
Menu Item	Description
<p><i>User-Defined Fields - Management</i></p>	<p>Enables you to add, modify, and remove user-defined fields, as described in Managing User-Defined Fields.</p> 
<p><i>Settings</i></p>	<p>Enables you to modify how user-defined fields are displayed, as described in Modifying the Display of User-Defined Fields.</p> <p>This menu item is only visible when a form is open with its user-defined fields displayed.</p>



Note

For information about the *User-Defined Values-Setup* submenu, see the how-to guide *How To Define and Use User-Defined Values* in the documentation area of SAP Business One Customer Portal at <http://service.sap.com/smb/sbocustomer/documentation>.

View Menu



Menu Item	Description
<i>User-Defined Fields</i>	<p>Displays the user-defined fields for the currently selected form.</p> <div> <p>The screenshot shows the 'Business Partner Master Data' form. The 'User-Defined Fields' panel is visible, displaying various fields such as 'Tel 1', 'Tel 2', 'Mobile Phone', 'Fax', 'E-Mail', 'Web Site', 'Shipping Type', 'Password', 'Factoring Indicator', 'Project', 'Alias Name', 'Contact Person', 'ID No. 2', 'Remarks', 'User-Defined Commission', 'BP Channel Code', and 'Territory'. The panel is titled 'General' and has a close button (X) in the upper-right corner.</p> </div> <p>After the user-defined field's panel has been displayed once, the panel is displayed every time you open the form.</p> <p>To hide the panel, click in the upper-right of the panel.</p>

Managing User-Defined Fields

This section describes how to add and remove user-defined fields, and how to display and enter data into these fields.

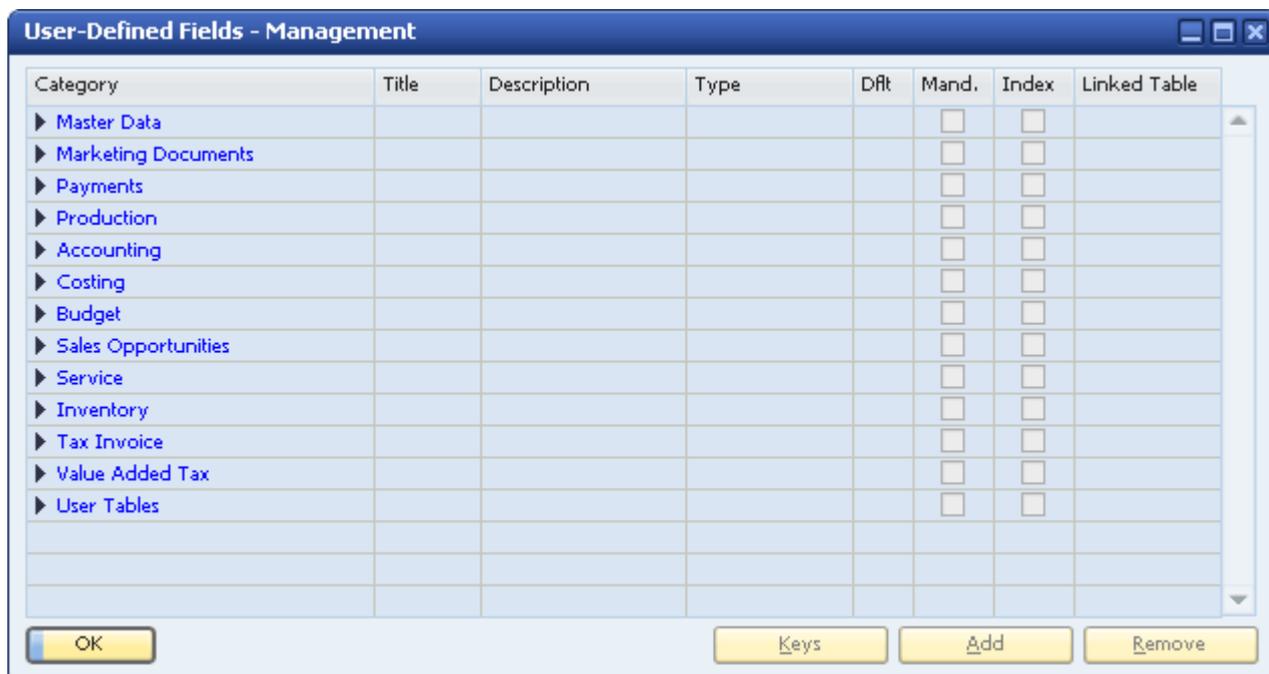
Creating User-Defined Fields

When creating user-defined fields, you specify a field name and the type of data to be contained in the field. You can also specify the valid values for the field.

Procedure

1. In the menu bar, choose *Tools* → *Customization Tools* → *User-Defined Fields - Management*.

The *User-Defined Fields - Management* window opens:

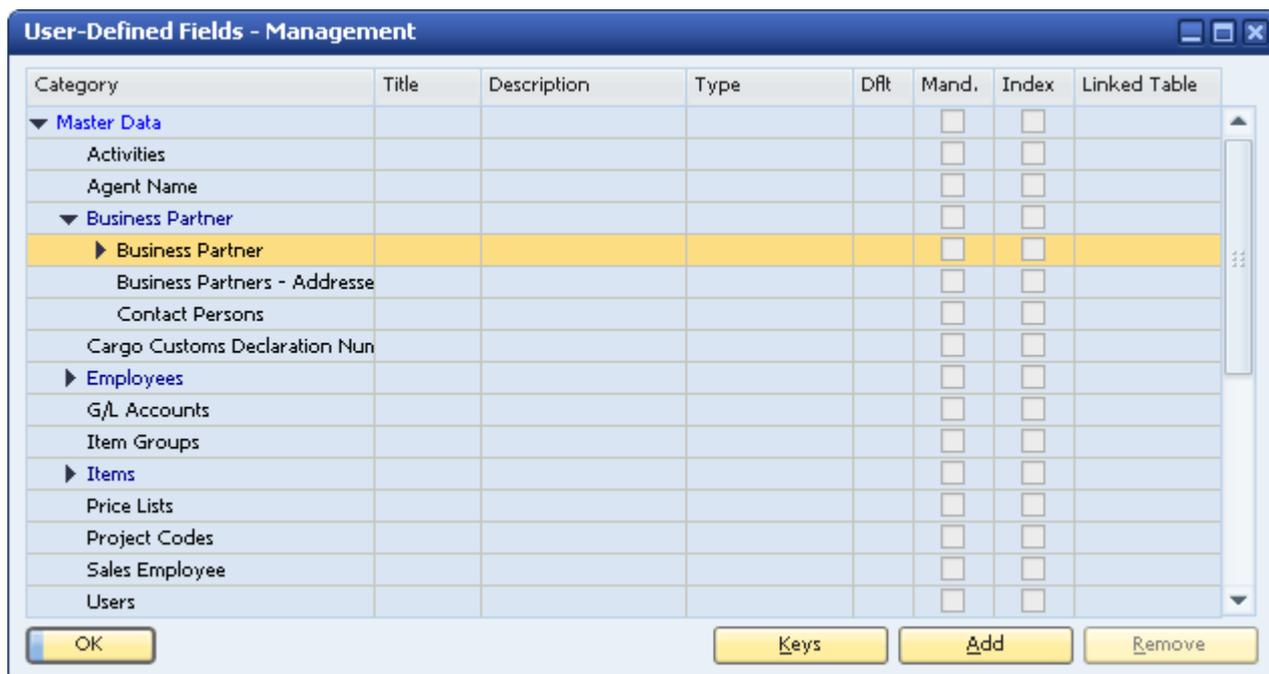


Category	Title	Description	Type	Dflt	Mand.	Index	Linked Table
▶ Master Data					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Marketing Documents					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Payments					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Production					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Accounting					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Costing					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Budget					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Sales Opportunities					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Service					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Inventory					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Tax Invoice					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Value Added Tax					<input type="checkbox"/>	<input type="checkbox"/>	
▶ User Tables					<input type="checkbox"/>	<input type="checkbox"/>	

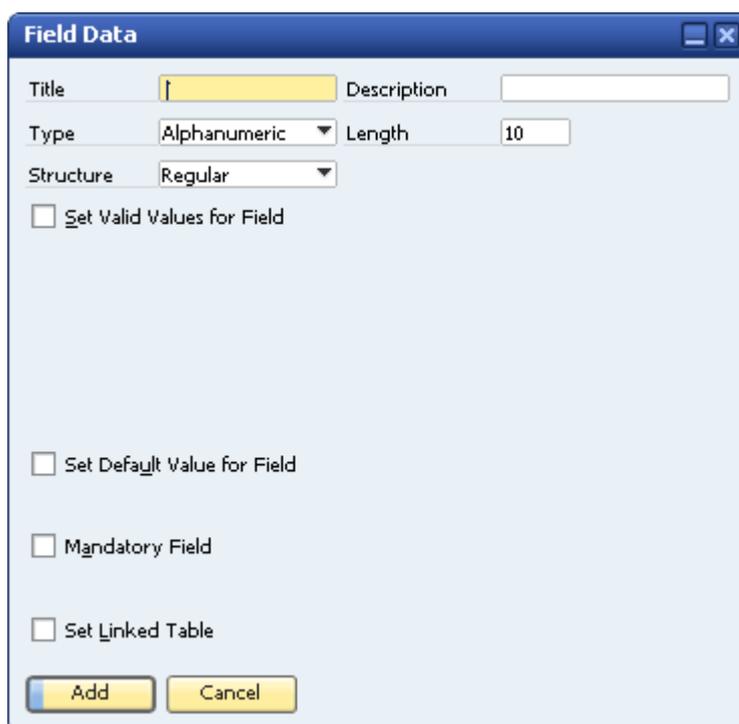
The window displays a hierarchy of categories (form types) to which you can add user-defined fields. Some categories affect a single form (such as *Business Partners* under *Master Data*), while others affect multiple forms (*Title* and *Rows* under *Marketing Documents*).

To view all available form types, click ▶ (*Expand*).

2. Select the category to which you want to add a field, and choose the *Add* button.



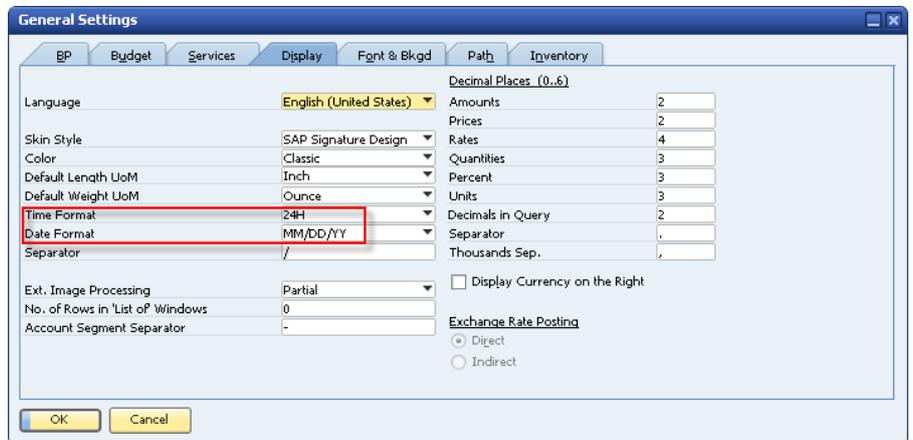
The *Field Data* window appears.

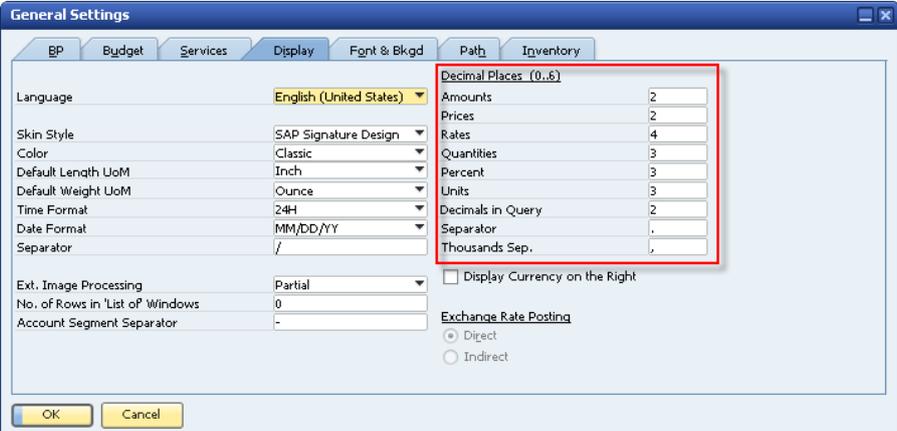


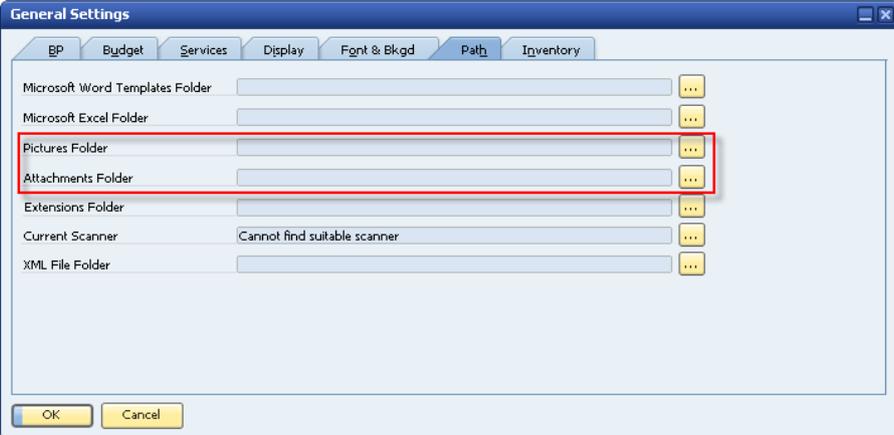
3. Specify the name and type of field by entering the following fields in the *Field Data* form:
 - **Title:** The field name.
The *Title* value cannot contain spaces or special characters.
A field is added to the database with the prefix U_ followed by the field name specified here. The full name, with the prefix, is displayed in the query generator when you view a table's list of fields.
 - **Description:** The field display name.

- **Length:** The size of the field.
 If the field type is *Alphanumeric*, the length is the maximum number of characters.
 If the field is *Numeric*, the length is one more than the maximum number of digits. For example, specify 11 to allow up to 10 digits to be entered.
- **Type and Structure:** Describes the type of data to be contained in the field.
 The type and structure determines the type of data that can be entered into each field, and how it is displayed. For more information about how different types of fields are displayed to the user, see *Entering Values in User-Defined Fields*.
 The following table describes the *Type* field options, and the *Structure* field options for each type:

Type	Description / Structure Options
<i>Alphanumeric</i>	A series of characters. The following are the structure options for this type: <ul style="list-style-type: none"> • Regular: Lets you enter up to 254 characters. • Address: For future use. • Telephone No.: If automatic dialing is set up, lets you dial the number by clicking it. • Text: Lets you enter: <ul style="list-style-type: none"> ○ 2 GB of text in header fields ○ 255 KB of text in row fields
<i>Numeric</i>	Integers up to 10 digits long. There are no structure options for this type.
<i>Date/Time</i>	Date or time. The following are the structure options for this type: <ul style="list-style-type: none"> • Date: Lets you enter a date. • Time: Lets you enter a time. The display format for dates and time is determined by system initialization settings, located in <i>Administration</i> → <i>System Initialization</i> → <i>General Settings</i> → <i>Display</i> tab.

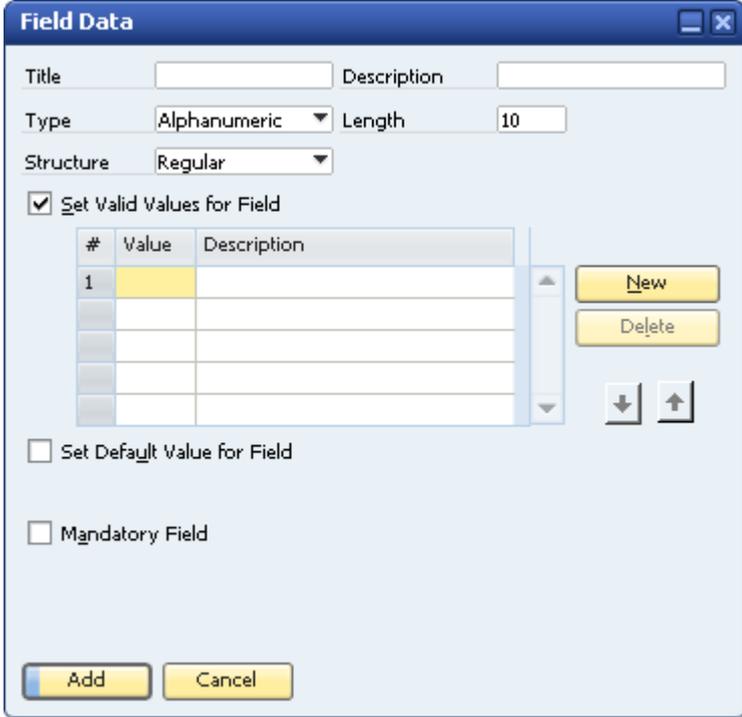


Type	Description / Structure Options																				
<p><i>Units and Totals</i></p>	<p>Integer and decimal numbers.</p> <p>The following are the structure options for this type:</p> <ul style="list-style-type: none"> • Rate • Amount • Price • Quantity • Percents • Measure <p>The structures are identical except for the display format. The formats are determined by system initialization settings on the <i>Display</i> tab in <i>Administration</i> → <i>System Initialization</i> → <i>General Settings</i>.</p>  <table border="1"> <thead> <tr> <th colspan="2">Decimal Places (0..6)</th> </tr> </thead> <tbody> <tr><td>Amounts</td><td>2</td></tr> <tr><td>Prices</td><td>2</td></tr> <tr><td>Rates</td><td>4</td></tr> <tr><td>Quantities</td><td>3</td></tr> <tr><td>Percent</td><td>3</td></tr> <tr><td>Units</td><td>3</td></tr> <tr><td>Decimals in Query</td><td>2</td></tr> <tr><td>Separator</td><td>.</td></tr> <tr><td>Thousands Sep.</td><td>,</td></tr> </tbody> </table>	Decimal Places (0..6)		Amounts	2	Prices	2	Rates	4	Quantities	3	Percent	3	Units	3	Decimals in Query	2	Separator	.	Thousands Sep.	,
Decimal Places (0..6)																					
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Percent	3																				
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Decimals in Query	2																				
Separator	.																				
Thousands Sep.	,																				

Type	Description / Structure Options
<p><i>General</i></p>	<p>Links and images.</p> <p>The following are the structure options for this type:</p> <ul style="list-style-type: none"> • Link: Lets you enter a link to a file or to a Web address • Image: Lets you enter a link to a picture <p>When you add a link to a file/picture, the file/picture is copied to folders specified in the initialization settings. You must specify these folders on the <i>Path</i> tab in <i>Administration</i> → <i>System Initialization</i> → <i>General Settings</i>.</p> <p>Specify a folder for files (attachments) and another for pictures.</p> 
<p><i>Identity</i></p>	<p>A numeric field to which values are assigned automatically, starting with 1, and increasing by 1 with each addition.</p> <p> Example</p> <p>If you have 5 sales quotations, the field automatically contains the values 1, 2, 3, 4, 5 for the 5 records of sales quotations. If you delete one of the sales quotations, the next sales quotation you create is assigned a unique number that was never used before (in this example, number 6).</p>

- Specify the valid values for the field. This step is optional.

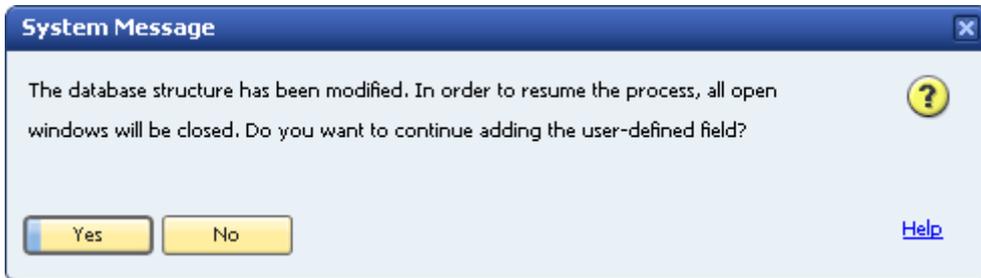
Select one or more of the following checkboxes in the *Field Data* form:

Field Name	Description
<i>Set Valid Values for Field</i>	<p>Specifies that there is a predefined list of valid values for this field. For this field, users must pick from a dropdown list of valid values.</p> <p>To enter a valid value, choose the <i>New</i> button and enter a value and a description.</p> 
<i>Set Default Value for Field</i>	<p>Specifies that there is a default value for the field in cases where the user does not select one.</p> <p>Choose a default value from the list (if you provided a list of valid values) or enter a default value.</p> <p>This setting is mandatory when the field is defined as mandatory.</p>
<i>Mandatory Field</i>	<p>Requires that you enter a value for this field in every document or form.</p> <p>If you select this checkbox, you must specify a default value for the field.</p>
<i>Set Linked Table</i>	<p>Specifies that the valid values for this field are the keys (values for the <i>Code</i> field) in a specific user-defined table.</p> <p>For more information, see <i>Linking a User Table to a User-Defined Field</i>.</p> <p>If you select this checkbox, <i>Set Valid Values for Field</i>, <i>Set Default Value for Field</i>, and <i>Mandatory Field</i> are disabled.</p>

- Choose the *Add* button.

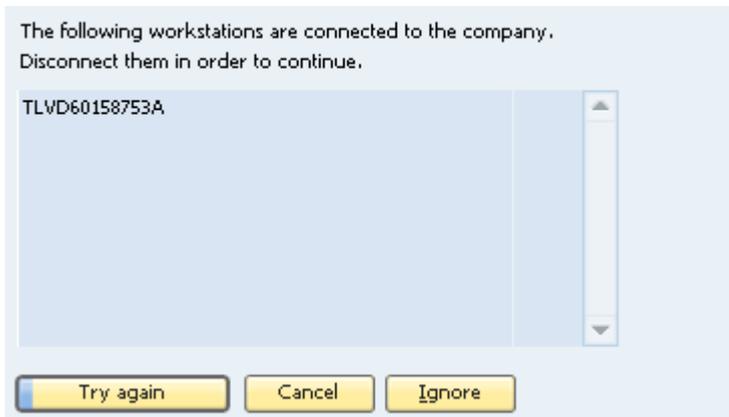
Note

The following message is displayed:

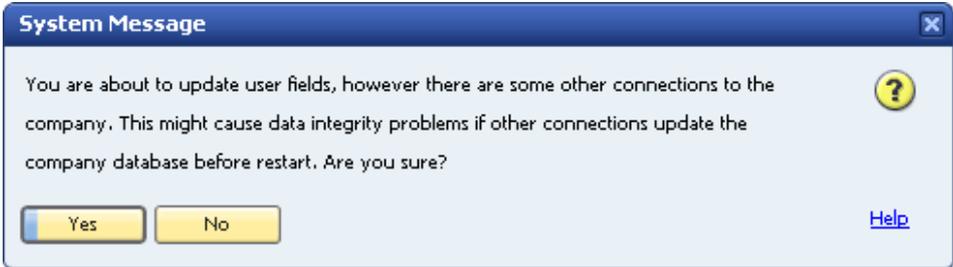


To add the field, click the Yes button.

If another user is logged on to the same company, the system displays the following message, listing the machine from which the user is logged on:



Choose one of the following buttons:

Option	Description
<i>Try again</i>	Checks again for other logged-on users and if there are none, saves the field.
<i>Cancel</i>	Cancels the save operation and returns to the <i>User-Defined Fields – Management</i> window.
<i>Ignore</i>	<p>Saves the field and displays the following:</p>  <p>To add the new field (or update the existing field), choose the Yes button.</p> <p>This action refreshes the database tables connected to this field. If you are currently working with one of these tables, the information on the form being processed is lost.</p>

Result

The following occurs when you add a user-defined field:

- Information about the new field (such as its name, its size, and the table to which it was added) is stored in the **CUFD** table (user field definition table).
- The field is added to the relevant table. The prefix **U_** is added to the name of the field in the database table, indicating that it is a user-defined field.



Example

- If you add a user-defined field called *Driver* to the business partners category table, the field *U_Driver* is added to the **OCRD** table.
- If you add a user-defined field to a sales or purchasing header, all header tables of sales and purchasing documents are updated. All tables that start with 'O' (**OINV**, **ODLN**, **OPCH**, and so on), have the prefix **U_** added to the name of the field in the database table.
- If you enter valid values, they are added to the **UFD1** table.

Linking a User Table to a User-Defined Field

Instead of defining valid values for a field within the field definition, you can specify that the valid values are contained in a user-defined table.

This can be helpful if you have several fields in different tables with the same valid values, or when you want to update the valid values dynamically.



Note

You can link a field to a user-defined table only.

Prerequisite

- You are adding a user-defined field, as described in [Creating User-Defined Fields](#), and you have opened the *Field Data* window to define the new field.
- The field type is *Alphanumeric* and its structure is *Regular*.
- The *Set Valid Values for Field* and *Set Default Value for Field* checkboxes are not selected.

Procedure

1. In the *Field Data* window, select the *Set Linked Table* checkbox.



The screenshot shows the 'Field Data' dialog box with the following settings:

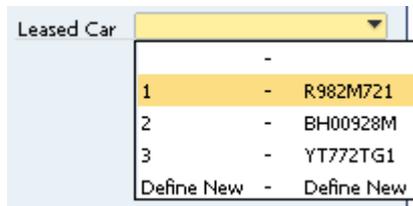
- Title: [Empty text box]
- Description: [Empty text box]
- Type: Alphanumeric (dropdown)
- Length: 10 (text box)
- Structure: Regular (dropdown)
- Set Valid Values for Field
- Set Default Value for Field
- Mandatory Field
- Set Linked Table
- Linked Table: T_LINK (dropdown)
- Buttons: Add, Cancel

A new field is displayed to the right.

2. In the new field to the right, select the user table that contains the valid values for the current field.
3. Fill out the rest of the form, and choose the *Add* button.

Result

When the field is displayed on the user interface, a dropdown list appears when you edit the field. The *Code* and *Name* fields are displayed, and the value of the field is the *Code* value of the selected item.



Creating Table Keys

You can set a user-defined field (or several fields together) as a key in the database table to make the field (or set of fields) unique and prevent duplicates.

Procedure

1. In the menu bar, choose *Tools* → *Customization Tools* → *User-Defined Fields - Management*.
2. Select the table for which you would like to define a key, and choose the *Keys* button.

The *User Tables Keys – Setup* window appears.



3. To create a new key for the table, choose the *New* button. The system creates a key with the name *IX_0*.

In the *Key Name* field, you can change this default name. You can create as many keys as you need by choosing *New*. You can also browse between the different keys by selecting them from the dropdown list.

4. In the table, select the user-defined fields you want to include in the selected key.



Note

You can define more than one user-defined field in one key.

5. Select the *Unique* checkbox.

If the key is made up of one field, values entered for that field must be unique. If the key is made up of more than one field, the set of values for these fields must be unique.

6. Choose the *Update* button, and then the *OK* button.

Updating User-Defined Fields

To update a user-defined field, do the following:

1. Open the *User-Defined Fields – Management* form by choosing *Tools → Customization Tools → User-Defined Fields – Management*.
2. Select a field by clicking it.
3. Choose the *Update* button.

The *Field Data* window appears. You can update the field settings except for *Title*, *Type*, and *Structure*.

Removing User-Defined Fields



CAUTION

This action is irreversible and deletes all values saved in this field in all its related objects. A query with a removed user-defined field displays an error when you run it.



Recommendation

Before you remove a user-defined field, back up the database.

To remove a user-defined field, do the following:

1. Open the *User-Defined Fields – Management* form by choosing *Tools → Customization Tools → User-Defined Fields - Management*.
2. Select a field by clicking it.
3. Choose the *Remove* button.

Displaying User-Defined Fields

After creating user-defined fields, you can display them while working in the relevant forms.

For example, if you added the field *Car Number* to the *Business Partner* category, you can display the field in the *Business Partner Master Data* form.

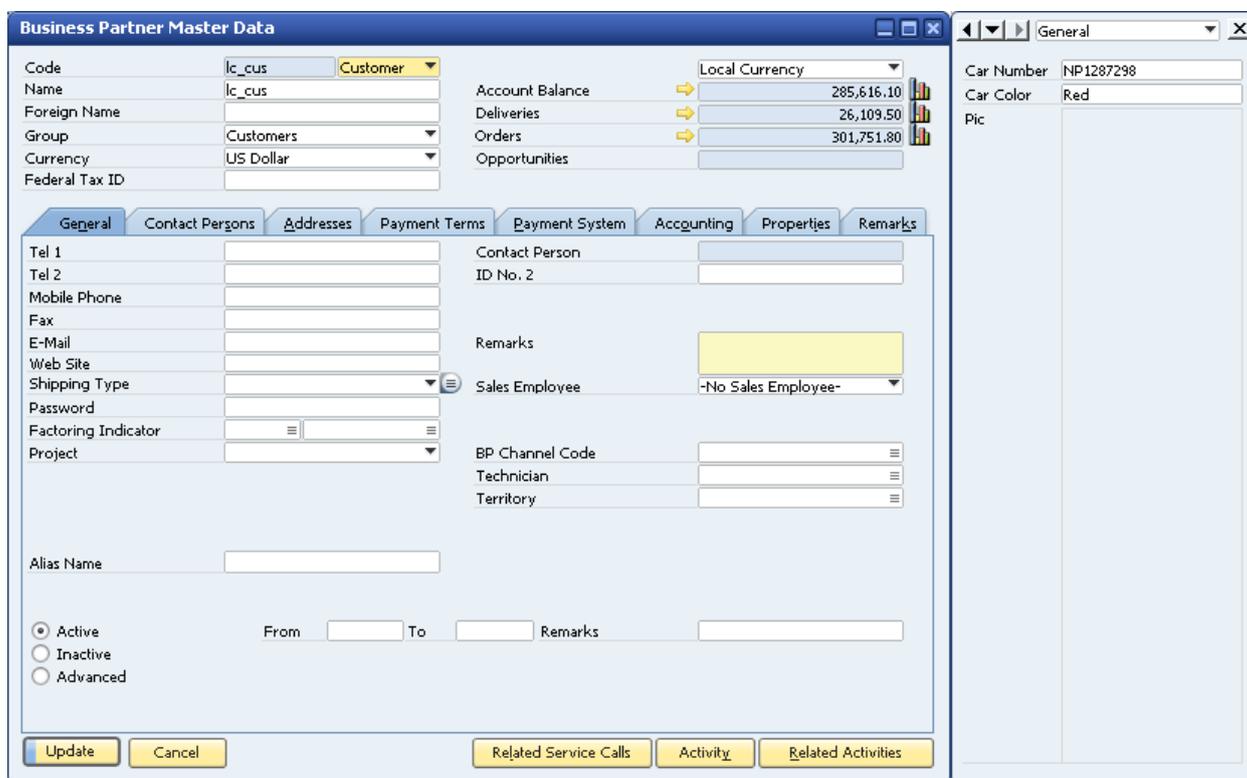
Displaying Header User-Defined Fields

Header user-defined fields are displayed in a panel on the side of the main form.

Procedure

1. Open a form with header user-defined fields, for example, *Business Partner Master Data*.
2. In the menu bar, choose *View → User-Defined Fields*.

The system displays the user-defined fields in a panel next to the form.



The screenshot shows the 'Business Partner Master Data' form. The main form has tabs for 'General', 'Contact Persons', 'Addresses', 'Payment Terms', 'Payment System', 'Accounting', 'Properties', and 'Remarks'. The 'General' tab is active, showing fields like 'Code', 'Name', 'Foreign Name', 'Group', 'Currency', 'Federal Tax ID', 'Account Balance', 'Deliveries', 'Orders', and 'Opportunities'. A side panel titled 'General' is open, displaying user-defined fields: 'Car Number' (NP1287298), 'Car Color' (Red), and 'Pic'. The side panel also has a close button (X) in the top right corner.

The panel displays all the header user-defined fields for the current form that are set as visible. For more information about showing/hiding fields, see [Modifying the Display of User-Defined Fields](#).

To change the location of the user-defined fields panel, use the  icons in the upper-left corner of the panel.

To close the panel, click .

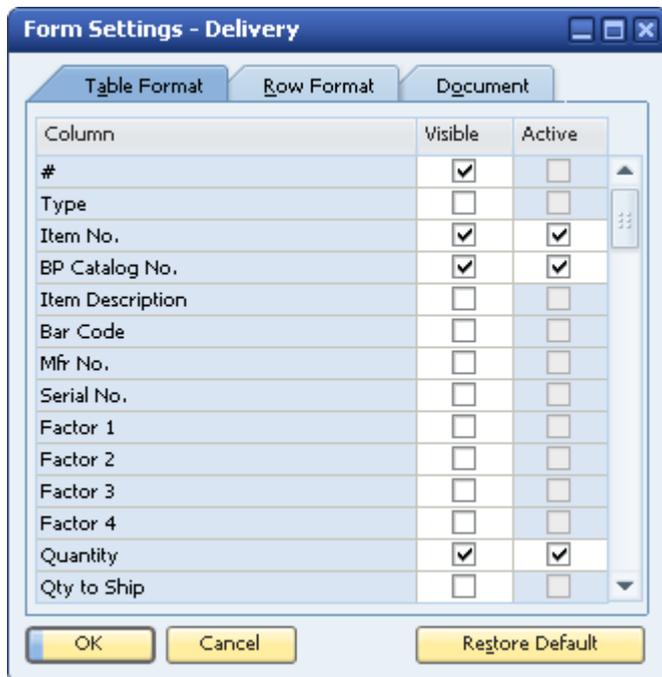
2. Configure the settings for each field.

Field Name	Description
<i>Field</i>	The display name of the field.
<i>Visible</i>	Specifies whether the field is to be displayed or hidden.
<i>Active</i>	Specifies whether a user can edit the field.
<i>Order</i>	Specifies the display order of the fields. The number must be an integer. The field with the lowest number is displayed first; the one with the highest number is displayed last.
<i>Category</i>	<p>Assigns the field to a category.</p> <p>You can filter the user-defined fields so only fields in a specific category are displayed using the dropdown list at the top of the user-defined fields panel:</p>  <p> Example</p> <p>You have many user-defined fields and you would like to display different sets each time you need to display user-defined fields. You can create a couple of categories for different user-defined fields and change the displayed category when necessary.</p> <p>To define a new category, choose <i>Define New</i> from the dropdown list.</p>

3. Choose the *OK* button.

Displaying Row User-Defined Fields

Row user-defined fields automatically appear in their relevant form tables, just like system fields, and are managed in the same way. You can make user-defined fields visible and active using the *Form Settings* window. Click  in the toolbar, and select the *Table Format* tab.

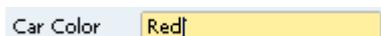


By default, each new row user-defined field appears at the end of the list of fields and is set to be visible and active.

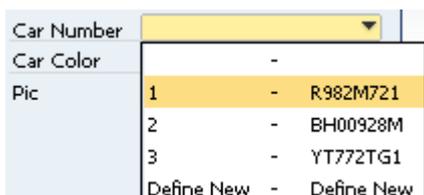
Entering Values in User-Defined Fields

The following section explains how to enter values for different types of user-defined fields:

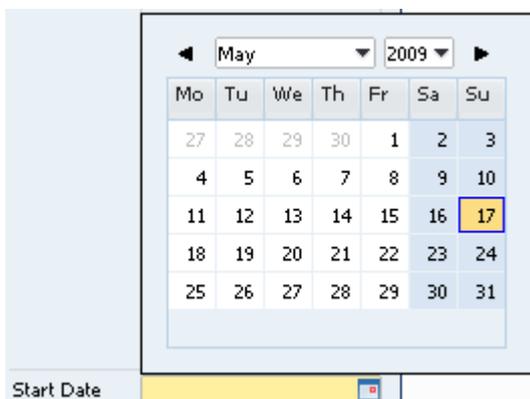
- **Standard Field** (alphanumeric and numeric, with no valid values): Select the field and enter a value manually.



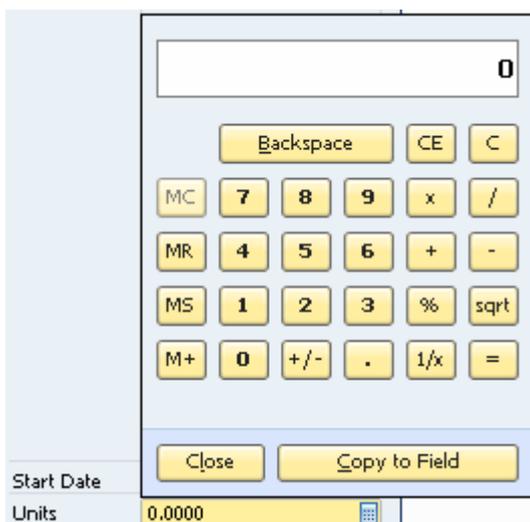
- **Field with Valid Values/Linked to a User-Defined Table:** Select the field to open a dropdown list, and select a value.



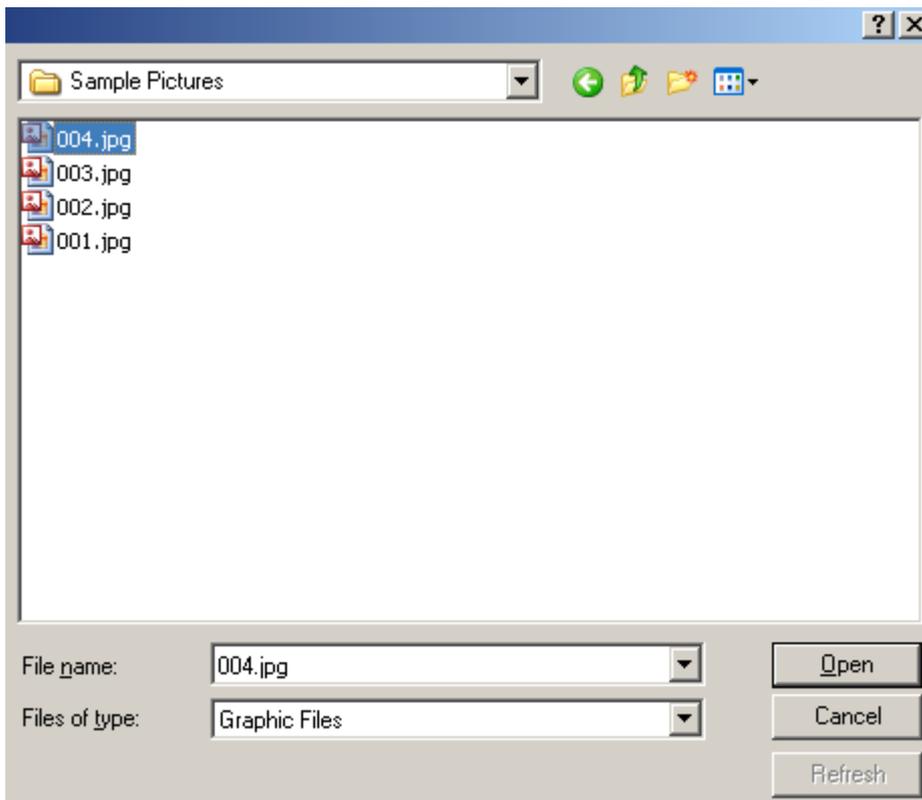
- **Date Field:** Select the field to display , and then click the icon to display a date picker.



- **Units and Totals:** Select the field to display , and then click the icon to display a calculator.



- **Image Field:** Double-click the field to display the *Open* window.



The default picture folder opens. Select a file, from this or another folder, and choose the *Open* button.



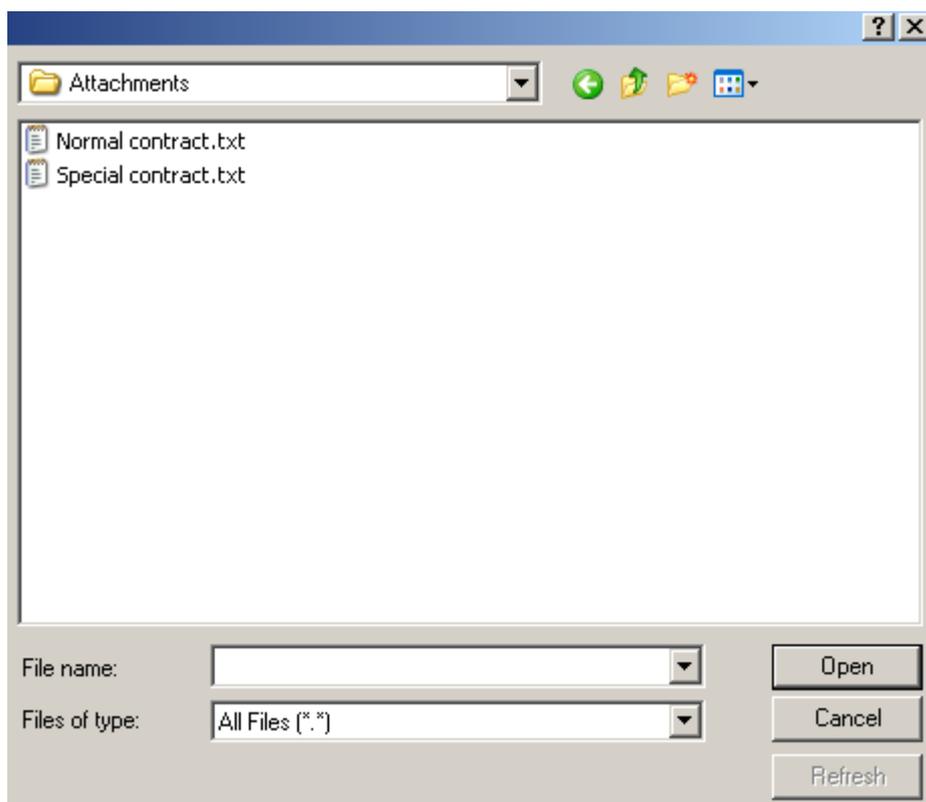
Note

The default picture folder is the folder defined in *Picture Folder* on the *Path* tab in *Administration* → *System Initialization* → *General Settings*. If you select a picture from a different folder, the picture is copied to the picture folder.

To replace the image, hold down the **CTRL** key and double-click the image.

To remove the image, hold down the **ALT** key and double-click the image.

- **Link Field:** Double-click the field to display the *Open* window.



The default attachments folder opens. Select a file, from this or another folder, and choose the *Open* button. To link to a Web site, type a URL in the *File name* field and choose the *Open* button.



Note

The default attachments folder is the folder defined in *Attachments* on the *Path* tab in *Administration* → *System Initialization* → *General Settings*. If you select a file from a different folder, the file is copied to the attachments folder.

Once a file or Web site is linked to the field, a hand cursor is displayed when you hover over it.



To open the linked file or Web site, double-click the link.

To replace the link, hold down the **CTRL** key and double-click the link.

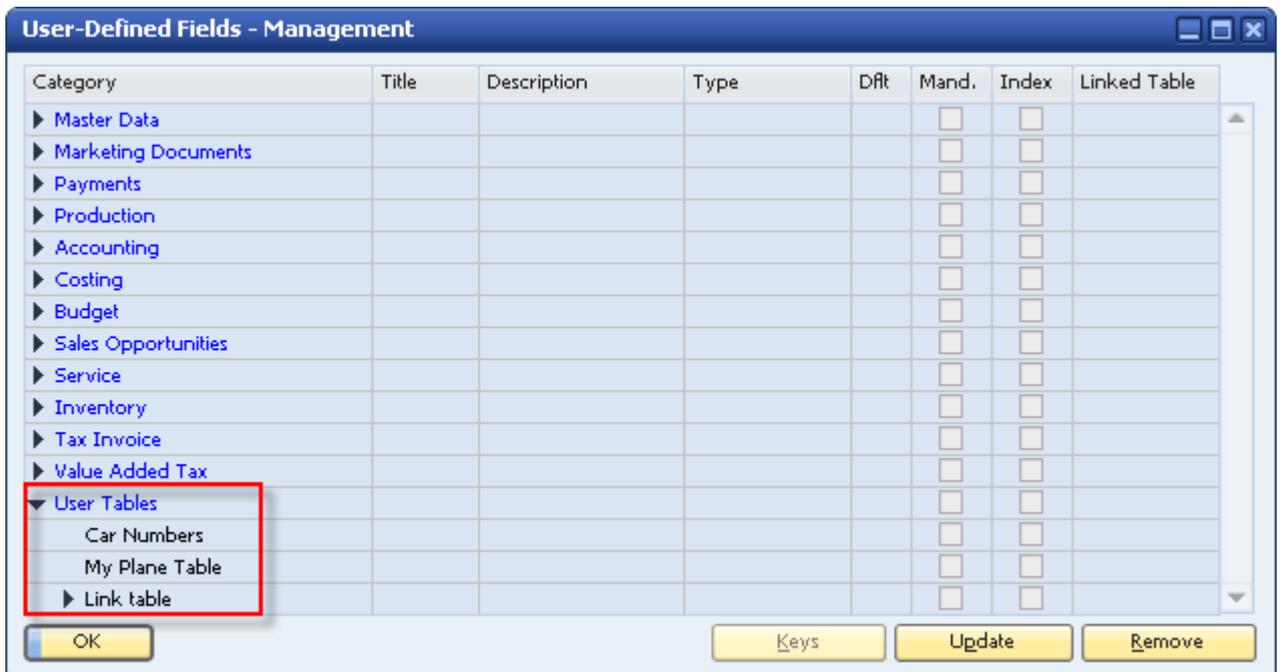
To remove the link, hold down the **ALT** key and double-click the link.

2. Enter information about the new table in a new row.

Field Name	Description
<i>Table Name</i>	The table name.
<i>Description</i>	A description for the table.
<i>Object Type</i>	<p>The type of table. Set to <i>No Object</i>.</p> <p> Note</p> <p>This column is relevant for working with user-defined objects (UDO). For more information, see the UDO section of the SDK Help Center, located on the SAP Community Network at https://www.sdn.sap.com/irj/sdn/businessone.</p> <p>You cannot update the <i>Object Type</i> field after adding a table.</p>

3. Choose the **OK** button.

The user-defined table appears under the *User Tables* category in the *User-Defined Fields – Management* window.



A user-defined window for entering data is automatically created for the table. For more information, see *Entering Values in User-Defined Tables*.



Note

As with modifying user-defined fields, all users should be logged off before you add a user-defined table. For information on possible messages when adding a table, see the last step in *Creating User-Defined Fields*.

Result

The following occurs when you add a user-defined table:

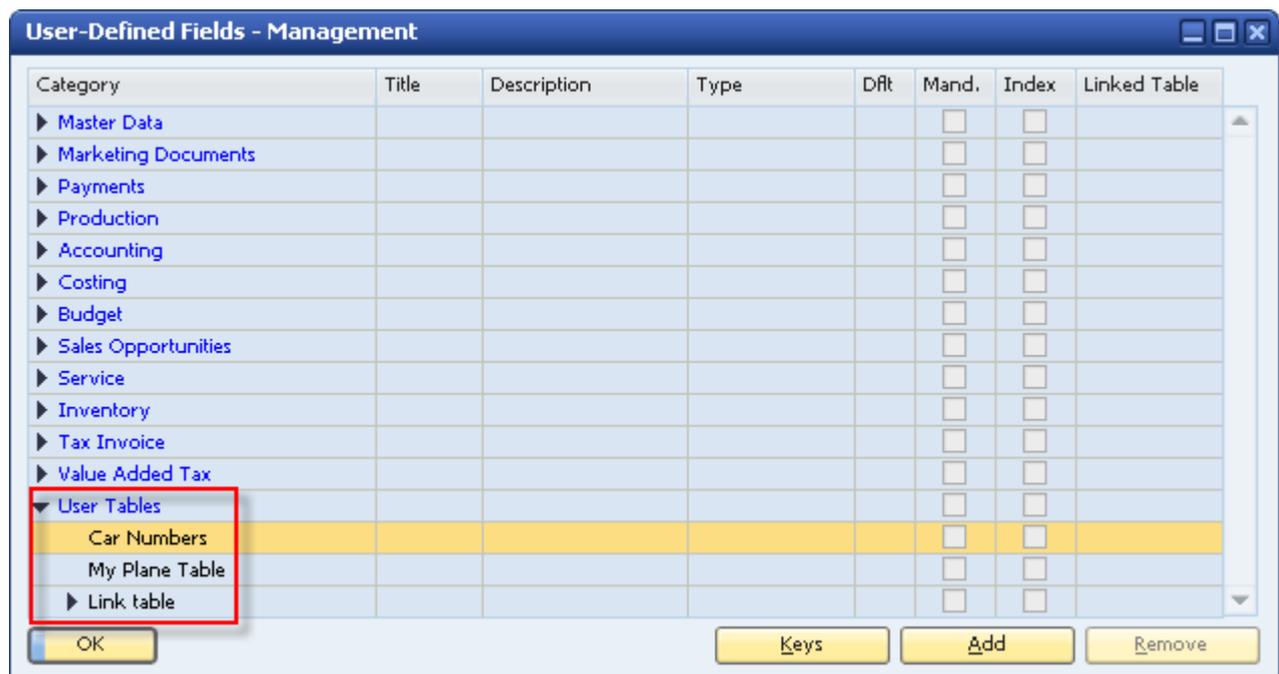
- Information about the new table is stored in the OUTB table (User Tables).
- The prefix @ is added to the name of the table in the database table, indicating that it is a user-defined table.
- You can use this table in queries.
- If this table is linked to a user-defined field, then in the *Query Generator*, the user-defined field appears in bold in this table, indicating it is related to another table. You can drag this user-defined field to use the user-defined table for the query.

Adding Fields to User-Defined Tables

Create additional fields in a user table if the two default fields, *Code* and *Name*, are not sufficient for your business needs.

The process of adding fields to a user-defined table is the same as for adding fields to a system table, as described in *Creating User-Defined Fields*.

In the *User-Defined Fields - Management* window, user-defined tables are displayed in *User Tables* at the bottom of the list of categories. Click  to display the available user-defined tables.



Removing User-Defined Tables

This section describes how to remove a user-defined table, including all its data.



CAUTION

This action deletes all the values saved in the table and is irreversible.



Recommendation

Before you remove a user-defined table, back up the database.

Procedure

1. From the menu bar, choose *Tools* → *Customization Tools* → *User-Defined Tables - Setup*.
2. Right-click the row to be removed, and choose *Remove*.



Note

Alternatively, select the *Description* column of the user-defined table you want to remove, and in the menu bar choose *Data* → *Remove*.

The table is removed from the list of user-defined tables.

3. Choose *Update*, and then *Yes* or *Yes to All* in the dialog box.

Copying Fields/Tables to a New Company

You can copy user-defined fields and tables from one company database to a new company database that you create.

Procedure

1. Connect to the company in which the user-defined fields and tables – the ones to be copied to the new company – are defined.
2. In the menu bar, choose *Administration* → *Choose Company*.
3. In the *Choose Company* window, choose the *New* button.

The *Site User* window appears:



The *Site User* dialog box is shown. It has a title bar with the text "Site User" and a close button. Inside, there are two input fields: "Site User ID" with the value "B1SiteUser" and "Site Password" which is empty. Below the fields are two buttons: "OK" and "Cancel".

4. Enter the *Site User ID* and the *Site Password*, and then choose the *OK* button.

The *Create New Company* window appears.



The *Create New Company* dialog box is shown. It has a title bar with the text "Create New Company" and window control buttons. The dialog contains several options and fields: a checkbox for "Trial Version" (unchecked), "Company Name" (empty field), "Database Name" (empty field), a checkbox for "Copy User-Defined Fields and Tables" (checked and highlighted with a red box), a checkbox for "Copy User-Defined Objects" (checked), "License" (SAP-INTERN-(Global)), "Local Settings" (dropdown menu), "Chart of Accounts" (U), "Base Language" (English (United States)), and "Define Posting Periods" (button with three dots). At the bottom are "OK" and "Cancel" buttons.

5. Select the *Copy User-Defined Fields and Tables* checkbox.
6. Specify the remaining information, and then choose the *OK* button.

Authorizations

For information about the authorizations required for *User-Defined Fields - Management*, see the online help for SAP Business One and the document *How to Define Authorizations* in the documentation area of SAP Business One Customer Portal at <http://service.sap.com/smb/sbocustomer/documentation>.

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