

PUBLIC



How to Create User-Defined Fields and Tables

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Introduction

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 to create 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.

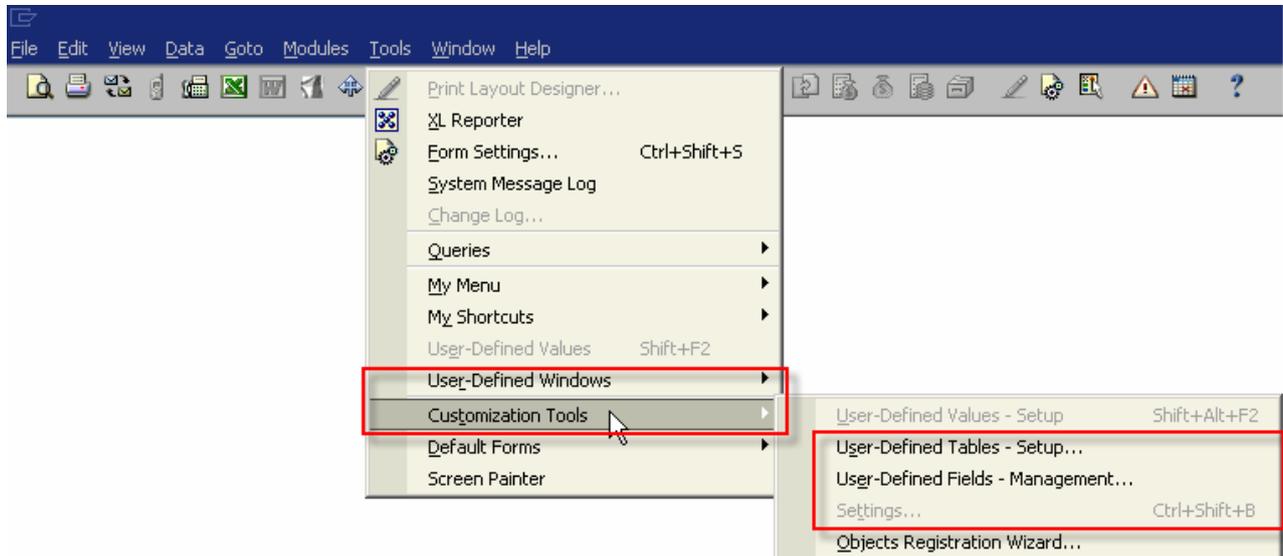
User-defined tables, as described in [Managing User-Defined Tables](#), can be used in one of the following ways:

- 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.

Menus

This section summarizes the menus for managing user-defined fields and user-defined tables.

Tools Menu

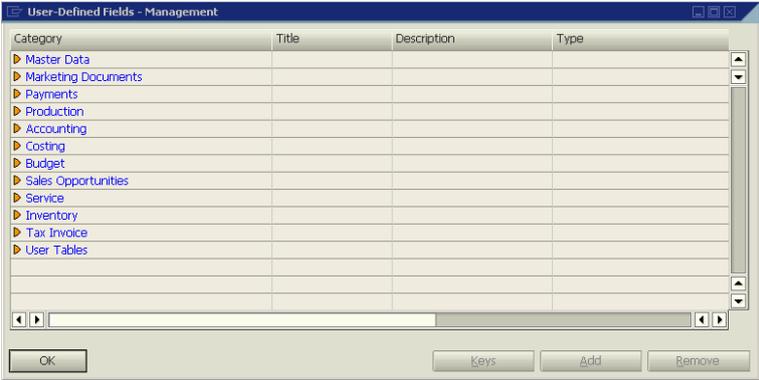


Menu Item	Description
<i>User-Defined Windows</i>	Opens a submenu that provides links to the forms for entering data to user-defined tables, as described in Entering Values in User Tables . After opening the form, you can change which fields are displayed in the form by clicking on the toolbar.

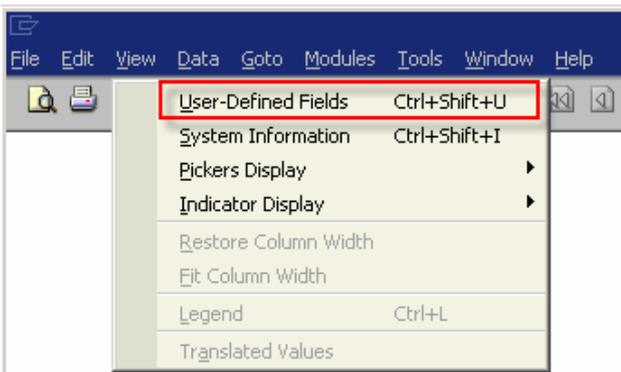
Customization Tools Submenu

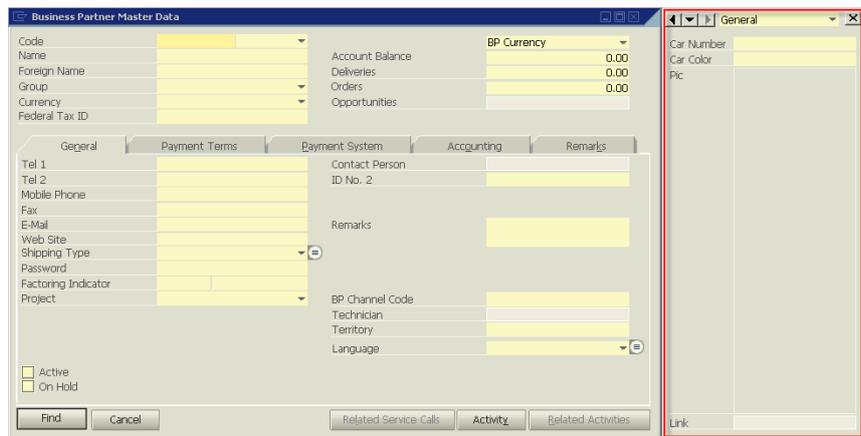
<i>User-Defined Tables - Setup</i>	Enables you to add, modify, and remove user-defined tables, as described in Managing User-Defined Fields .
------------------------------------	--

#	Table Name	Description	Object Type
1	MEALS		Master Data
2	PLAINTABLE	My Plain Table	No Object
3	SIDEORDERS		Master Data Rows
4	SM_MOR		Document
5	SM_MOR1		Document Rows
6	SM_STUDENTLIST		Master Data
7	TEST		Document
8	TESTDOC		Document
9	TESTMASTER		Master Data
10	TESTMASTERROWS		Master Data Rows
11	TESTNONE		No Object
12			No Object

<p><i>User-Defined Fields - Setup</i></p>	<p>Enables you to add, modify, and remove user-defined fields, as described in Managing User-Defined Fields.</p> 
<p>Settings</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. To find out how to display user-defined fields, see View Menu.</p>

View Menu



Menu Item	Description
<p><i>User-Defined Fields</i></p>	<p>Displays the user-defined fields for the currently selected form.</p>  <p>After the user-defined fields 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.

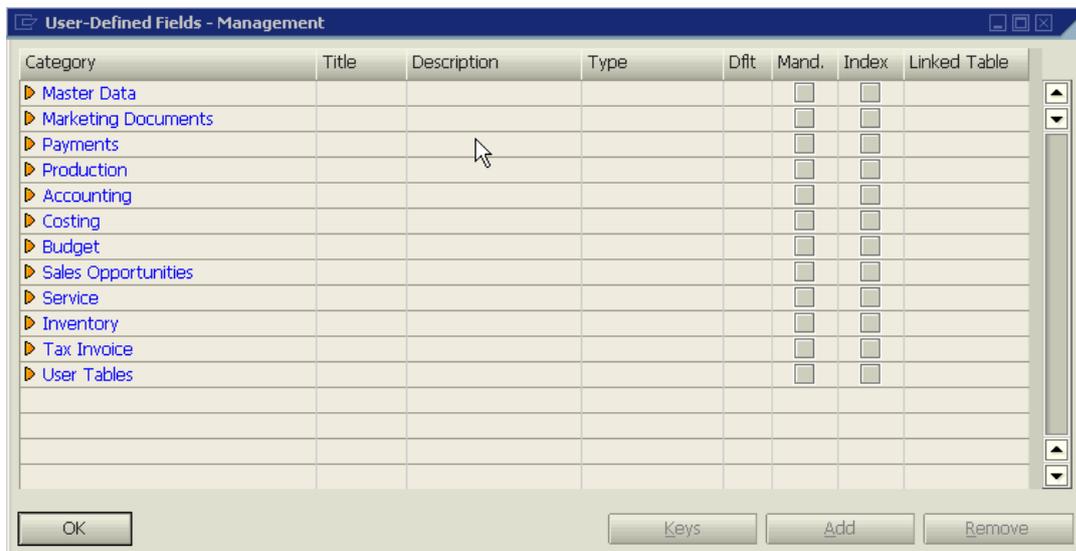
Creating User-Defined Fields

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

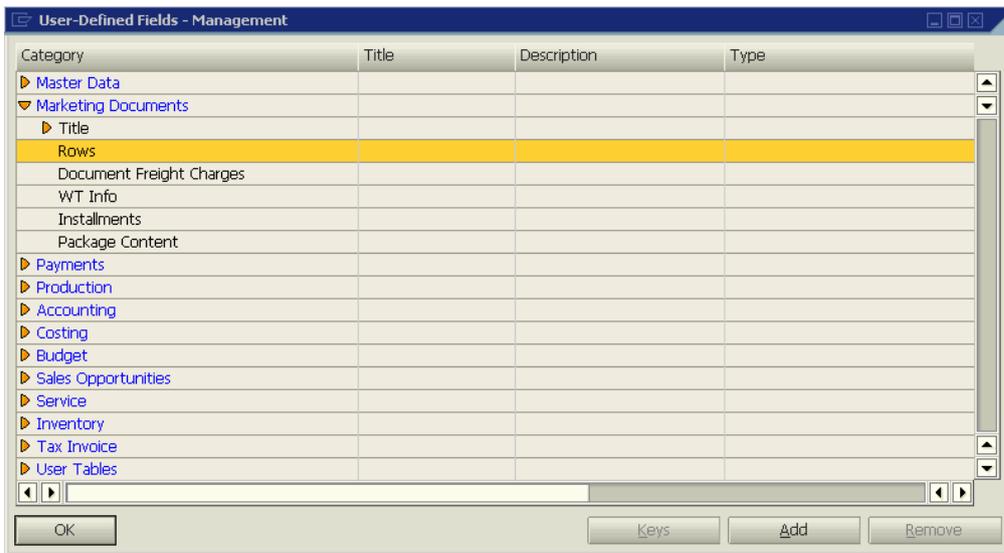
The *User-Defined Fields - Management* window appears.



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*) and some affect many forms (*Title* and *Rows* under *Marketing Documents*).

To view all available types, click the drill-down triangles.

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



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.

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.

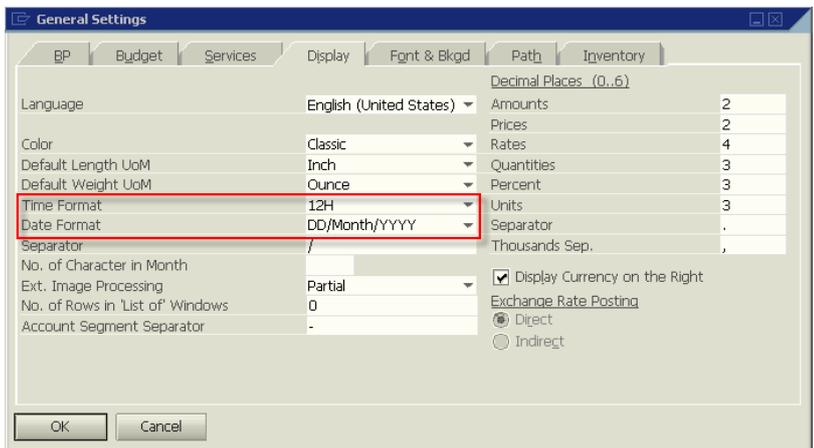
If the field type is *Alphanumeric*, the length is the maximum number of characters.

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 describes the *Type* field options, and the *Structure* field options for each type:

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

Units and Totals

Integer and decimal numbers.

The following are the structure options for this type:

- **Rate**
- **Amount**
- **Price**
- **Quantity**
- **Percents**
- **Measure**

The structures are identical except for the display format. The formats are determined by system initialization settings, located at *Administration* → *System Initialization* → *General Settings* → *Display* tab.

Field	Value
Amounts	2
Prices	2
Rates	4
Quantities	3
Percent	4
Units	5
Separator	.
Thousands Sep.	,

General

Links and images.

The following are the structure options for this type:

- **Link:** Allows entering a link to a file or a Web address
- **Image:** Allows entering a link to a picture

When a user adds a link to a file/picture, the file/picture is copied to folders specified in the initialization settings. You must specify these folders at *Administration* → *System Initialization* → *General Settings* → *Path* tab.

Specify a folder for files (attachments) and another for pictures.

4. 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 will have to pick from a dropdown box of valid values.</p> <p>To enter a valid value, choose <i>New</i> and enter a value and a description.</p>

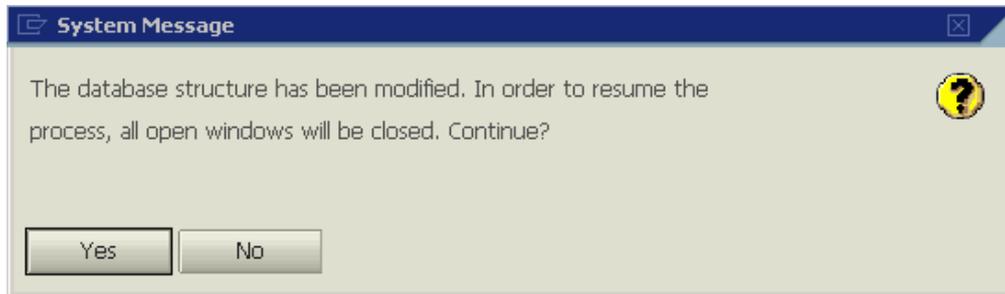
<i>Set Default Value for Field</i>	<p>Specifies that there is a default value for the field in cases where the user does not select one.</p> <p>Choose a default value from the list (if you provided a list of valid values) or enter a default value.</p> <p>This setting is mandatory when:</p> <ul style="list-style-type: none">• Valid values are defined.• The field is defined as mandatory.
<i>Mandatory Field</i>	<p>Requires that a value be entered 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>Create Index</i>	<p>Improves performance of queries based on this 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 Linking a User Table to a User-Defined Field.</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>

5. Choose *Add*.



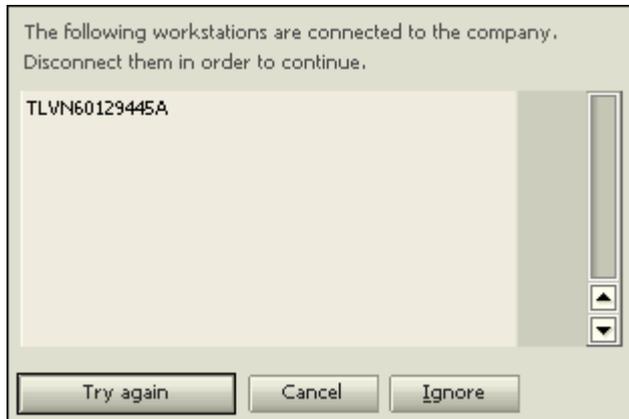
NOTE

The following message is displayed:

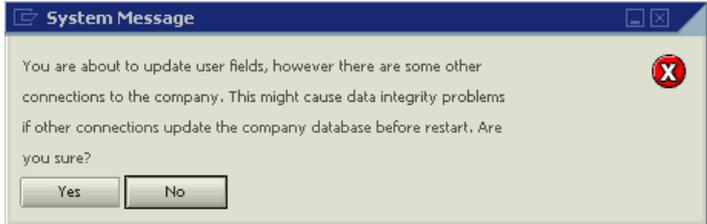


To add the field, click *Yes*.

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:



Click one of the following:

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 and returns to the <i>User-Defined Fields – Management</i> window.
<i>Ignore</i>	<p>Saves the field and displays the following:</p>  <p>Choose <i>Yes</i> to add the new field (or update the existing field).</p> <p>This action refreshes the database tables connected to this field. If a user is 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 to 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.

For 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 valid values were entered, the values 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

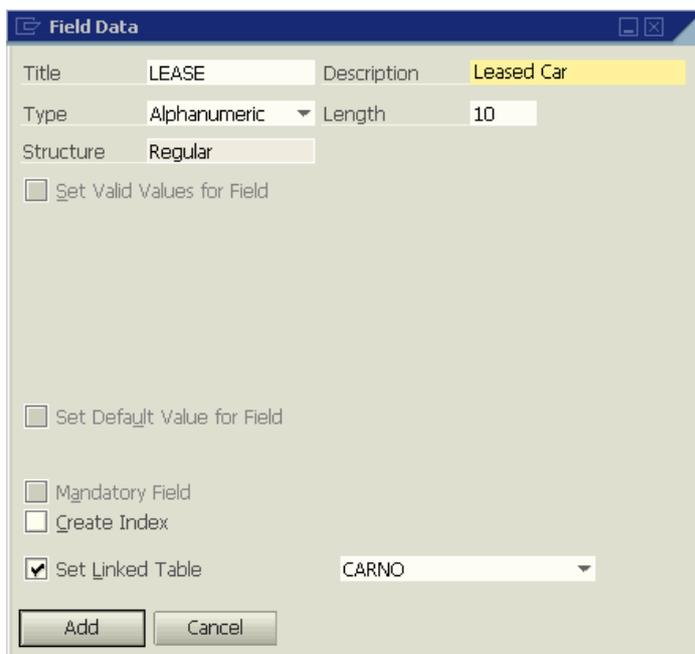
You can link a field to a user-defined table only.

Prerequisite

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

Procedure

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



The screenshot shows the 'Field Data' dialog box. The 'Title' is 'LEASE' and the 'Description' is 'Leased Car'. The 'Type' is 'Alphanumeric' and the 'Length' is '10'. The 'Structure' is 'Regular'. The 'Set Valid Values for Field' checkbox is unchecked. The 'Set Default Value for Field' checkbox is unchecked. The 'Mandatory Field' checkbox is unchecked. The 'Create Index' checkbox is unchecked. The 'Set Linked Table' checkbox is checked, and the table 'CARNO' is selected in the dropdown menu. The 'Add' and 'Cancel' buttons are visible at the bottom.

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 *Add*.

Result

When the field is displayed in the user interface, a dropdown box is displayed when the user edits the field. The *Code* and *Name* fields are displayed, and the value of the field is the *Code* value of the selected item.

Leased Car	BH00928M	
	-	
1	-	R982M721
2	-	BH00928M
3	-	YT772TG1
4	-	SQ0P1I81
Define New	-	Define New

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. From 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 *Keys*.

The *Manage User Keys* window appears.



3. To create a new key for the table, choose *New*. 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 drop-down list.
4. In the table, select the user-defined fields you want to include in the selected key.



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 *Update*, and then *OK*.

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. Choose a field by clicking it.
3. Choose *Update*.

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 run.



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. Choose a field by clicking it.
3. Choose *Remove*.

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.

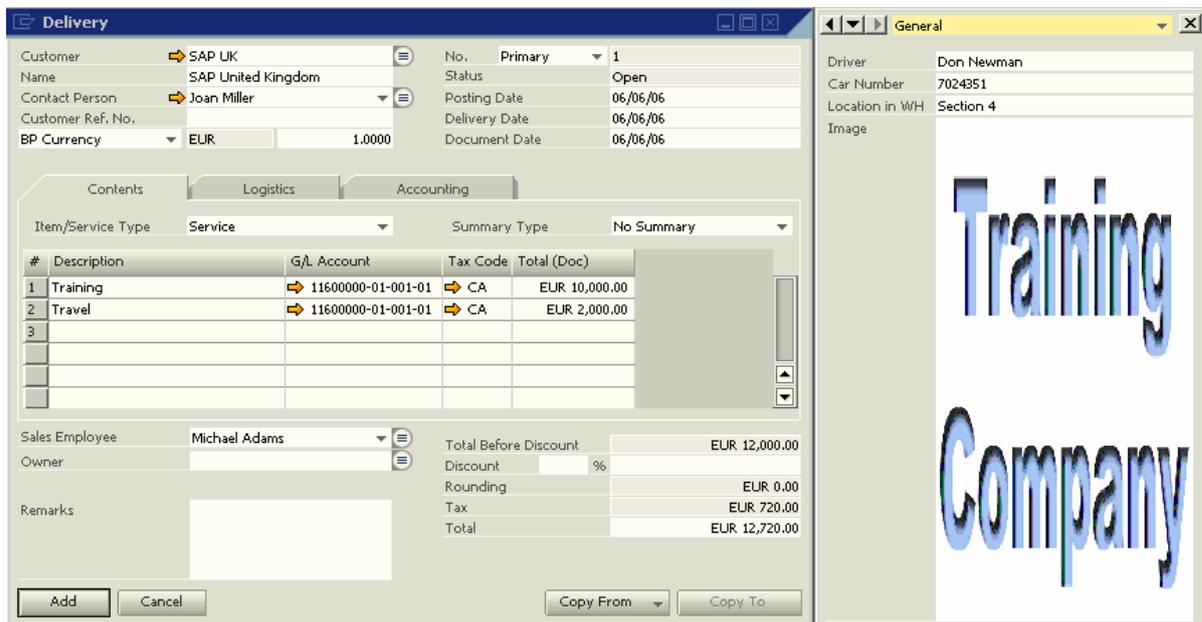
Displaying Header User-Defined Fields

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, *Delivery*.
2. From 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 SAP Delivery form with a side panel titled 'General' containing user-defined fields. The main form displays customer information (SAP UK, Joan Miller), a table of items (Training and Travel), and a summary table.

#	Description	G/L Account	Tax Code	Total (Doc)
1	Training	11600000-01-001-01	CA	EUR 10,000.00
2	Travel	11600000-01-001-01	CA	EUR 2,000.00
3				

Total Before Discount	EUR 12,000.00
Discount	%
Rounding	EUR 0.00
Tax	EUR 720.00
Total	EUR 12,720.00

The side panel 'General' contains the following fields:

- Driver: Don Newman
- Car Number: 7024351
- Location in WH: Section 4
- Image: Training Company

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, click the  icons in the upper-left of the panel.

To close the panel, click .

Modifying the Display of User-Defined Fields

You can modify the way user-defined fields are displayed. For example, you can choose which fields are to be displayed and in what order.

User-defined field settings are saved separately for each user.

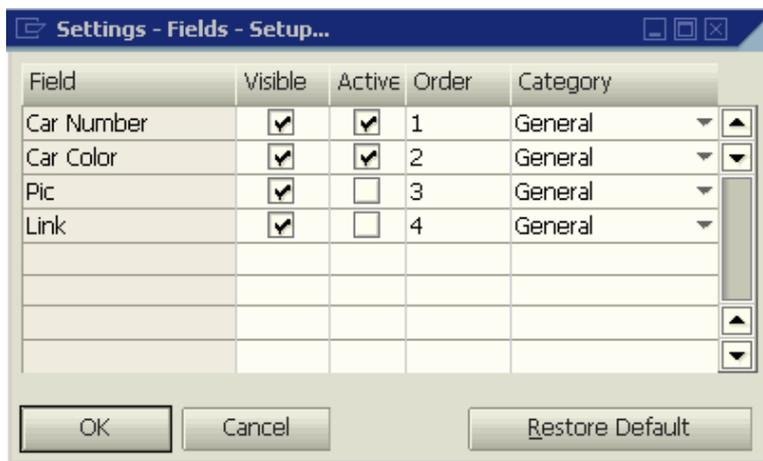
Prerequisite

A form is open with the user-defined fields panel displayed. For more information, see [Displaying Header User-Defined Fields](#).

Procedure

- From the menu bar, choose *Tools* → *Customization Tools* → *Settings*.

The following appears:



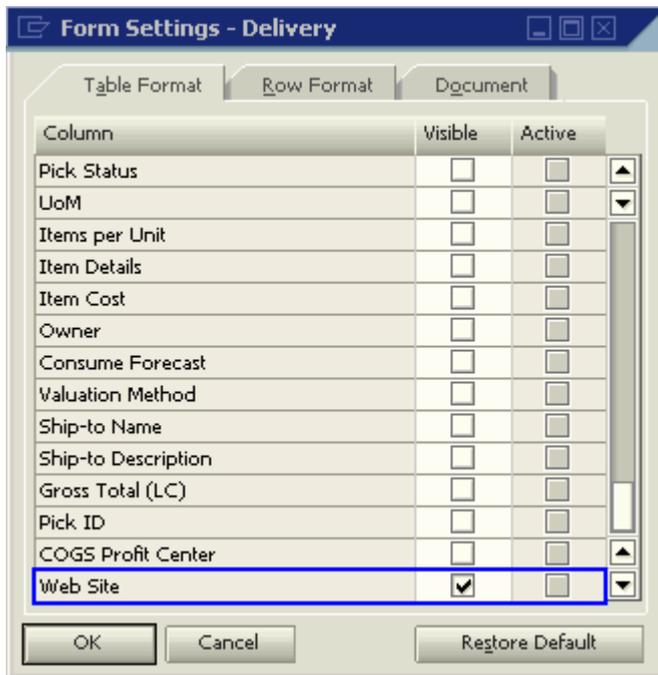
- Configure the settings for each field.

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>	Assigns the field to a category. You can filter the user-defined fields so only fields in a specific category are displayed. For example, a user-defined field in <i>Marketing Documents</i> is automatically added to all documents, even if it relevant only to sales. You can create a category called Sales and assign it to all sales-related fields, and then create a category called Purchasing and assign it to all purchasing-related fields. Users can then choose to display only fields from a specific category. To define a new category, choose <i>Define New</i> from the dropdown box.

- Click *OK*.

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, which you open by clicking  in the toolbar.



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 shows how to enter values into different types of user-defined fields:

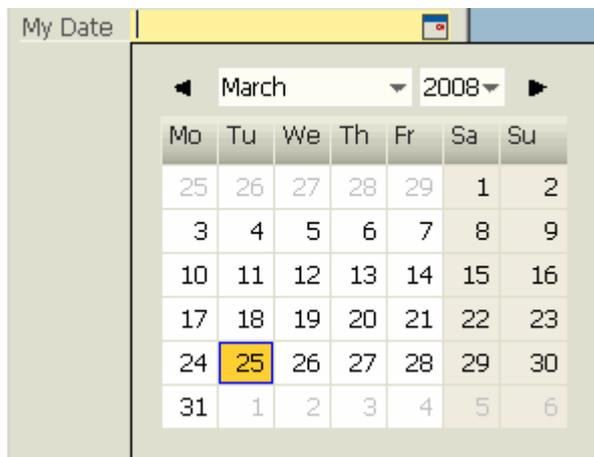
- **Standard Field** (alphanumeric and numeric, no valid values): Click the field and enter a value manually.



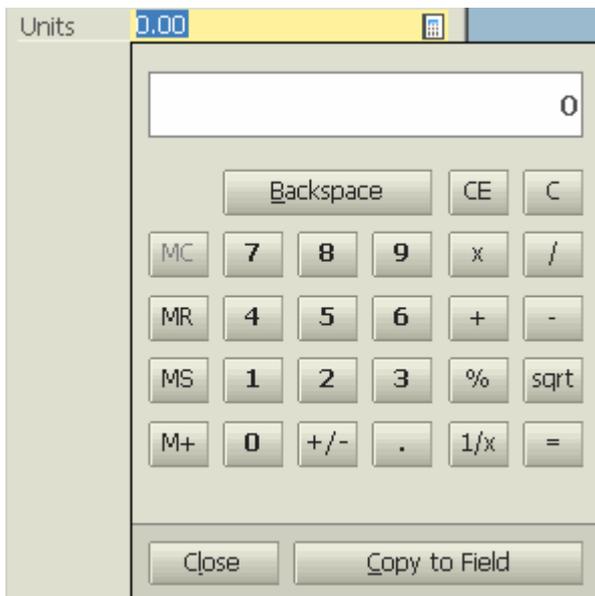
- **Field with Valid Values:** Click the field to open a dropdown box, and select a value.



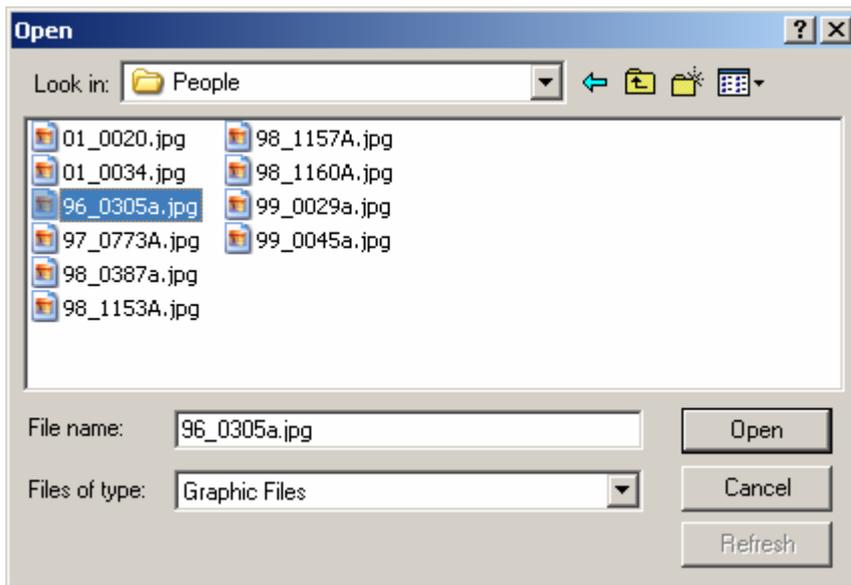
- **Date Field:** Click the field to display , and then click the icon to display a date picker.



- **Units and Totals:** Click the field to display , 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 *Open*.



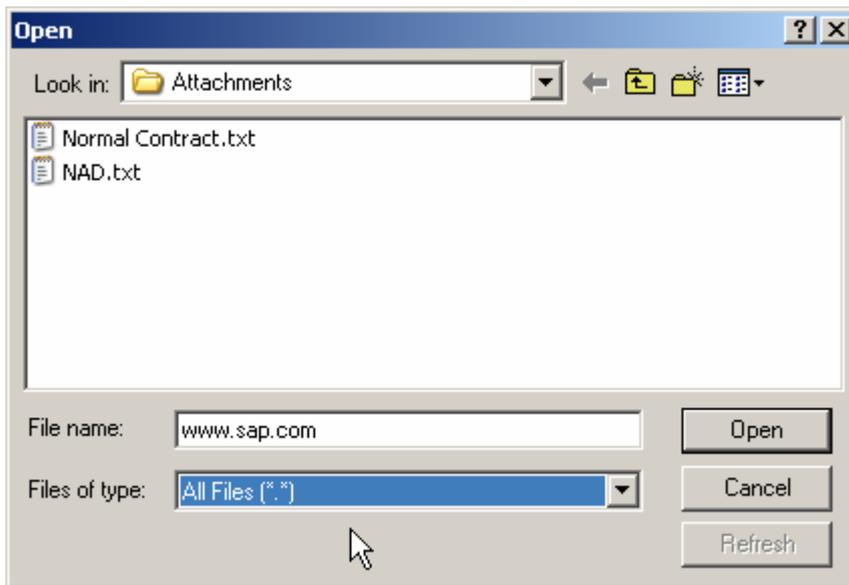
NOTE

The default picture folder is the folder defined under *Administration* → *System Initialization* → *General Settings* → *Path* tab → *Picture Folder*. 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 *Open*. To link to a Web site, type a URL in the *File name* field.



NOTE

The default attachments folder is the folder defined under *Administration* → *System Initialization* → *General Settings* → *Path* tab → *Attachments*. 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.

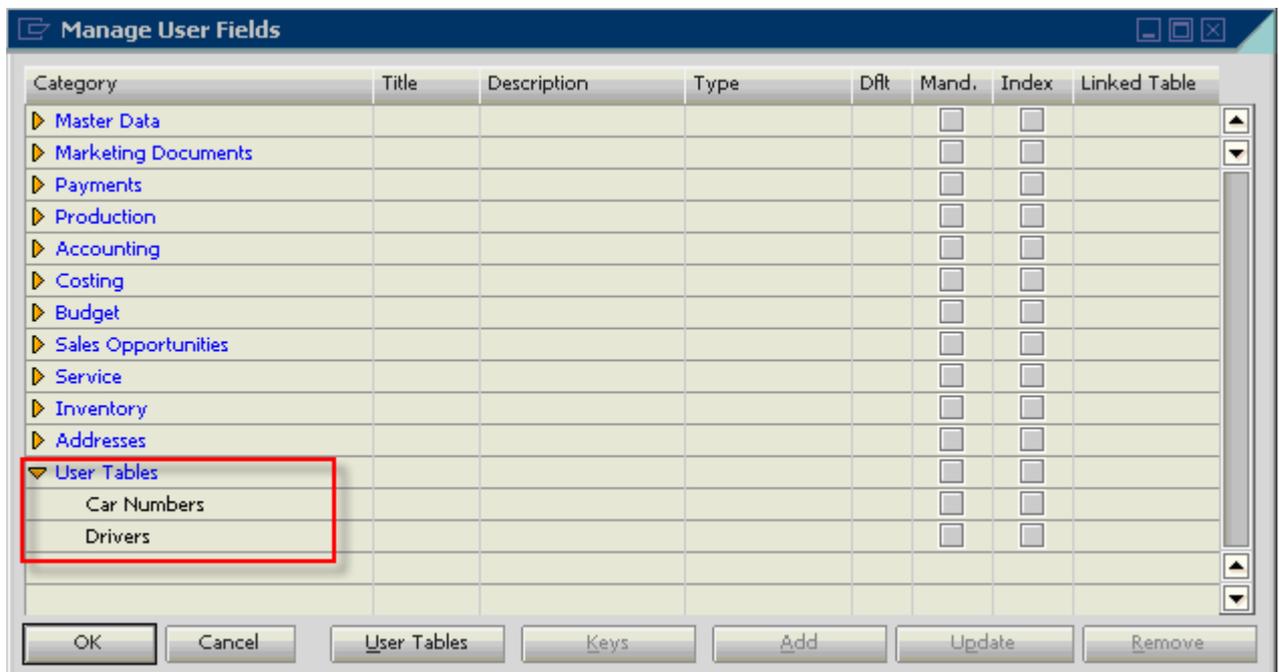
To remove the link, hold down the `Alt` key and double-click the link.

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

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

- Choose OK.

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 Tables](#).

 **NOTE**

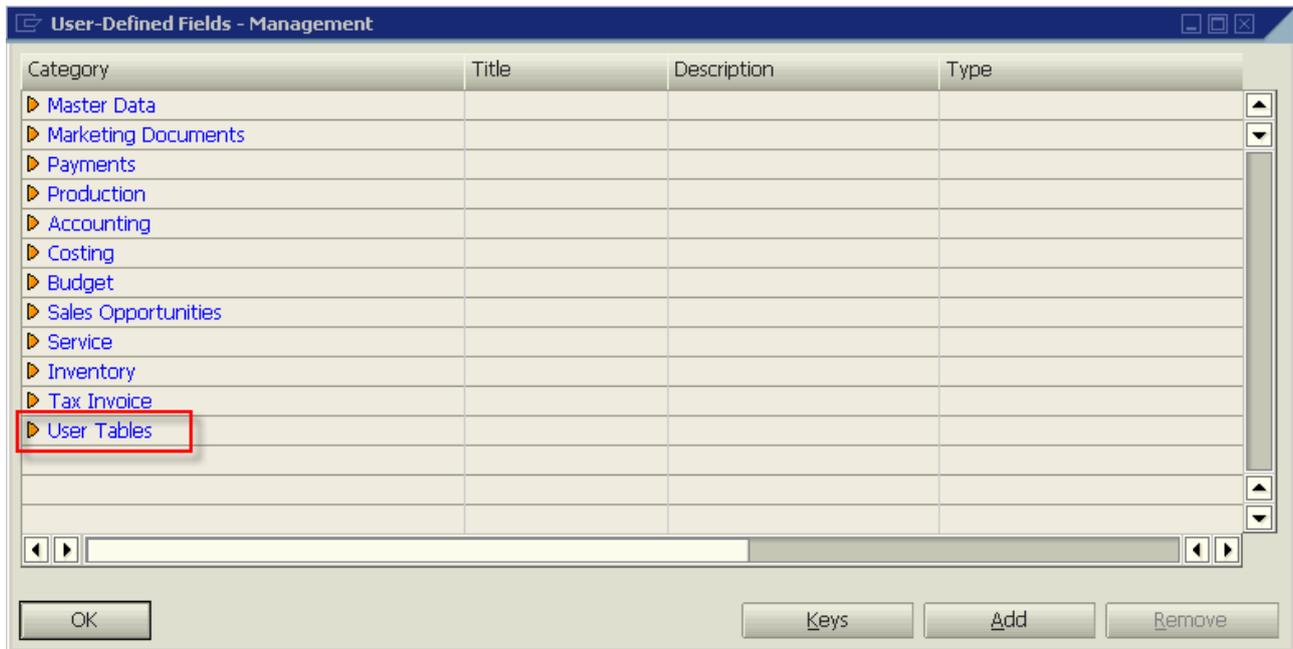
As with modifying user-defined fields, all users should be logged off before you add a user-defined table. For information on possible messages when adding a table, see the last step in [Creating User-Defined Fields](#).

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 New 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 select *Remove*.



NOTE

Alternatively, click the *Description* column of the user-defined table you want to remove, and from 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. From the menu bar, choose *Administration* → *Choose Company*.
3. From the *Choose Company* window, choose *New*.

The *Create New Company* window appears.



The screenshot shows the 'Create New Company' dialog box. The 'Copy User-Defined Fields and Tables' checkbox is checked and highlighted with a blue box. Other fields include Company Name (New Company), Database Name (NEWCOM), Local Settings (United States Of America), Chart of Accounts (US_CoA), and Base Language (English (United States)).

4. Select the *Copy User-Defined Fields and Tables* checkbox.
5. Fill out the rest of the form, and choose *OK*.

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