

## CREATE A DATABASE

To create a database in ServiceCenter, you must create a dbdict to define the fields in the table, and a format to define how the data is displayed to a user. This exercise shows how ServiceCenter can automatically create a dbdict, after you create a format. This is easier than manually creating a dbdict, and then creating the format.

## CREATE THE FORMAT

Logged in as **falcon**

**1** From the MAIN MENU select the Toolkit tab and click on the **Forms Designer** button. Enter "desktop" as the **Form** field. Click on **New** (center button).

**2** Click on **No** when it asks if you want to use the Wizard.

**3** Add a label at the top. Enter "Workstation" as the **Caption**. Set **Bold** to **Yes** and **FontIncrease** to **15**. See Figure 9-1.

**4** Add the following labels and fields:

<b>Label</b>	<b>Input field value</b>
Tag Number	tag.id
Manufacturer	manufacturer
Model	model
Date of Purchase	purchase.date
Memory	memory
Operating System	os
Location	location

**i** The X and Y coordinate values should be even numbers.

**5** Click on **OK**.

**Workstation**

Tag ID

Manufacturer

Model

Date of Purchase

Memory

Operating System

Location

**Figure 9-1** The format for desktop.

## CREATE THE DBDICT

Logged in as **falcon**

- 1** While still in forms designer, click on **Options, Create File**. The pop-up window should contain a file name of **desktop**.
- 2** Click on the **OK** button (green check).
- 3** You should now see the dbdict.
- 4** Verify all the fields are spelled correctly, are character type (except **purchase.date**), and the unique key is **tag.id**.

**File Name:** desktop **Root Record (if -1 then on SQL):** 50360790

**Case Mode:** Case Sensitive

Field Name	Type	Inde	Level
descriptor	Structure	1	0
tag.id	Character	1	1
manufacturer	Character	2	1
model	Character	3	1
purchase.date	Date/Time	4	1
memory	Character	5	1
os	Character	6	1
location	Character	7	1

Keys | File Number/Pools

Unique

tag.id

**Figure 9-2** The initial dbdict for desktop.

Database Dictionary		
File Name	desktop	
Field name	Type	Keys
tag.id	character	unique
manufacturer	character	tag.id
model	character	
purchase.date	date/time	
memory	character	
os	character	
location	character	

- 5** Click on **OK** to return to the format.

## ADD DATA

Logged in as **falcon**

- 1** While still in Forms Designer, click on **Options, Database Manager**. You should go to database manager.
- 2** Type "A001" in the **Tag ID** field and "APPLE" in the **manufacturer** field. Click on **Add**.
- 3** Click on **OK**.
- 4** Create records for IBM, COMPAQ, and DELL. Use A002 to A004 as the **Tag ID** for each.
- 5** Click on **Back**.
- 6** Press **ENTER** to see all of your records. Click on **Back** twice to return to Forms Designer.
- 7** Click on **Design**.
- 8** On all of the input fields except **Date of Purchase** set the **CaseConversion** property to **Upper**. This forces any input to upper case. Click on **OK** and **OK** to save the format.
- 9** Return to the **MAIN MENU**.

### Unload

<b>Unload File</b>	lsc01.unl
format	desktop
desktop	all records

**ADD AN ARRAY FIELD**

Logged in as **falcon**

- 1** From the MAIN MENU select the **Toolkit** tab, and click on the **Forms Designer** button. Enter "desktop" as the **Form** field. Press **ENTER**.
- 2** Click on **Options** and **dbDict**.
- 3** Click on **New**.
- 4** Enter a field name of "software", and select a type of **array**. Click on **Add**.
- 5** Select a **type of character**. Click on **Add**.

Field Name	Type	Inde	Level	Keys	File Number/Pools
descriptor	Structure	1	0		
tag.id	Character	1	1	Unique	
manufacturer	Character	2	1		
model	Character	3	1		
purchase.date	Date/Time	4	1		
memory	Character	5	1		
os	Character	6	1		
location	Character	7	1		
software	Array	8	1		
software	Character	1	2		

**Figure 9-3** The modified dbdict for desktop.

Database Dictionary		
File Name	desktop	
Field name	Type	Keys
tag.id	character	unique
manufacturer	character	tag.id
model	character	
purchase.date	date/time	
memory	character	
os	character	
location	character	
software	array	
software	character	

**6** Click on **OK**.

- 7** Click on **Design**.
  - 8** Add a label for **Software**.
  - 9** Add a field with input of **software**. Position it below the **Location** field. Be sure the X and Y values are even numbers. Set the **ArrayLength** to 5.
- i** If the X and Y values are not even for an array, it jumps to an even value on display. This may make it overlap another field, or become misaligned with its label.
- 10** Click on **Options, Database Manager**. You should see five lines for the software array.
  - 11** Return to the **MAIN MENU**.

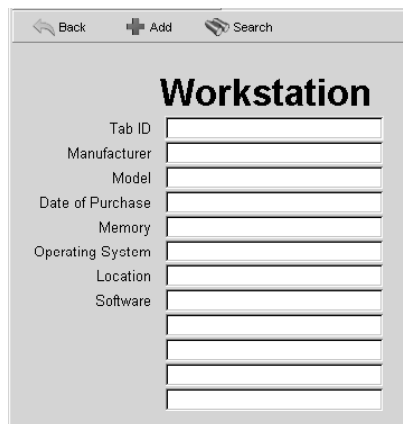


Figure 9-4 The format expended with the software field.

 **Unload**

Unload File	Isc02.unl
desktop	all records
format	desktop

## USING FORMAT CONTROL VALIDATIONS

The validations portion of format control enforces business rules about what fields are required, and what values are allowed. Here are several common examples of its use.

## MAKE FIELDS REQUIRED


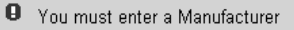
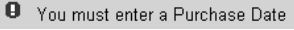
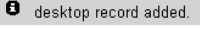
This describes using format control to make fields required. It works by checking the validation condition when a database operation is executed. If the condition is not met, then the operation fails and a message is sent to the user on the message line.

Logged in as **falcon**

- 1** From the **MAIN MENU** select the Toolkit tab, and click on the **Forms Designer** button. Enter "desktop" as the **Form** field. Press **ENTER**.
- 2** Click on **Options, Format Control**.
- 3** Click on **New** to add a format control record.
- 4** Click on **Validations**.
- 5** Add the three validations as shown below.

**i** You may want to work in the expanded display in format control. In the expanded mode the labels will change from those shown below. The labels I have shown are for the Condensed view.

<b>Format control</b>	
<b>Name</b>	desktop
<b>Validations</b>	
<b>Comment</b>	Make the tag ID mandatory
<b>Add</b>	true
<b>Upd</b>	true
<b>Validation</b>	not null(tag.id in \$file)
<b>Message</b>	You must enter a Tag ID
<b>On Failed ...</b>	tag.id
<b>Comment</b>	Make the manufacturer mandatory
<b>Add</b>	true
<b>Upd</b>	true
<b>Validation</b>	not null(manufacturer in \$file)
<b>Message</b>	You must enter a Manufacturer
<b>On Failed ...</b>	manufacturer
<b>Comment</b>	Make the purchase date mandatory
<b>Add</b>	true
<b>Upd</b>	true
<b>Validation</b>	not null(purchase.date in \$file)
<b>Message</b>	You must enter a Purchase Date
<b>On Failed ...</b>	purchase.date

- 6** Click on **Back**, then the **OK** button. Click on **Back** to return to designer.
- 7** Click on **Options, Database Manager**.
- 8** Click on **Add**. You should get the first validation message, and the cursor will be placed in the field. 
- 9** Enter a **Tag ID** and click on **Add**. You should get the second validation message, and the cursor will be placed in the field. 
- 10** Enter a **Manufacturer** and click on **Add**. You should get the third validation message, and the cursor will be placed in the field. 
- 11** Enter a **Purchase Date** and click on **Add**. The record should be added properly. 
- 12** Return to the **MAIN MENU**.

## CHECK FIELD VALUES

This describes how you can use format control to validate the value found in a field. For this you will use the **Date of Purchase** field.

Logged in as **falcon**

- 1** From the **MAIN MENU** select the Toolkit tab, and click on the **Forms Designer** button. Enter "desktop" as the **Form** field. Press **ENTER**.
- 2** Click on **Options** and **Format Control**.
- 3** Click on **Validations**.
- 4** Add a new validation as shown below.

Format control	
<b>Name</b>	desktop
Validations	
<b>Comment</b>	Require the purchase date be in the past
<b>Add</b>	true
<b>Upd</b>	true
<b>Validation</b>	purchase.date in \$file<tod()
<b>Message</b>	Purchase date cannot be in the future
<b>On Failed ...</b>	purchase.date

- 5** The `tod()` function returns the current date and time. This checks to insure the purchase date is before the current date and time.

- 6** Click on **Back**, then the **OK** button. Click on **Back** to return to designer.
- 7** Enter "desktop" as the **Form** field. Press **ENTER**. Select **Options, Database**.
- 8** Try entering a record with the date in the future. You will see the message. 