

Software Engineering Lab

Oracle Developer 11g

Part 1

Oracle Developer

- The aim is to introduce the concepts and techniques of forms, and to learn how to build single and multiple form applications, using database and graphical user interface (GUI) features

Form Module

- There are many types of objects that you can create in a form module:
 - Item
 - Block
 - Canvas
 - Trigger
 - Other Objects (i.e. Alerts)

Form Objects

1- Item

- ❑ Object to represent data values to the user or let the user interact with the form
- ❑ Member of a block
- ❑ Items are logically grouped into blocks
- ❑ Items are visibly arranged on canvas

Form Objects

2- Block

- Logical owner of items. Owned by the form module
- There is no practical limit to the number of blocks that can be defined

Block Types

- Block Types: Data blocks and control blocks

- **Data block:**
 - Data block is associated with data (table columns) within a database
 - By default, the association between a data block and the database allows operators to automatically query, update, insert, and delete rows within a database
 - Data blocks can be based on database tables, views, procedures, or transactional triggers

Block Types (cont.)

□ **Control block:**

- Control block is not associated with the database
- Items in a control block do not relate to table columns within a database

Form Objects

3- Canvas (page)

- The surface where visual objects are arranged

- **Content Canvas:**
 - Specifies that the canvas should occupy the entire content area of the window to which it is assigned.
Most canvases are content canvases

Form Objects

4- Triggers

- A program unit (a PL/SQL block) that is executed due to an event

Form Minimum Requirements

1 Canvas

1 Block

1 Item

Oracle Forms Builder

The screenshot displays the Oracle Forms Builder application window titled "Oracle Forms Builder - C:\Documents and Settings\Joseph\My Documents\EMPLOYEES_DATA.fmb". The interface includes a menu bar (File, Edit, View, Layout, Program, Debug, Tools, Window, Help) and a toolbar with various icons for file operations and development tools.

The Object Navigator on the left shows a tree structure for the form:

- Forms
 - EMPLOYEES_DATA
 - Triggers
 - Alerts
 - Attached Libraries
 - Data Blocks
 - EMP
 - Triggers
 - Items
 - EMPNO
 - ENAME
 - JOB
 - MGR
 - HIREDATE
 - SAL
 - COMM
 - DEPTNO
 - SKILLS
 - GENDER
 - Relations
 - Canvases
 - CANVAS4
 - Grnhirc

The main canvas editor, titled "EMPLOYEES_DATA: CANVAS4", shows a form titled "Employees Data" with the following fields:

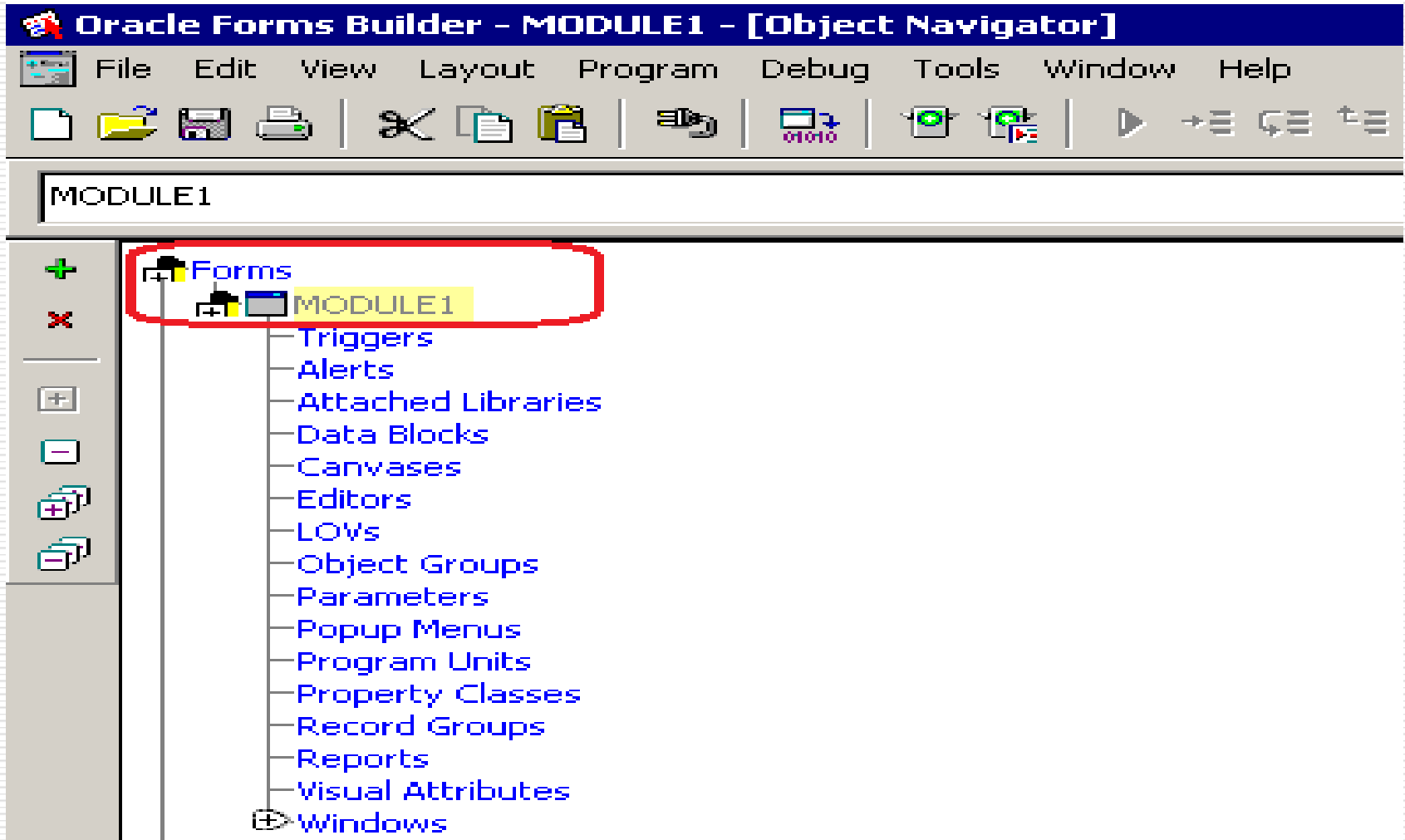
Empno	EMPNO	Ename	ENAME
Mgr	MGR	Hiredate	HIREDATE
Comm	COMM	Deptno	DEPTN
Gender	GEI		

The status bar at the bottom indicates "Module built successfully." The Windows taskbar shows the Start button, several application icons, and the system tray with the date and time (7:20 PM).

Layout Editor

- Graphical design facility for creating and arranging interface items in a form
 - **F2** → Layout editor
 - **F3** → object Navigator

Lab Practice: Creating Form

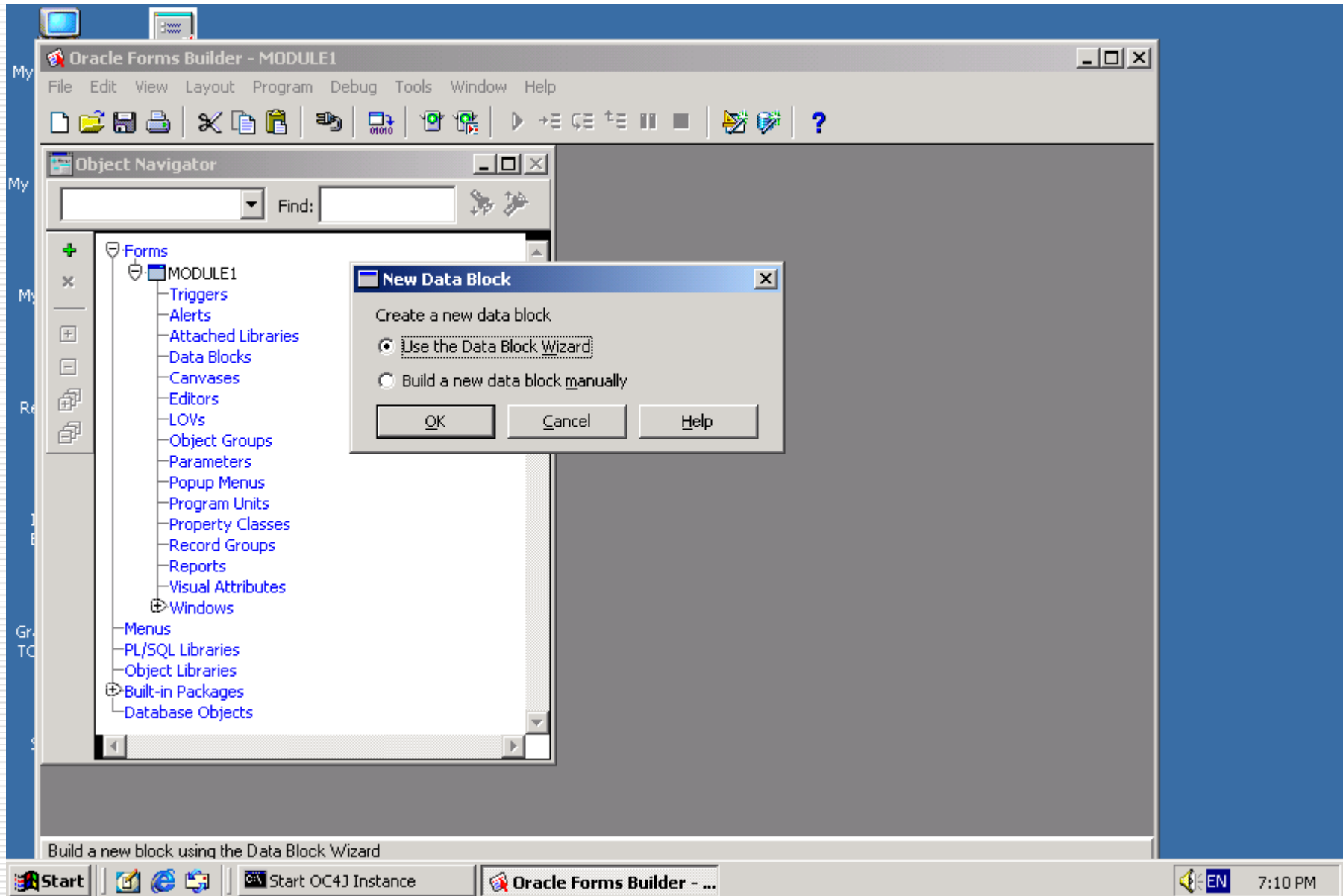


Lab Practice: Data Block

- We will create a form which contains one **database block** associated with **EMP** table.

- Database block Creation:
 - Click the object navigator entry block
(you should use the wizard for creating the data block)OR
 - Click the create icon in the object navigator

Data Block Wizard



Data Block Wizard (cont.)

Oracle Forms Builder - MODULE1

File Edit View Layout

Object Navigator

Forms

- MODULI
- Trigger:
- Alerts
- Attache
- Data Bl
- Canvas
- Editors
- LOVs
- Object
- Parame
- Popup f
- Progran
- Propert
- Record
- Reports
- Visual A
- Window

- Menus
- PL/SQL Librari
- Object Librari
- Built-in Packag
- Database Obj

Data Block Wizard

Select the type of data block you would like to create by clicking on a radio button below.

Note: To base your data block on a set of stored procedures, you should have a working knowledge of PL/SQL programming.

Table or View

Stored Procedure

Cancel Help < Back Next > Finish

Close the window (saving any changes that may have been made).

Start Start OC4J Instance Oracle Forms Builder - ... EN 7:11 PM

Data Block Wizard (cont.)

The screenshot shows the Oracle Forms Builder interface with the Data Block Wizard dialog box open. The wizard is titled "Data Block Wizard" and contains the following elements:

- Text:** "Enter a table or view on which to base your data block. Then select the columns that should appear as items."
- Form:** A text field labeled "Table or view:" with a "Browse..." button to its right.
- Checkbox:** An unchecked checkbox labeled "Enforce data integrity".
- Section:** A section titled "Database Items" with an empty list box below it.
- Buttons:** "Cancel", "Help", "< Back", "Next >", and "Finish" buttons are located at the bottom of the wizard.

A "Connect" dialog box is overlaid on the wizard, containing the following information:

- Title:** "Connect"
- Fields:** "User Name:" with the value "scott", "Password:" with the value "***** tiger", and "Database:" with the value "orcl".
- Buttons:** "Connect", "Cancel", and "Help" buttons are located at the bottom of the dialog.

The background shows the Oracle Forms Builder window with the menu bar (File, Edit, View, Layout, Program, Debug, Tools, Window, Help) and the Object Navigator tree on the left side.

Data Block Wizard (cont.)

The screenshot shows the Oracle Forms Builder interface with the Data Block Wizard dialog box open. The 'Tables' dialog is the active window, displaying a list of tables and their owners. The 'EMP' table is selected. The 'Display' section has 'Current user', 'Tables', and 'Synonyms' checked. The 'Database Items' section is empty.

Tables

Display:

- Current user
- Tables
- Other users
- Views
- Synonyms

Table	Owner
CK_REPORT_GROUP_C...	
CK_REPORT_PARAMETERS	
CK_REPORT_PARAMETE...	
CK_TEMPORARY_SET	
CK_TEMP_COPY_EL_IDS	
CK_TEMP_EL_IDS	
CK_TEMP_IRIDS	
CK_UTILITY_NAVIGATION	
COURSE	
CUSTOMER	
DEPT	
EMP	
I\$CK_APPLICATION_LOGIC	
I\$RM\$ELEMENT_TYPE_EX...	
I\$RM\$NLS_DATA_TYPE_V...	
I\$RM\$NLS_ELEMENT_TYPES	
I\$RM\$NLS_LANGUAGES	
I\$RM\$NLS_MESSAGES	
I\$RM\$NLS_MESSAGE_GR...	
I\$RM\$NLS_PROPERTIES	
I\$RM\$NLS_TEXT_TYPES	
I\$RM\$NLS UTILITIES	

Buttons: OK, Cancel, Help

Database Items

Buttons: < Back, Next >, Finish

Query the current user table space.

Windows: Oracle Forms Builder - MODULE, Start OC4J Instance, Oracle Forms Builder - ...

System tray: EN, 7:13 PM

Data Block Wizard (cont.)

Oracle Forms Builder - MODULE1

Data Block Wizard

Enter a table or view on which to base your data block. Then select the columns that should appear as items.

Table or view:
EMP

Refresh Enforce data integrity

Available Columns

Database Items

- EMPNO
- ENAME
- JOB
- MGR
- HIREDATE
- SAL
- COMM
- DEPTNO
- SKILLS
- GENDER

Cancel Help < Back Next > Finish

Data Block Wizard (cont.)

The screenshot displays the Oracle Forms Builder interface. The main window is titled "Oracle Forms Builder - MODULE1". A "Data Block Wizard" dialog box is open, prompting the user to "Enter a name for your data block." The "Data Block Name:" text field contains the text "EMP".

The Object Navigator on the left side of the screen shows a tree view of the form's objects. The "Forms" folder is expanded, showing a list of objects including:

- MODUL1
- Trigger:
- Alerts
- Attache
- Data Bl
- Canvas
- Editors
- LOVs
- Object
- Parame
- Popup f
- Prograr
- Propert
- Record
- Reporte
- Visual A
- Window
- Menus
- PL/SQL Librari
- Object Librari
- Built-in Packag
- Database Obj

The wizard dialog box includes the following text and controls:

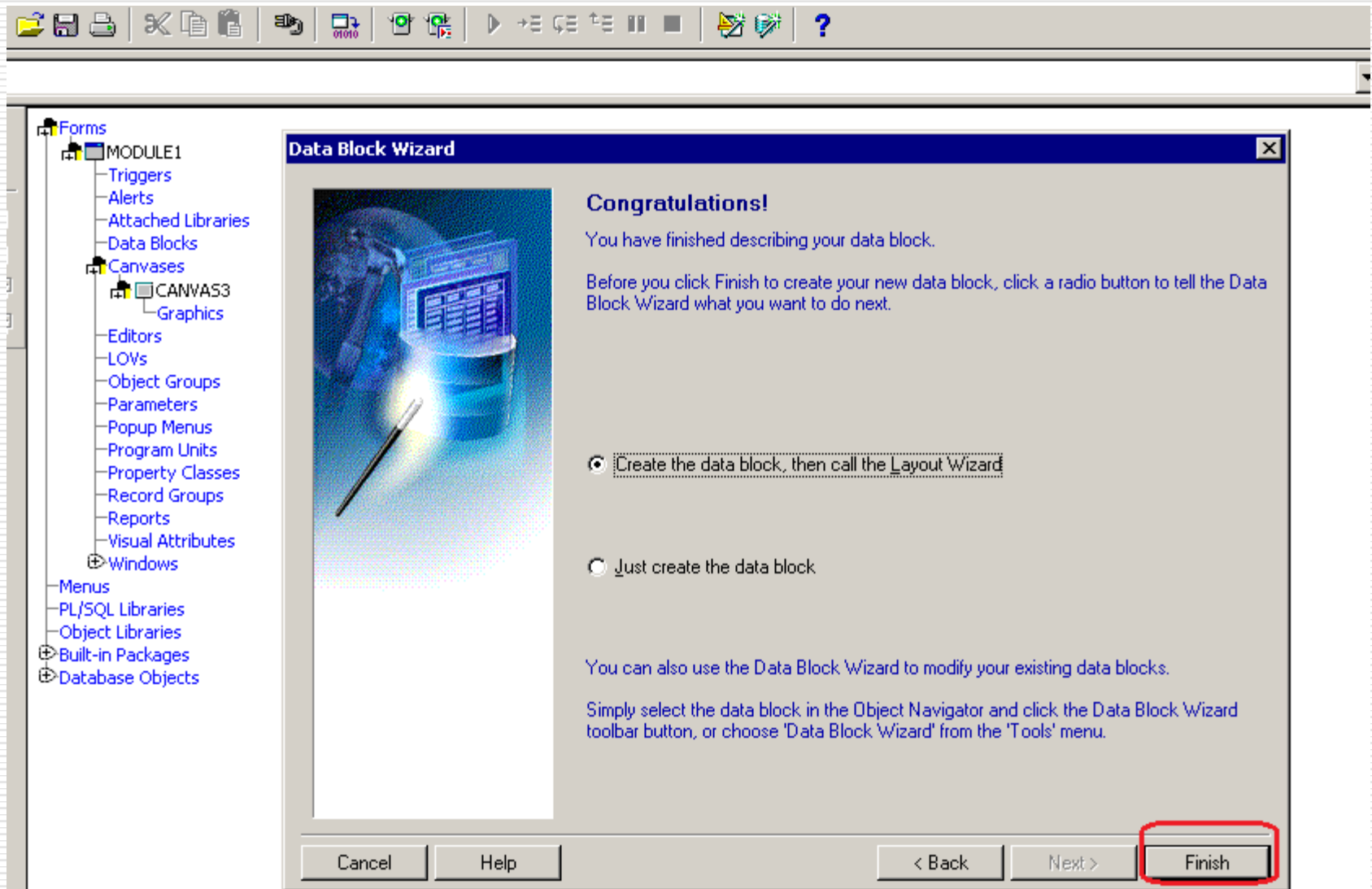
Enter a name for your data block.

Data Block Name:

EMP

Buttons at the bottom of the wizard: Cancel, Help, < Back, Next >, Finish.

Data Block Wizard (cont.)



The screenshot shows a software application window with a toolbar at the top and a tree view on the left. The tree view is expanded to show 'MODULE1' and its sub-items: Triggers, Alerts, Attached Libraries, Data Blocks, Canvases, CANVAS3 (with Graphics sub-item), Editors, LOVs, Object Groups, Parameters, Popup Menus, Program Units, Property Classes, Record Groups, Reports, Visual Attributes, and Windows. Below this are Menus, PL/SQL Libraries, Object Libraries, Built-in Packages, and Database Objects.

The main area of the application displays the 'Data Block Wizard' dialog box. The dialog has a title bar with 'Data Block Wizard' and a close button. It features a blue-tinted image of a globe, a computer monitor, and a pen. The text inside the dialog reads:

Congratulations!
You have finished describing your data block.

Before you click Finish to create your new data block, click a radio button to tell the Data Block Wizard what you want to do next.

Create the data block, then call the Layout Wizard

Just create the data block

You can also use the Data Block Wizard to modify your existing data blocks.

Simply select the data block in the Object Navigator and click the Data Block Wizard toolbar button, or choose 'Data Block Wizard' from the 'Tools' menu.

At the bottom of the dialog, there are four buttons: 'Cancel', 'Help', '< Back', and 'Next >'. The 'Finish' button is highlighted with a red rectangle.

Data Block Creation: Layout Wizard

The screenshot shows the Oracle Forms Designer application window. The title bar reads "Oracle Forms Designer - MODULE1 - [Object Navigator]". The menu bar includes "Edit", "View", "Layout", "Program", "Debug", "Tools", "Window", and "Help". The toolbar contains various icons for file operations, editing, and execution. The main workspace is titled "OYEE5". On the left, the Object Navigator tree shows a hierarchy: Forms > MODULE1 > Data Blocks > CANVAS3 > Graphics. The "Layout Wizard" dialog box is open in the foreground. It has a blue title bar and a close button (X). The dialog contains an illustration of a globe, a clipboard with a form, and a calculator. The text inside the dialog reads: "Welcome to the Layout Wizard! This wizard allows you to quickly and easily lay out the items of a data block. The wizard will display the items in a frame on a canvas, and lay them out in one of several styles. Click Next to begin creating your frame." Below this text is a checked checkbox labeled "Display this page next time". At the bottom of the dialog, there are four buttons: "Cancel", "Help", "Next >" (which is highlighted with a red rectangle), and "Finish".

Data Block Creation: Layout Wizard

File Edit View Layout Program Debug Tools Window Help

EMPLOYEES

Forms

- MODULE1
 - Triggers
 - Alerts
 - Attached Libraries
 - Data Blocks
 - Canvases
 - CANVAS3
 - Graphics
 - Editors
 - LOVs
 - Object Groups
 - Parameters
 - Popup Menus
 - Program Units
 - Property Classes
 - Record Groups
 - Reports
 - Visual Attributes
- Windows
- Menus
- PL/SQL Libraries
- Object Libraries
- Built-in Packages
- Database Objects

Layout Wizard

Select the canvas on which you wish to lay out the data block's items. If you are creating a new canvas, also be sure to select the appropriate canvas type.

Canvas: (New Canvas)

Type: **Content**

- Content
- Stacked
- Vertical Toolbar
- Horizontal Toolbar
- Tab

If you select a tab canvas, then you also must select a tab page on which to lay out the data block's items.

Tab Page: (New Tab Page)

Cancel Help < Back Next > Finish

Data Block Creation: Layout Wizard

Oracle Forms Builder - MODULE1

File Edit View Layout

Layout Wizard

Select the data block you wish to lay out. Then select the items that should be displayed in the frame, and select an item type for each.

Data Block: EMP

Available Items

Displayed Items

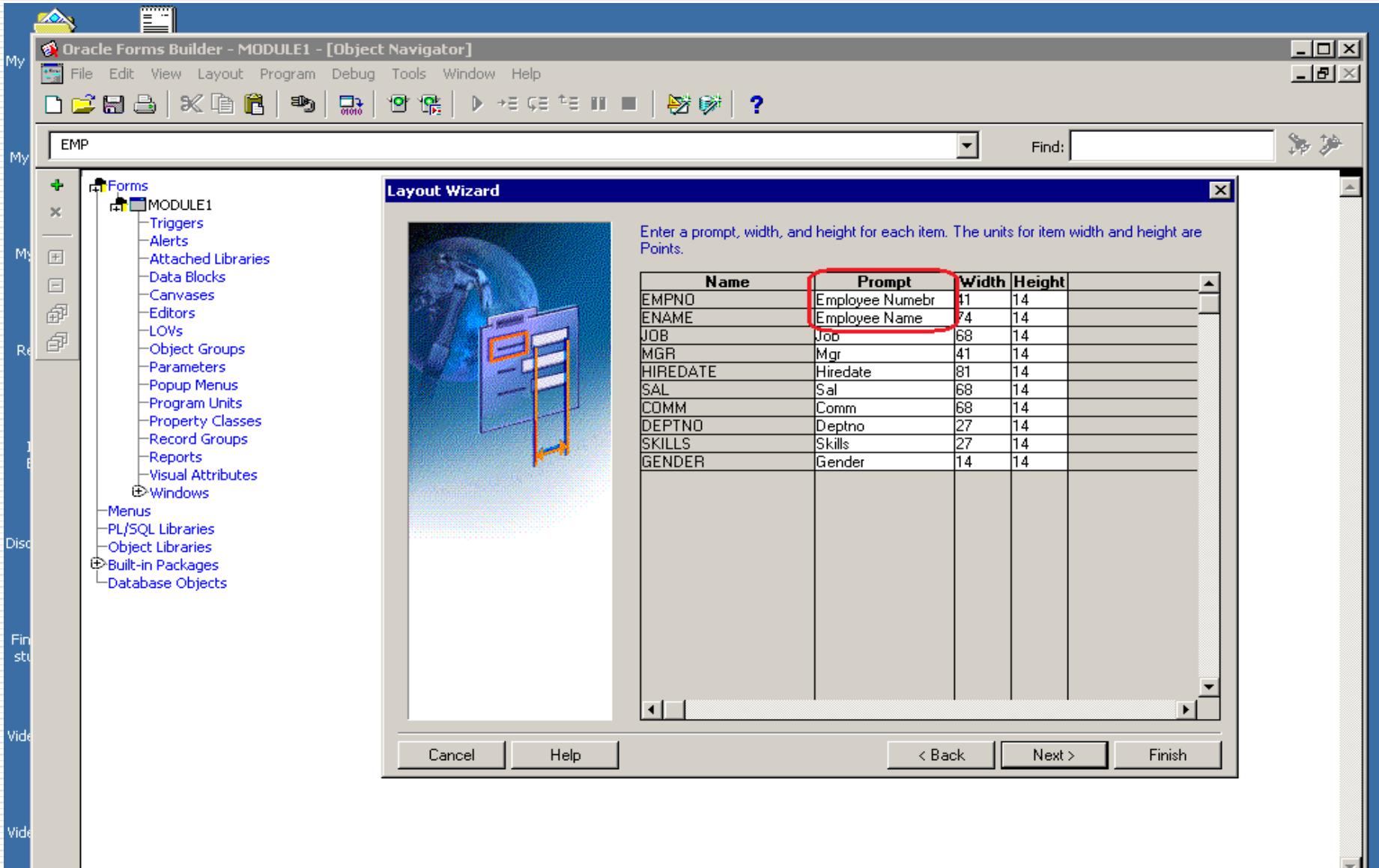
- EMPNO
- ENAME
- JOB
- MGR
- HIREDATE
- SAL
- COMM
- DEPTNO
- SKILLS
- GENDER

Item Type: Bean Area

View: Group

Cancel Help < Back Next > Finish

Data Block Creation: Layout Wizard



Oracle Forms Builder - MODULE1 - [Object Navigator]

File Edit View Layout Program Debug Tools Window Help

EMP Find:

Forms

- MODULE1
 - Triggers
 - Alerts
 - Attached Libraries
 - Data Blocks
 - Canvases
 - Editors
 - LOVs
 - Object Groups
 - Parameters
 - Popup Menus
 - Program Units
 - Property Classes
 - Record Groups
 - Reports
 - Visual Attributes
 - Windows
- Menus
- PL/SQL Libraries
- Object Libraries
- Built-in Packages
- Database Objects

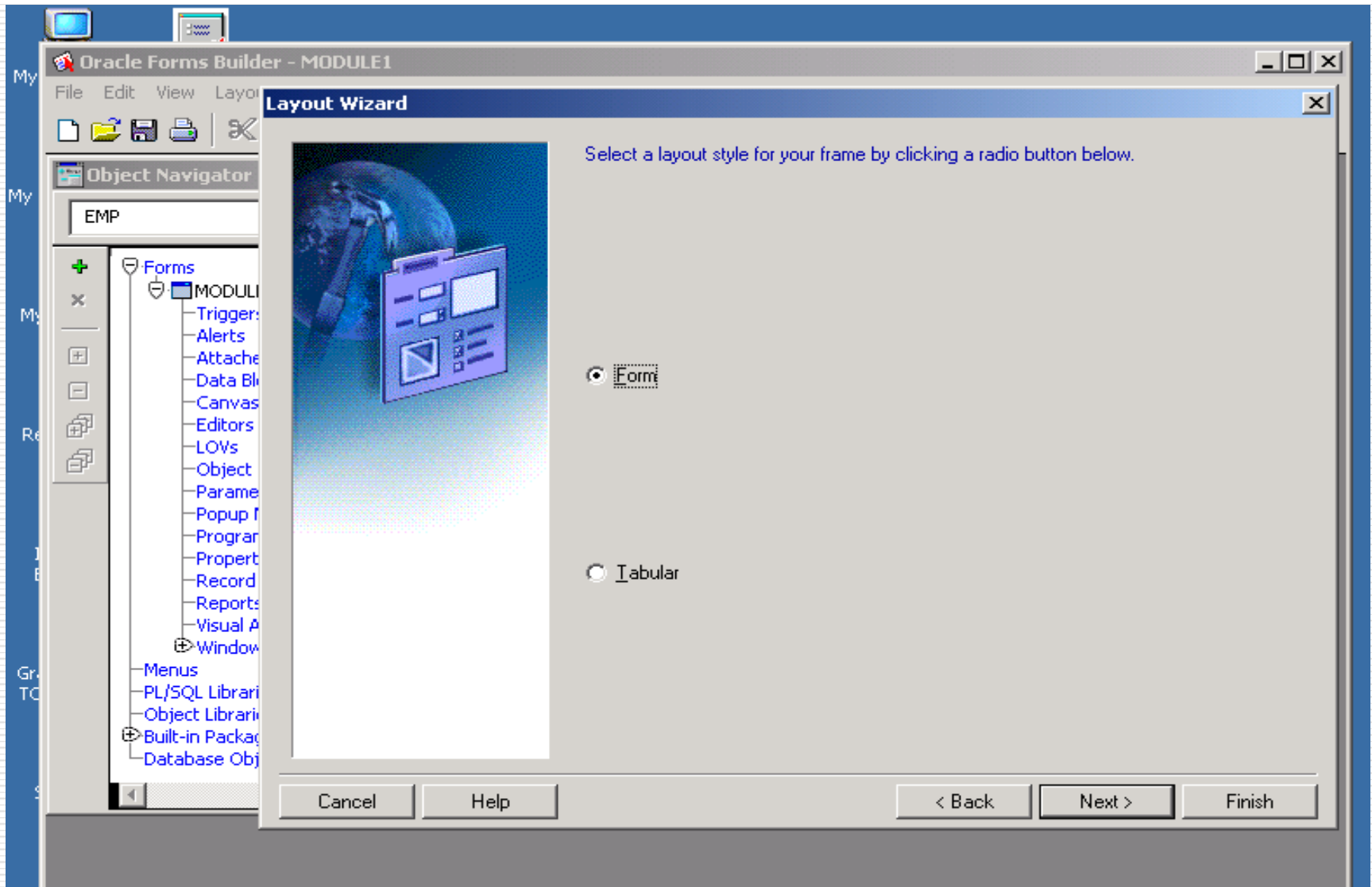
Layout Wizard

Enter a prompt, width, and height for each item. The units for item width and height are Points.

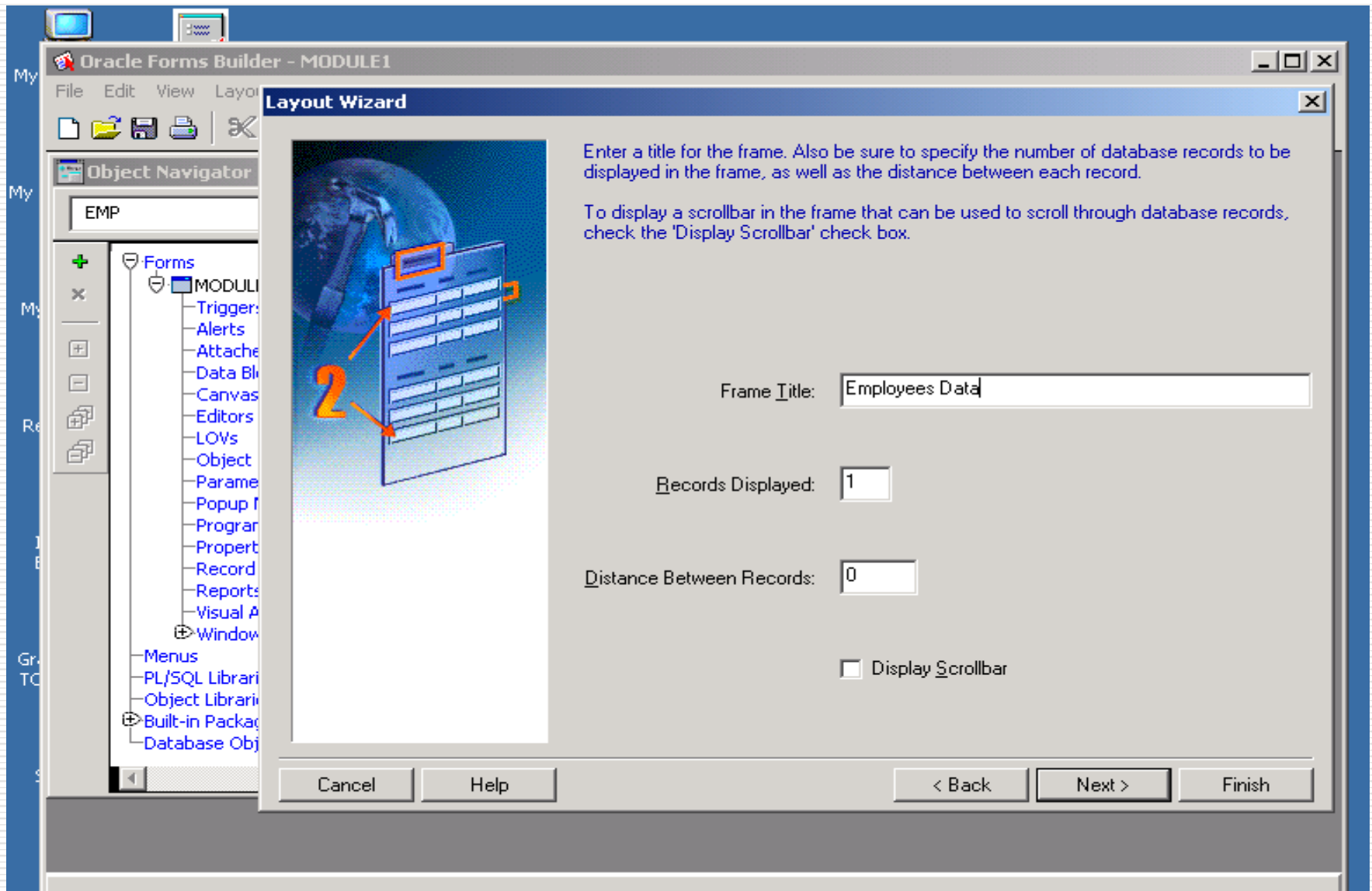
Name	Prompt	Width	Height
EMPNO	Employee Numebr	11	14
ENAME	Employee Name	74	14
JOB	Job	68	14
MGR	Mgr	41	14
HIREDATE	Hiredate	81	14
SAL	Sal	68	14
COMM	Comm	68	14
DEPTNO	Deptno	27	14
SKILLS	Skills	27	14
GENDER	Gender	14	14

Cancel Help < Back Next > Finish

Data Block Creation: Layout Wizard



Data Block Creation: Layout Wizard



Oracle Forms Builder - MODULE1

File Edit View Layout

Object Navigator

EMP

Forms

- MODULI
- Trigger:
- Alerts
- Attache
- Data Bl
- Canvas
- Editors
- LOVs
- Object
- Parame
- Popup f
- Progran
- Propert
- Record
- Reports
- Visual A
- Window

Menus

PL/SQL Librari

Object Librari

Built-in Packag

Database Obj

Layout Wizard

Enter a title for the frame. Also be sure to specify the number of database records to be displayed in the frame, as well as the distance between each record.

To display a scrollbar in the frame that can be used to scroll through database records, check the 'Display Scrollbar' check box.

Frame Title:

Records Displayed:

Distance Between Records:

Display Scrollbar

Cancel Help < Back Next > Finish

Before running the form

- For the Form to run; Oracle HTTP Server listener receives the request when web browser starts. Oracle HTTP Server listener forwards the request to the Oracle WebLogic Server Oracle Developer. So there must be a weblogic server started.
 - Write in the **windows search box:**
Start Web Logic Admin Server
- Once the weblogic server is running, you can minimize it and continue working (design/ run) in the form builder.
- When you are finished, and the weblogic server is no longer needed, you may stop it
 - Write in the **windows search box:**
Stop Web Logic Admin Server

```
Start Weblogic Admin Server
s.config=C:\Oracle\Middleware\user_projects\domains\ClassicDomain\config\fmwconfig\jps-config.xml -Doracle.instance=C:\O
racle\Middleware\asinst_1 -Doracle.instance.name=asinst_1 -Doracle.forms.weblogic=1 -Ddomain.name=ClassicDomain -Dcommon
.components.home=C:\Oracle\MIDDLE~1\ORACLE~1 -Djrf.version=11.1.1 -Dorg.apache.commons.logging.Log=org.apache.commons.lo
gging.impl.Jdk14Logger -Ddomain.home=C:\Oracle\MIDDLE~1\USER_P~1\domains\CLASSI~1 -Djrocket.optfile=C:\Oracle\MIDDLE~1\O
RACLE~1\modules\oracle.jrf_11.1.1\jrocket_optfile.txt -Doracle.server.config.dir=C:\Oracle\MIDDLE~1\USER_P~1\domains\CLA
SSI~1\config\FMWCON~1\servers\AdminServer -Doracle.domain.config.dir=C:\Oracle\MIDDLE~1\USER_P~1\domains\CLASSI~1\config
\FMWCON~1 -Digf.arisidbeans.carmlloc=C:\Oracle\MIDDLE~1\USER_P~1\domains\CLASSI~1\config\FMWCON~1\carml -Digf.arisidst
ack.home=C:\Oracle\MIDDLE~1\USER_P~1\domains\CLASSI~1\config\FMWCON~1\arisidprovider -Doracle.security.jps.config=C:\Ora
cle\MIDDLE~1\USER_P~1\domains\CLASSI~1\config\fmwconfig\jps-config.xml -Doracle.deployed.app.dir=C:\Oracle\MIDDLE~1\USER
_P~1\domains\CLASSI~1\servers\AdminServer\tmp\WL_user -Doracle.deployed.app.ext=- -Dweblogic.alternateTypesDirectory=C
:\Oracle\MIDDLE~1\ORACLE~1\modules\oracle.ossoiap_11.1.1,C:\Oracle\MIDDLE~1\ORACLE~1\modules\oracle.oamprovider_11.1.1,C
:\Oracle\MIDDLE~1\ORACLE~1\modules\oracle.jps_11.1.1 -Djava.protocol.handler.pkgs=oracle.mds.net.protocol -Dweblogic.jd
bc.remoteEnabled=false -Dwc.oracle.home=C:\Oracle\Middleware\Oracle_FRHome1 -Dclassic.oracle.home=C:\Oracle\Middleware\
Oracle_FRHome1 -Dweblogic.management.discover=true -Dwlw.iterativeDev=false -Dwlw.testConsole=false -Dwlw.logErrorsToC
onsole=false -Dweblogic.ext.dirs=C:\Oracle\MIDDLE~1\patch_wls1036\profiles\default\sysext_manifest_classpath;C:\Oracle\M
IDDLE~1\patch_ocp371\profiles\default\sysext_manifest_classpath weblogic.Server
[WARN ] Use of -Djrocket.optfile is deprecated and discouraged.
<31-Oct-2018 08:09:38 o'clock EET> <Info> <Security> <BEA-090905> <Disabling CryptoJ JCE Provider self-integrity check f
or better startup performance. To enable this check, specify -Dweblogic.security.allowCryptoJDefaultJCEVerification=true>
<31-Oct-2018 08:09:38 o'clock EET> <Info> <Security> <BEA-090906> <Changing the default Random Number Generator in RSA C
ryptoJ from ECDRBG to FIPS186PRNG. To disable this change, specify -Dweblogic.security.allowCryptoJDefaultPRNG=true>
<31-Oct-2018 08:09:39 o'clock EET> <Info> <WebLogicServer> <BEA-000377> <Starting WebLogic Server with Oracle JRockit(R)
Version R28.2.0-79-146777-1.6.0_29-20111005-1808-windows-ia32 from Oracle Corporation>
<31-Oct-2018 08:09:41 o'clock EET> <Info> <Management> <BEA-141107> <Version: WebLogic Server 10.3.6.0 Tue Nov 15 08:52
:36 PST 2011 1441050
WebLogic Server 10.3 Tue Nov 15 08:52:36 PST 2011 1441050 >
<31-Oct-2018 08:09:43 o'clock EET> <Info> <Security> <BEA-090065> <Getting boot identity from user.>
Enter username to boot WebLogic server:weblogic
Enter password to boot WebLogic server:
```

- Username: **weblogic** and Password: **Administrator1**
- Note that the password is **INVISIBLE**, so it is better to write it in a notepad and copy it then paste in the web logic window

RED

```
EMBEAN: EMDomain:Name=reports,EMTargetType=oracle_repapp,type=EMIntegration,Application=reports,ApplicationVersion=11.1.2
REGISTERED
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Log Management> <BEA-170027> <The Server has established connection with the
Domain level Diagnostic Service successfully.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Warning> <Server> <BEA-002611> <Hostname "DESKTOP-JJ3RSQT", maps to multiple IP addresses:
172.16.44.64, 172.24.241.225, fe80:0:0:0:c5ca:4d10:60c6:ee74%15, fe80:0:0:0:6c9b:3d9a:fba:c4f7%5>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 172.24.241.2
25:7001 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 172.16.44.64:70
01 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default[4]" is now listening on 127.0.0.1:70
01 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default[5]" is now listening on 0:0:0:0:0:0:
0:1:7001 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on fe80:0:0:0:c
5ca:4d10:60c6:ee74:7001 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <Server> <BEA-002613> <Channel "Default[3]" is now listening on fe80:0:0:0:6
c9b:3d9a:fba:c4f7:7001 for protocols iiop, t3, ldap, snmp, http.>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <WebLogicServer> <BEA-000329> <Started WebLogic Admin Server "AdminServer" f
or domain "ClassicDomain" running in Production Mode>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING>
```

```
<31-Oct-2018 08:11:08 o'clock EET> <Notice> <WebLogicServer> <BEA-000360> <Server started in RUNNING mode>
```

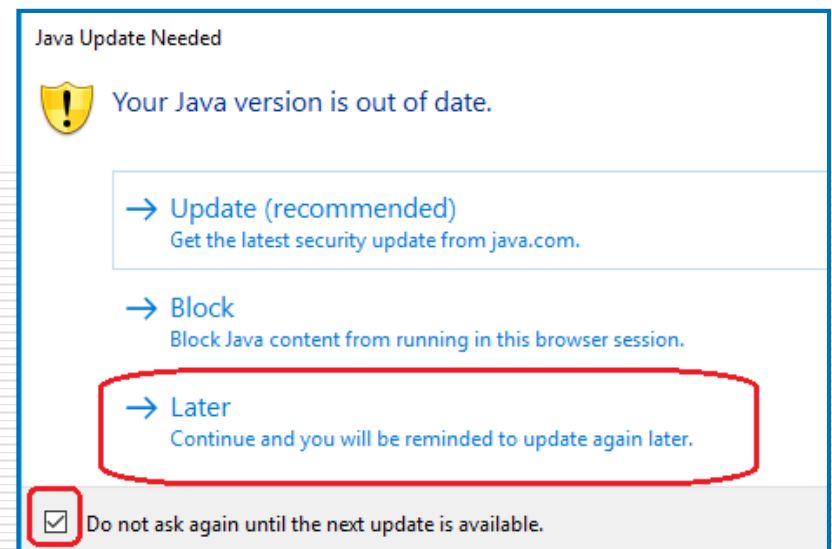
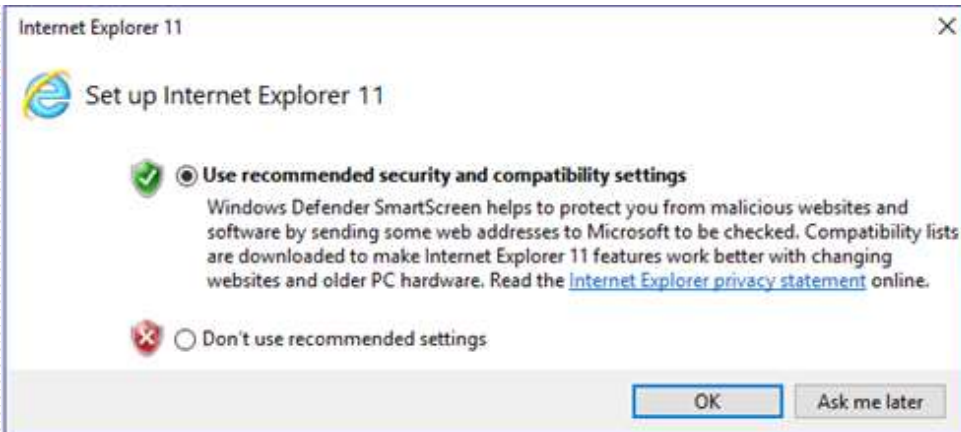
Running the form

The screenshot shows the Oracle Forms Builder interface. The title bar reads "Oracle Forms Builder - MODULE1 - [MODULE] CANVAS4 (EMP)". The menu bar includes File, Edit, View, Layout, Program, Debug, Tools, Window, and Help. The toolbar contains various icons, with the 'Run' icon (a green play button) highlighted by a red circle and a red arrow pointing to it from above. Below the toolbar, the "Canvas:" dropdown is set to "CANVAS4" and the "Block:" dropdown is set to "EMP". The font is set to "Tahoma (Western)" and the size is "8". The main workspace displays a form titled "Employees Data" with the following fields:

Employee Numebr	EMPNO	Employee Name	ENAME	Job	JOB
Hiredate	HIREDATE	Sal	SAL	Mgr	MGR
Deptno	DEPTN	Skills	SKILLS	Comm	COMM
				Gender	SEX

The form is displayed on a grid with a coordinate system on the left and top. The left side has a vertical axis from 0 to 272 in increments of 16. The top has a horizontal axis from 0 to 640 in increments of 16. A vertical scroll bar is on the right side of the form area.

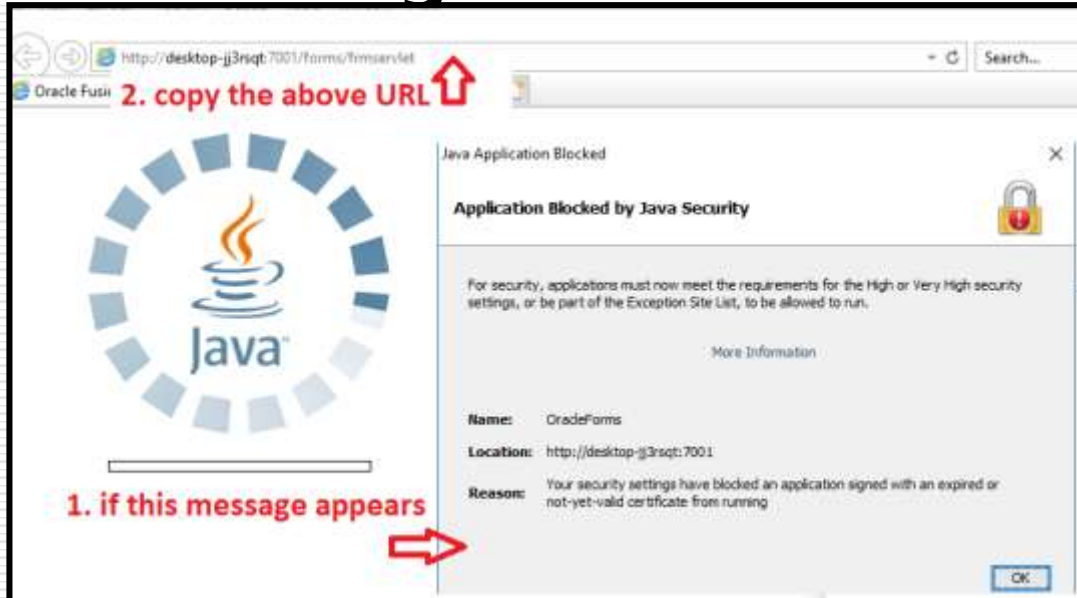
Running the form for the first time



Running the form for the first time

1. if this message appears

2. copy the above URL



Java Application Blocked

Application Blocked by Java Security

For security, applications must now meet the requirements for the High or Very High security settings, or be part of the Exception Site List, to be allowed to run.

More Information

Name: OracleForms

Location: http://desktop-jj3rsqt:7001

Reason: Your security settings have blocked an application signed with an expired or not-yet-valid certificate from running

OK

Adjust your computer's settings

View by: Large icons

3. Control Panel

- Administrative Tools
- Credential Manager
- Ease of Access Center
- Indexing Options
- BitLocker Drive Encryption
- Device Manager
- Flash Player (32-bit)
- Java



4. Java Control Panel

General Update Java Security Advanced

Enable Java content in the browser

Security level for applications not on the Exception Site list

Very High
Only Java applications identified by a certificate from a trusted authority are allowed to run, and only if the certificate can be verified as not revoked.

High
Java applications identified by a certificate from a trusted authority are allowed to run, even if the revocation status of the certificate cannot be verified.

Exception Site List

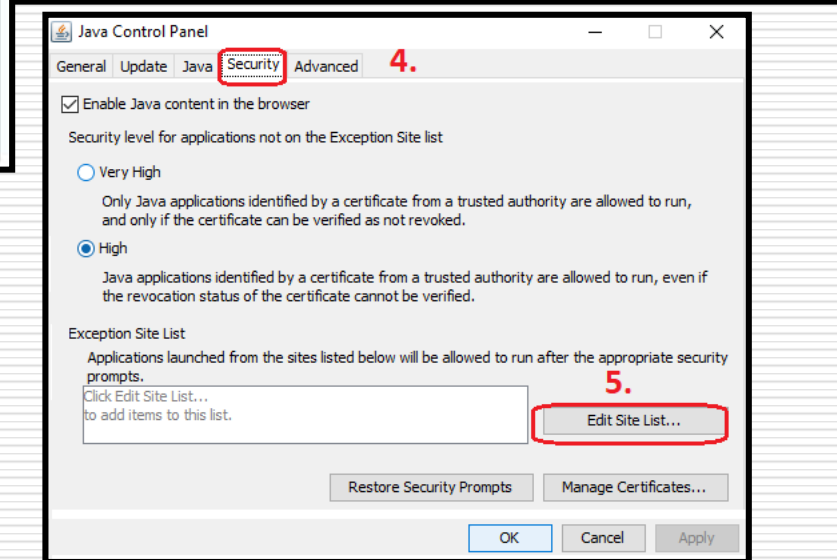
Applications launched from the sites listed below will be allowed to run after the appropriate security prompts.

Click Edit Site List... to add items to this list.

5. Edit Site List...

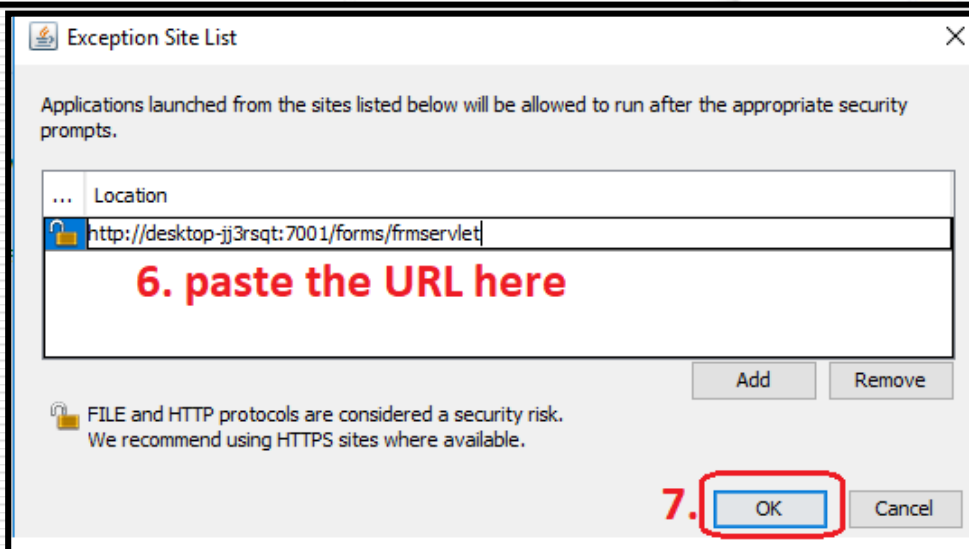
Restore Security Prompts Manage Certificates...

OK Cancel Apply



6. paste the URL here

7. OK



Exception Site List

Applications launched from the sites listed below will be allowed to run after the appropriate security prompts.

Location
http://desktop-jj3rsqt:7001/forms/frmservlet

Add Remove

FILE and HTTP protocols are considered a security risk. We recommend using HTTPS sites where available.

OK Cancel

8. Continue

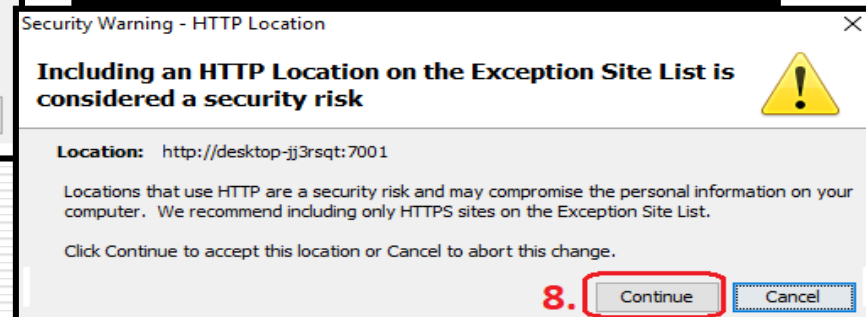
Including an HTTP Location on the Exception Site List is considered a security risk

Location: http://desktop-jj3rsqt:7001

Locations that use HTTP are a security risk and may compromise the personal information on your computer. We recommend including only HTTPS sites on the Exception Site List.

Click Continue to accept this location or Cancel to abort this change.

Continue Cancel



Lab Practice: Running Form

- ❑ Run your form from the toolbar, click on **Run**
- ❑ Insert new, update, and delete employees
- ❑ Retrieving data (**unrestricted query**)
 - => press **Execute Query**

Select all employees

Oracle Application Server Forms Services - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

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Address <http://orclvpc:8889/forms/frmservlet>

Action Edit Query Block Record Field Help Window

ORACLE

WINDOW1

Execute Query

Employees Data

Employee Number	<input type="text"/>	Employee Name	<input type="text"/>	Job	<input type="text"/>
Hiredate	<input type="text"/>	Sal	<input type="text"/>	Mgr	<input type="text"/>
Deptno	<input type="text"/>	Skills	<input type="text"/>	Comm	<input type="text"/>
				Gender	<input type="checkbox"/>

Select all employees

Oracle Application Server Forms Services - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

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Address **Use navigation keys (those blue arrows) to display next or previous record**

Action Edit Query Block Record Field Help window

WINDOW1

Employees Data

Employee	7499	Employee	ALLEN	Job	SALESMAN
Number		Name		Mgr	7698
Hiredate	20-FEB-1981	Sal	1600	Comm	300
Deptno	30	Skills		Gender	

Lab Practice: filter data based on condition (restricted query)

- Retrieving data (**restricted query**)
you can use matching values, matching patterns (wildcards)
 1. Select from **Menu => Query =>Enter**
OR press icon **enter query** from form menu
 2. Enter your query
ex: enter 10 in the deptno text box
 3. Press **Execute Query**
 - Data of employees working in dept 10 only is displayed
-

Insert Record

Oracle Application Server Forms Services - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media History Mail Print

Address <http://orclvpc:8889/forms/frmservlet>

Action Edit Query Block Record Field Help Window

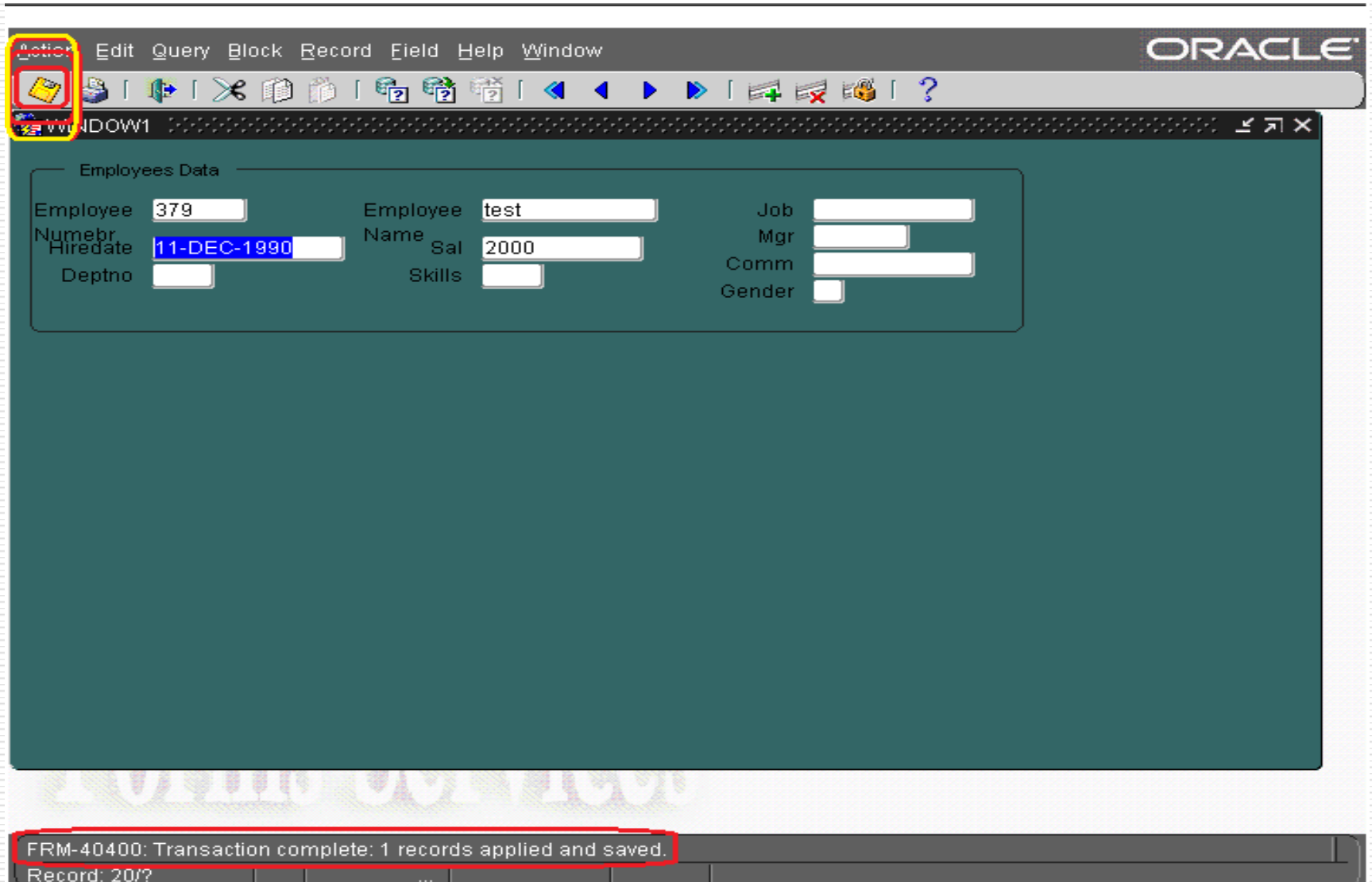
ORACLE

WINDOW1 Insert Record

Employees Data

Employee Number	<input type="text"/>	Employee Name	<input type="text"/>	Job	<input type="text"/>
Hiredate	<input type="text"/>	Sal	<input type="text"/>	Mgr	<input type="text"/>
Deptno	<input type="text"/>	Skills	<input type="text"/>	Comm	<input type="text"/>
				Gender	<input type="text"/>

Insert Record



The screenshot displays the Oracle Forms interface for the 'Employees Data' form. The menu bar includes 'Action', 'Edit', 'Query', 'Block', 'Record', 'Field', 'Help', and 'Window'. The 'Action' button is highlighted with a yellow box. The toolbar contains various navigation and editing icons. The form fields are as follows:

Field	Value
Employee Number	379
Employee Name	test
Salary	2000
Hiredate	11-DEC-1990
Deptno	
Skills	
Job	
Mgr	
Comm	
Gender	

The status bar at the bottom indicates: FRM-40400: Transaction complete: 1 records applied and saved. Record: 20/?

Delete record

Oracle Application Server Forms Services - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media History Mail Print

Address <http://orclvpc:8889/forms/frmservlet>

Action Edit Query Block Record Field Help Window

ORACLE

WINDOW1

Employees Data

Employee Number	<input type="text" value="7499"/>	Employee Name	<input type="text" value="ALLEN"/>	Job	<input type="text" value="SALESMAN"/>
Hiredate	<input type="text" value="20-FEB-1981"/>	Sal	<input type="text" value="1600"/>	Mgr	<input type="text" value="7698"/>
Deptno	<input type="text" value="30"/>	Skills	<input type="text"/>	Comm	<input type="text" value="300"/>
				Gender	<input type="checkbox"/>

Delete Record

The screenshot displays the Oracle Forms interface for an 'Employees Data' form. The menu bar includes 'Action', 'Edit', 'Query', 'Block', 'Record', 'Field', 'Help', and 'Window'. The toolbar contains various icons for navigation and editing. The form fields are as follows:

Field	Value
Employee Number	379
Employee Name	test
Hiredate	11-DEC-1990
Deptno	
Sal	2000
Skills	
Job	
Mgr	
Comm	
Gender	

FRM-40400: Transaction complete: 1 records applied and saved.
Record: 20/?

After the record is deleted, it automatically displays next record on the form

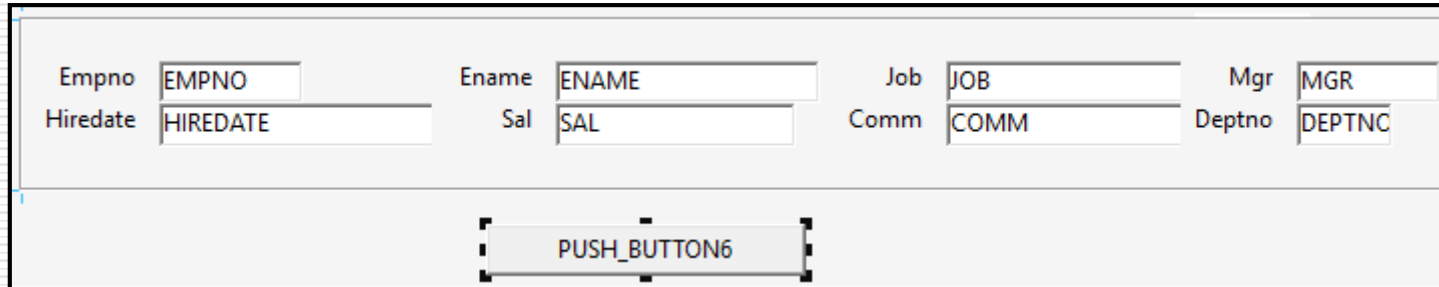
Lab Practice: Buttons

- Draw a button from the toolbox and open its property palette by:
 - Double-click the object icon **OR**
 - Select the button then press **F4 OR**
 - Right click then choose property palette

- **Label** property: label that appears on the button at runtime
- **Tool tip** property: short help text that displays info about item when you navigate to it with the mouse

Lab Practice: Buttons

Press F2 to go to the Layout Editor



Empno EMPNO Ename ENAME Job JOB Mgr MGR
Hiredate HIREDATE Sal SAL Comm COMM Deptno DEPTNC

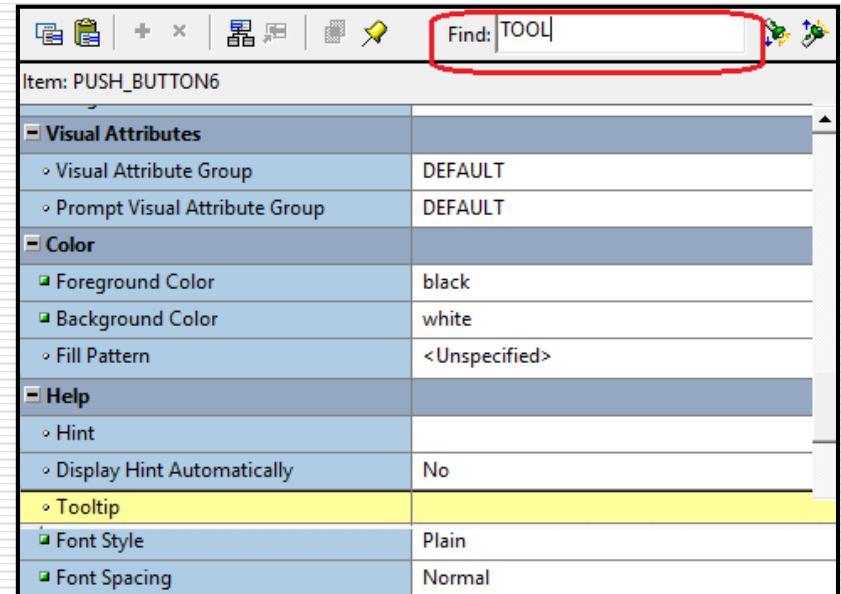
PUSH_BUTTON6

Double Click on the button to open the property pallet



Item: PUSH_BUTTON6

General	
Name	PUSH_BUTTON6
Item Type	Push Button
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	Show_Next
Access Key	
Implementation Class	
Iconic	No
Icon Filename	
Default Button	No
Popup Menu	<Null>



Item: PUSH_BUTTON6

Visual Attributes	
Visual Attribute Group	DEFAULT
Prompt Visual Attribute Group	DEFAULT
Color	
Foreground Color	black
Background Color	white
Fill Pattern	<Unspecified>
Help	
Hint	
Display Hint Automatically	No
Tooltip	
Font Style	Plain
Font Spacing	Normal

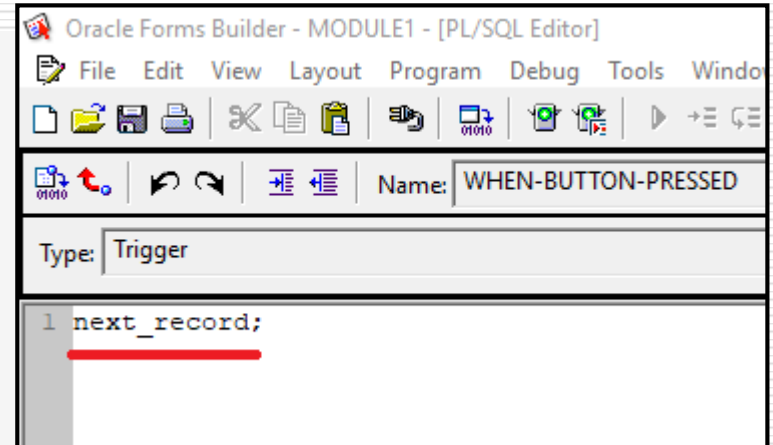
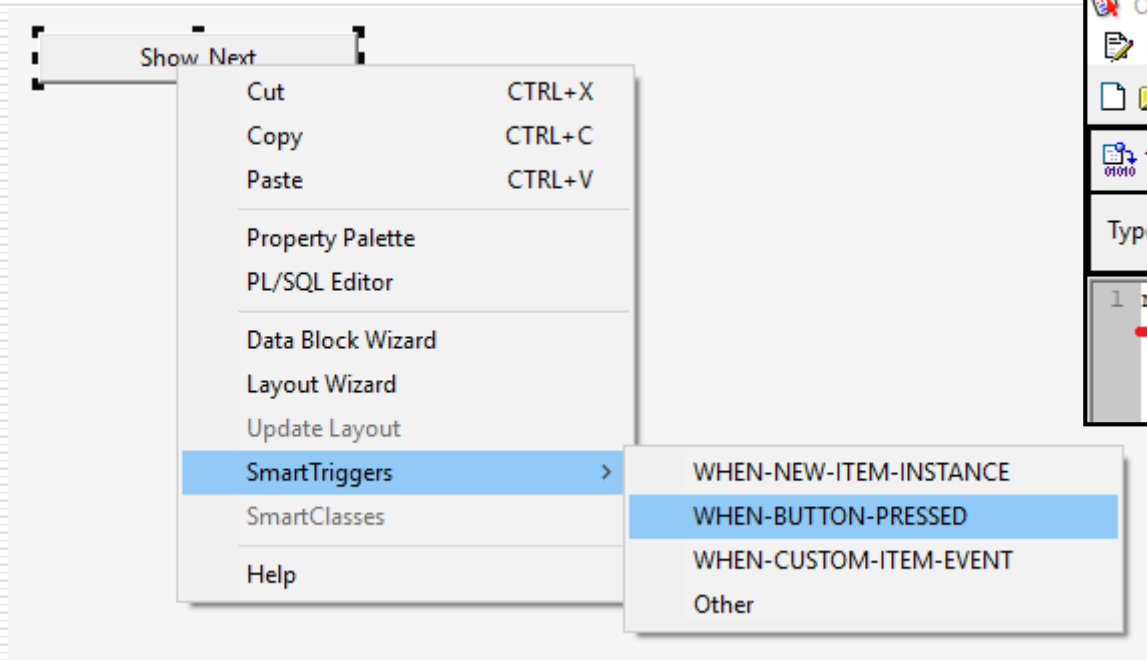
Lab Practice: Triggers

- Item level:
 - A Trigger fires when this item is the current item
 - In the layout editor, create a button, right click, and choose

Smart Triggers => 'When_button_pressed'

- Edit PL/SQL:
 - 1- Next_record;
 - 2- Previous_record;
 - 3- First_record;
 - 4- Last_record;
 - 5- Commit;
- **Compile and close**

Lab Practice: Triggers



Before we start

- You need to connect to SQL Developer with user name: **scott** and password: **tiger** then write these SQL statements in :

- Alter table emp

```
add ( skills char(3), gender char(1));
```

- Update emp set skills = 'yes' , gender='M'

```
where empno between 7300 and 7839;
```

- Update emp set skills = 'no' , gender='F'

```
where empno between 7844 and 8000;
```

```
Commit;
```

User **scott** already contains tables **emp** and **dept** similar to employees and departments of user hr

Create New form based on Emp table

The screenshot displays the Oracle Forms Builder interface. The main window is titled "Oracle Forms Builder - C:\Documents and Settings\Joseph\My Documents\EMPLOYEES_DATA.fmb". The menu bar includes File, Edit, View, Layout, Program, Debug, Tools, Window, and Help. The Object Navigator on the left shows a tree structure for the form, with "EMP" selected under "Items". The "EMP" object is expanded, showing fields like EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO, SKILLS, and GENDER. A canvas window titled "EMPLOYEES_DATA: CANVAS4" is open, showing a form layout with fields for Empno, Mgr, Comm, Gender, Ename, Hiredate, and Deptno. The status bar at the bottom indicates "Module built successfully."

Oracle Forms Builder - C:\Documents and Settings\Joseph\My Documents\EMPLOYEES_DATA.fmb

File Edit View Layout Program Debug Tools Window Help

Object Navigator

Triggers Find:

Forms

- EMPLOYEES_DATA
 - Triggers
 - Alerts
 - Attached Libraries
 - Data Blocks
 - EMP
 - Triggers
 - Items
 - EMPNO
 - ENAME
 - JOB
 - MGR
 - HIREDATE
 - SAL
 - COMM
 - DEPTNO
 - SKILLS
 - GENDER
 - Relations
 - Canvases
 - CANVAS4
 - Granhirc

EMPLOYEES_DATA: CANVAS4

Canvas: CANVAS4 Block: <Null>

(Tahoma (Western) 8 B I U)

0 16 32 48 64 80 96 112 128 144 160 176 192 208 224 240 256 272

Employees Data

Empno	EMPNO	Ename	ENAME
Mgr	MGR	Hiredate	HIREDATE
Comm	COMM	Deptno	DEPTN
Gender	GEI		

Module built successfully.

Start Start OC4J Instance Oracle Forms Builder - ... EN 7:20 PM

Lab Practice: Check Box

The screenshot shows a form editor for an 'employee' table. The form contains several fields: 'Empno' (EMPNO), 'Job' (JOB), 'Comm' (COMM), 'Skills' (SKILLS), 'Mgr' (MGR), 'Deptno' (DEPTNO), 'Ename' (ENAME), 'Sal' (SAL), and 'Hiredate' (HIREDATE). The 'Skills' field is highlighted with a red box, indicating it is the focus of the lab practice.

- ❑ In the layout editor, select the **skills** item, enter property palette:
 - Change **item type** into **Check Box**
 - Set **value when checked** => yes
and **value when unchecked** => no
 - Set check box **mapping of other values**:
this determines how data values other than specified are processed, **not allowed** property makes the form ignore the entire record during the query processing
 - Set **initial value** => yes

Lab Practice: Check Box

General	
Name	SKILLS
Item Type	Check Box
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	
Access Key	
Implementation Class	
Value when Checked	yes
Value when Unchecked	no
Check Box Mapping of Other Values	Checked
Popup Menu	Not Allowed Checked
Navigation	
	Unchecked
Data	
Data Type	Char
Data Length Semantics	BYTE
Maximum Length	14
Initial Value	yes

Lab Practice: Check Box

Form layout (design)

employee

Empno	EMPNO	Skills <input checked="" type="checkbox"/>	Mgr	MGR	Hiredate	HIREDATE	Ename	ENAME
Job	JOB						Sal	SAL
Comm	COMM		Deptno	DEPTNO				

Form Run

WINDOW1

employee

Empno		Skills <input checked="" type="checkbox"/>	Mgr		Hiredate		Ename	
Job	Manger						Sal	
Comm			Deptno					

Lab Practice: Radio Group

- A radio group is a set of radio buttons, each represents a different value. These values are mutually exclusive
- In the layout editor, select the gender item, enter property palette
 - Change **item type** property into **radio group**. It disappears from layout editor
 - In the object navigator, expand the gender node => radio buttons node => click the create icon, and create two radio buttons
 - Enter the property palette of the radio buttons:
 - Change **label** into Female, **radio button value** => F
 - Change **label** into Male, **radio button value** => M

Lab Practice: Radio Group (cont.)

- In layout editor, radio buttons are placed on the top left corner above each other. Drag them, add a frame
- Enter the property palette of the radio group, that is, the gender item itself.
 - Set **initial value** => F
- Leaving the radio group's **mapping of other values property** blank makes the form ignore the entire row during query processing. Associate it with one of the existing radio buttons by writing M

Lab Practice: Radio Group

- 1. Double click on the Gender Item

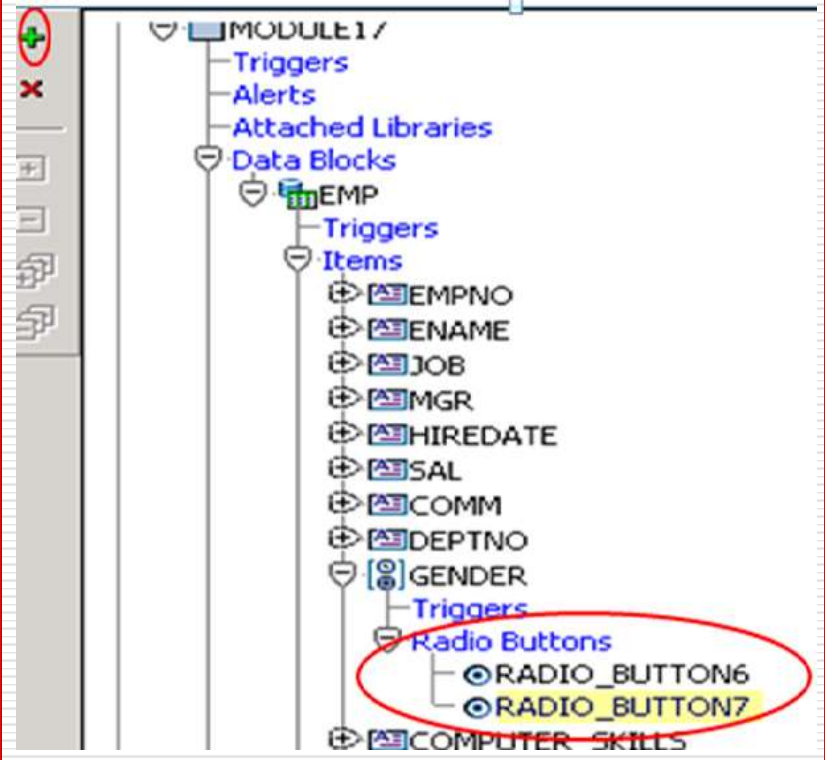
Employees Data

Empno	EMPNO	Ename	ENAME
Mgr	MGR	Hiredate	HIREDATE
Comm	COMM	Deptno	DEPTN
Gender	GEI		

- 2. Change item type property

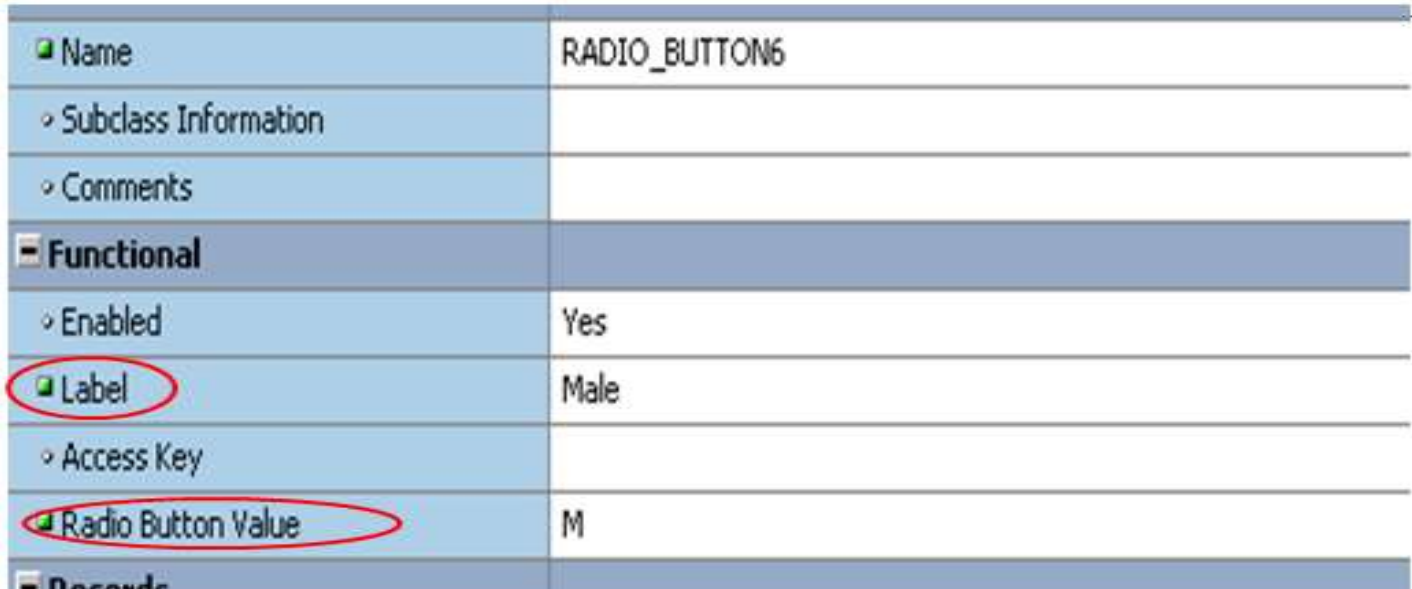
General	
Name	GENDER
Item Type	Radio Group
Subclass Information	

- 3. Press F3 then Add two radio buttons



Lab Practice: Radio Group

- 4. Open the property pallet of the first radio button and change the following

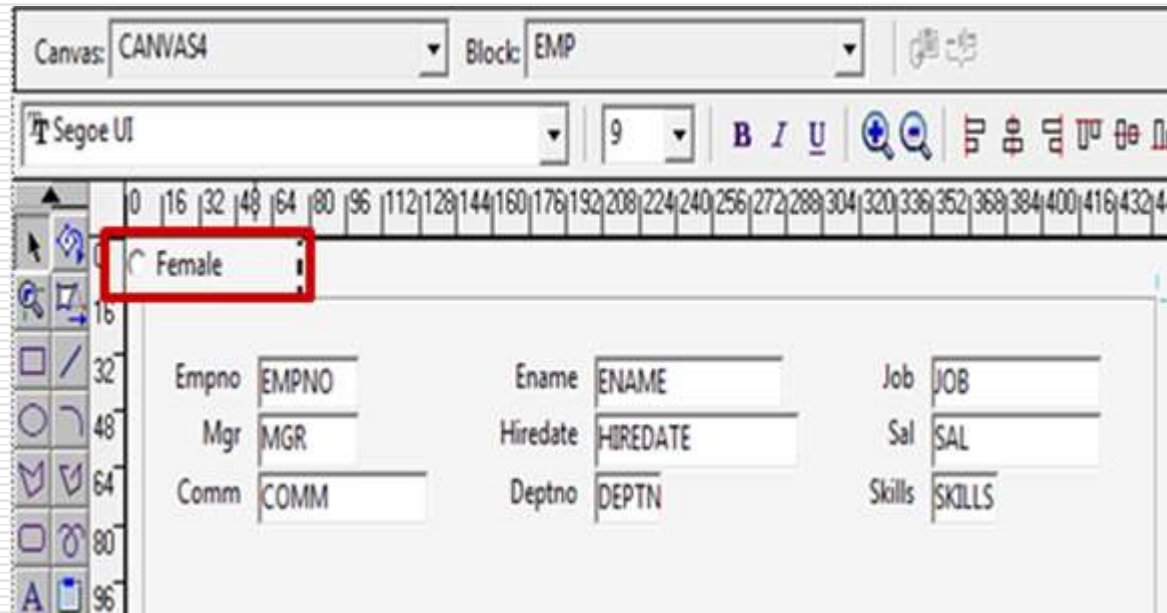


Name	RADIO_BUTTON6
Subclass Information	
Comments	
Functional	
Enabled	Yes
Label	Male
Access Key	
Radio Button Value	M
Records	

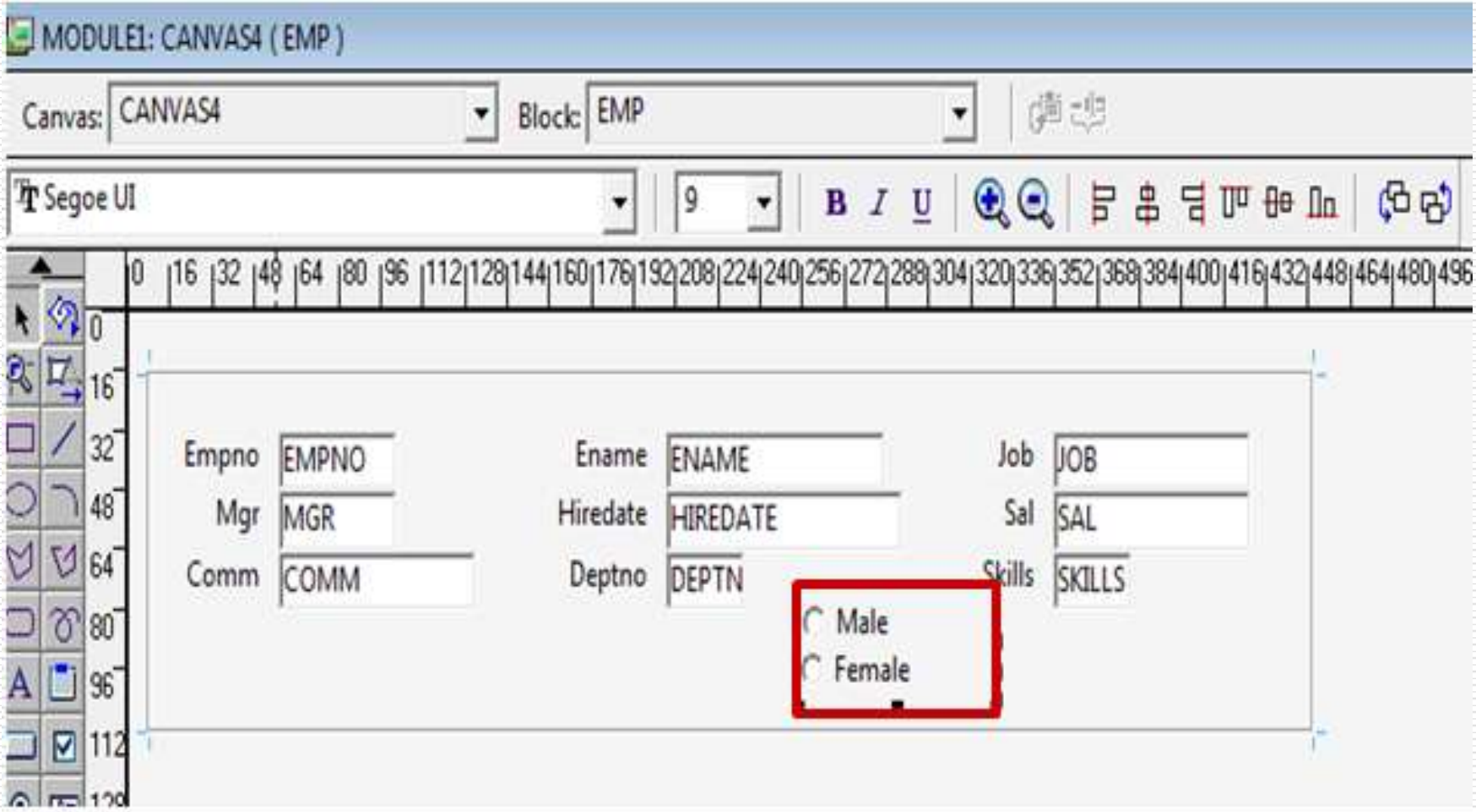
- 5. Do the same for **FEMALE** the second radio button

Lab Practice: Radio Group

- ❑ 6- Press F2 then you will find both radio buttons above each other

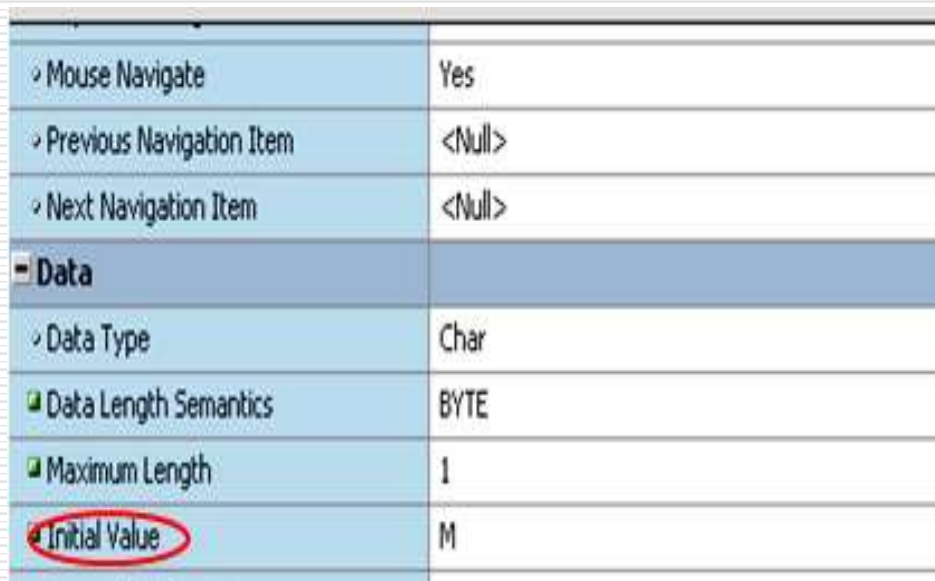


Lab Practice: Radio Group



Lab Practice: Radio Group

- 7. Open the property pallet of the **Gender** item



▾ Mouse Navigate	Yes
▾ Previous Navigation Item	<Null>
▾ Next Navigation Item	<Null>
- Data	
▾ Data Type	Char
▣ Data Length Semantics	BYTE
▣ Maximum Length	1
▣ Initial Value	M

- Initial Value: M
- Mapping of other Values: M

Thank You