

# Creating a Report Using the Create Application Wizard

Create an Application

Name  
Demo App

Pages (?) 1

+ Add Page 2

Home

Add Page

Blank, Calendar, Cards, Chart, Dashboard, Faceted Search, Form, Interactive Grid, Interactive Report, Master Detail, Wizard, Multiple Reports

Additional Pages

3 Add Report Page

Page Name  
Employee Report Set Icon

Table or View SQL Query **Interactive Report** Classic Report

Table or View  
EBA\_DEMO\_IR\_EMP ⋮

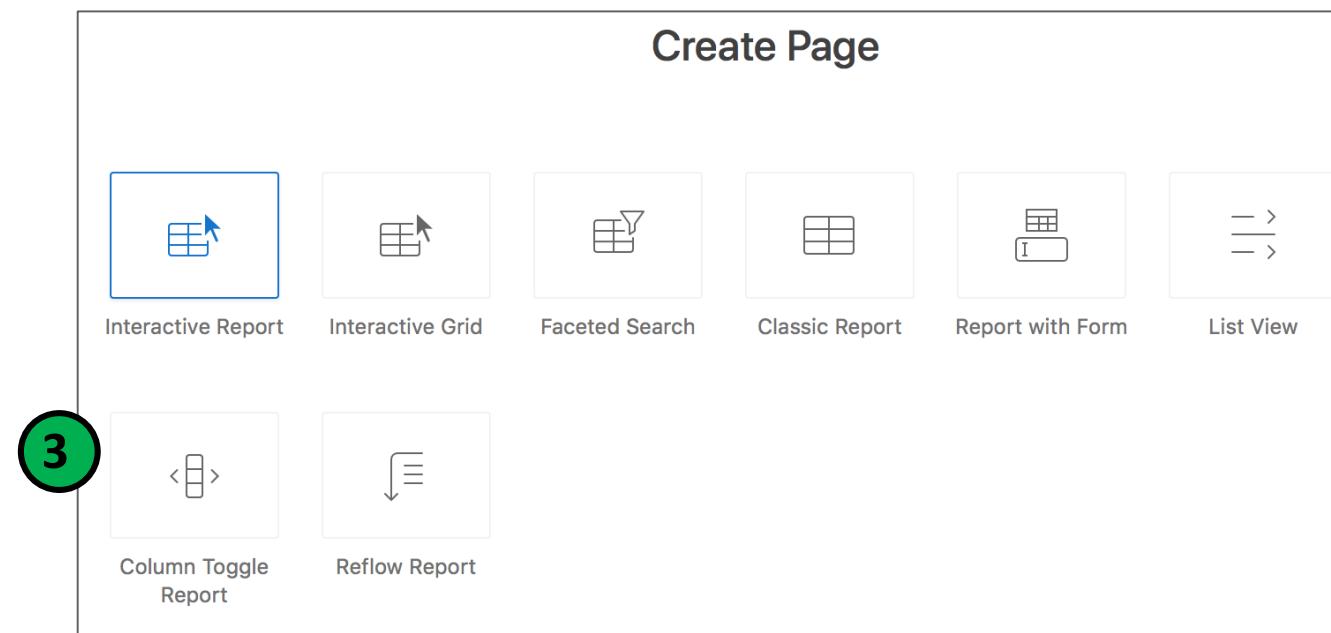
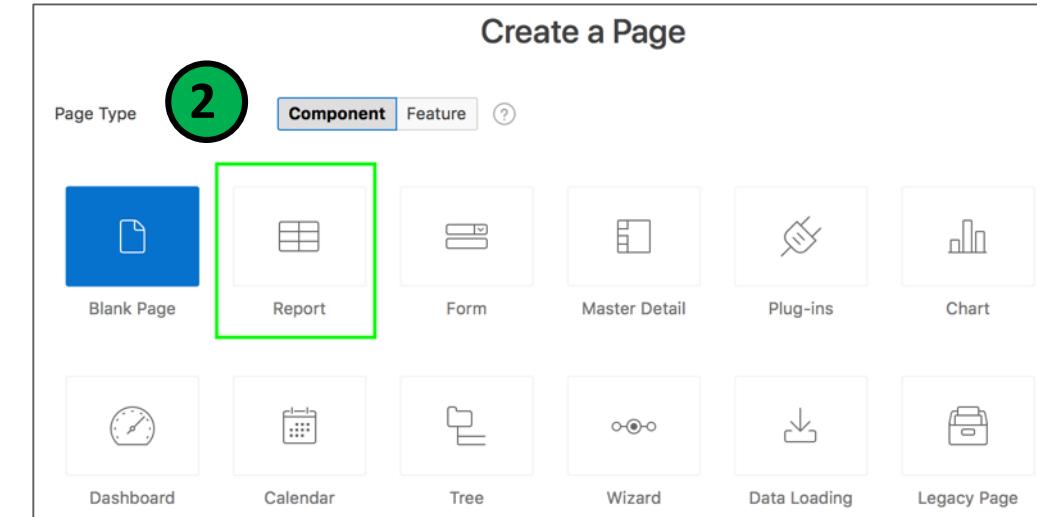
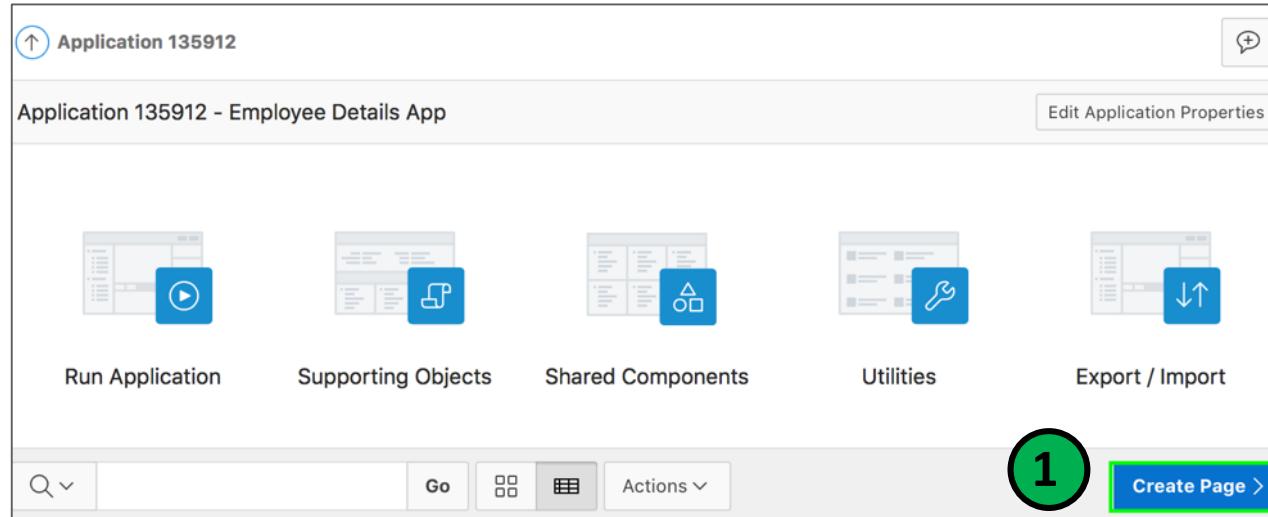
Include Form

Lookup Columns

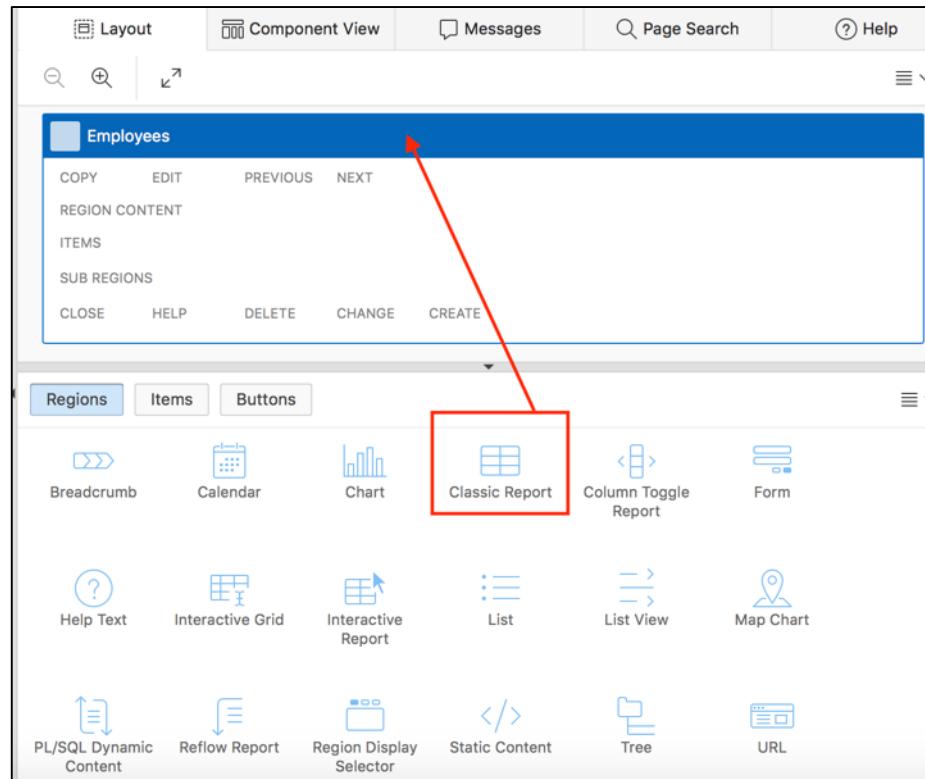
Advanced

< ? Add Page

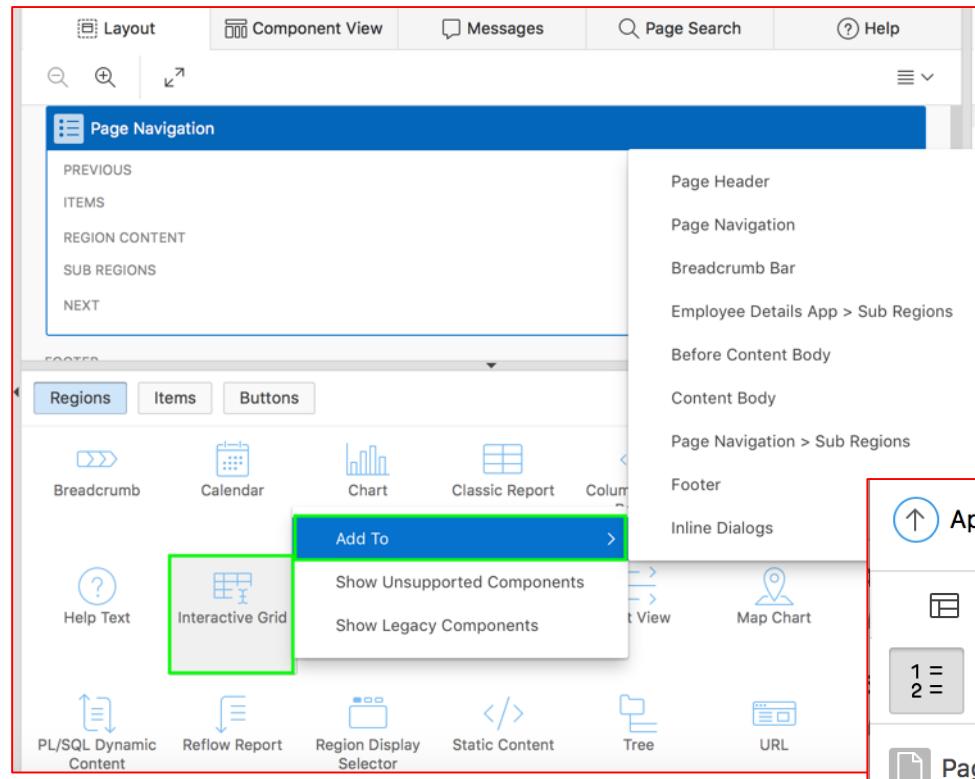
# Creating a Report Using the Create Page Wizard



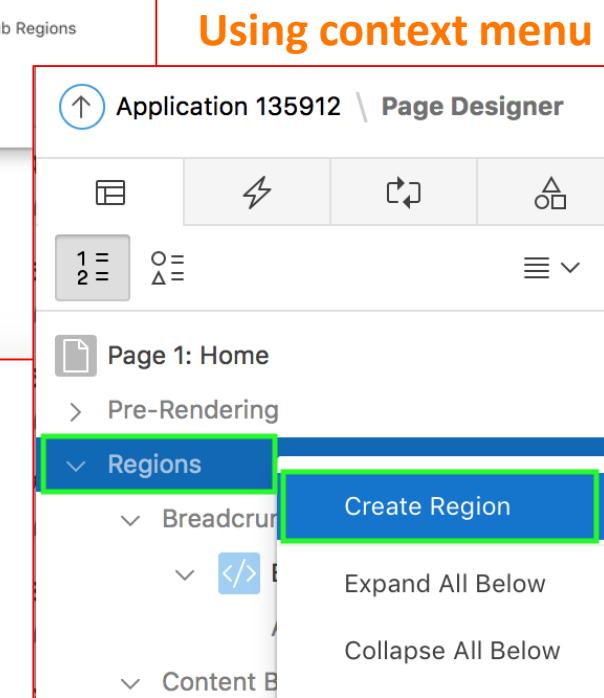
# Creating a Report Region in Page Designer



Dragging and dropping from the gallery



Using gallery context menu



Using context menu

# What is an Interactive Report?

Project	Task Name	Start Date	End Date	Assigned To	Cost	Budget	Status Id
ACME Web Express Configuration	Identify server requirements	02-AUG-19	03-AUG-19	John Watson	200	500	4
ACME Web Express Configuration	Determine Web listener config	04-AUG-19	04-AUG-19	James Cassidy	600	500	4
ACME Web Express Configuration	Run installation	07-AUG-19	07-AUG-19	James Cassidy	200	200	4
ACME Web Express Configuration	Create pilot workspace	09-AUG-19	09-AUG-19	John Watson	100	100	4
ACME Web Express Configuration	Specify security authentication	14-AUG-19	14-AUG-19	John Watson	200	300	1
ACME Web Express Configuration	Configure Workspace provisioning	15-AUG-19	15-AUG-19	John Watson	200	100	1
ACME Web Express Configuration	Select servers for Development	18-AUG-19	20-AUG-19	James Cassidy	200	600	1
Bug Tracker	Document quality assurance process	18-JUN-19	21-JUN-19	Myra Sutcliff	3000	2000	4
Bug Tracker	Review automated testing tools	22-JUN-19	24-JUN-19	Myra Sutcliff	750	1500	4

# Creating an Interactive Report Region: Example

Using context menu

The screenshot shows the Oracle APEX Page Designer interface. On the left, a sidebar lists regions: Content Body, Regions (selected), and Post-Rendering. A context menu is open over the 'Regions' item, with 'Create Region' highlighted. The main workspace displays the 'Employees' page structure, including regions like PAGE HEADER, PAGE NAVIGATION, BREADCRUMB BAR, BEFORE CONTENT BODY, and CONTENT BODY. In the bottom right, the 'Interactive Report' configuration panel is open, showing settings for the 'Projects' region. The 'Type' dropdown is set to 'Interactive Report'. Other settings include 'Local Database' for Location, 'Table / View' for Type, and 'EBA\_DEMO\_IR\_PROJECTS' for Table Name. The 'Include ROWID Column' option is set to 'No'.

Application 135912 \ Page Designer

Regions

- Content Body
- Create Region
- Expand All Below
- Collapse All Below

Page 4: Employees

Pre-Rendering

Regions

Content Body

Projects

Expand All Below

Collapse All Below

Post-Rendering

Employees

PAGE HEADER

PAGE NAVIGATION

BREADCRUMB BAR

BEFORE CONTENT BODY

CONTENT BODY

Projects

Regions Items Buttons

- Breadcrumb
- Calendar
- Chart
- Classic Report
- Column Toggle Report
- Form
- Help Text
- Interactive Grid
- Interactive Report
- List
- List View
- Map Chart

Region

Filter

Identification

Title: Projects

Type: Interactive Report

Source

Location: Local Database

Type: Table / View

Table Owner: Parsing Schema

Table Name: EBA\_DEMO\_IR\_PROJECTS

Include ROWID Column: No

Where Clause:

Order By:

Page Items to Calculate:

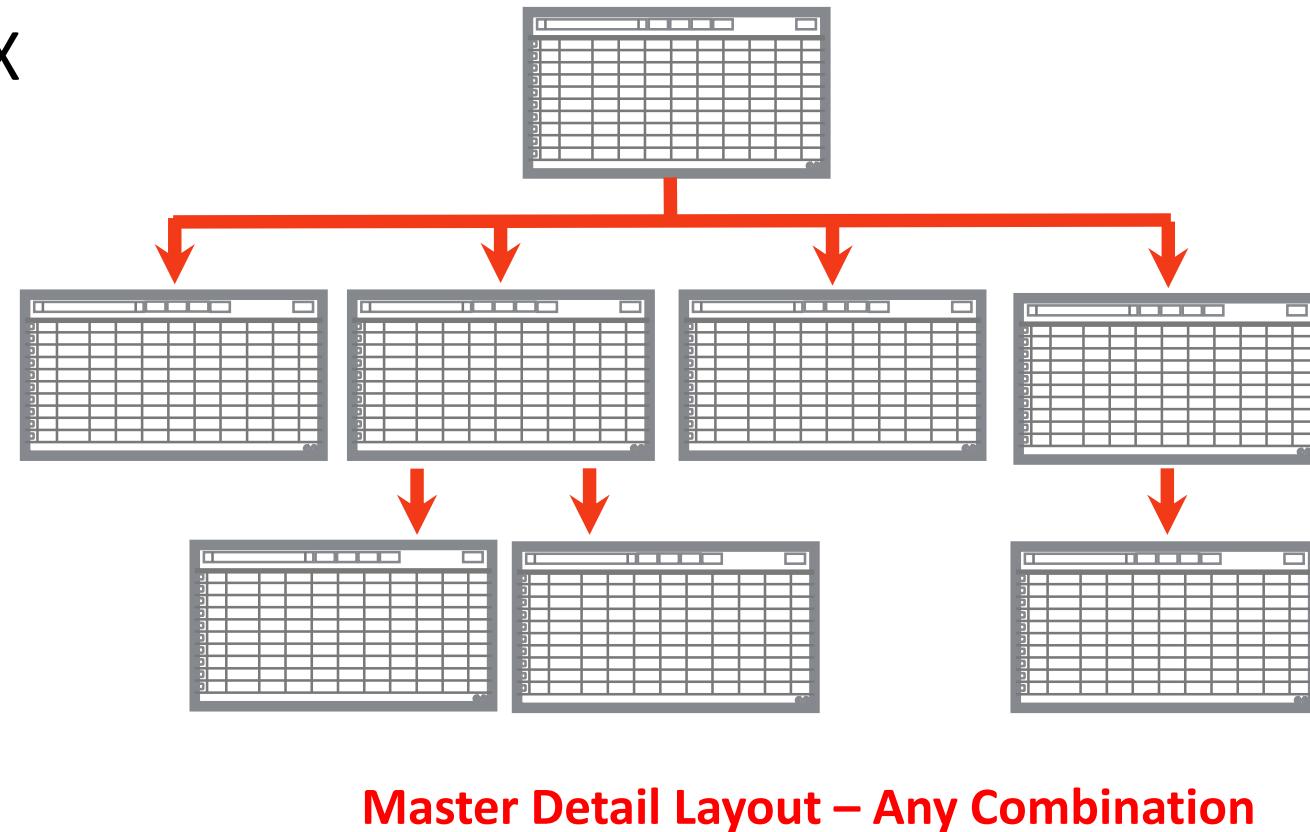
# What is an Interactive Grid?

Projects Grid

Project	Task Name	Start Date	End Date	Assigned To	Cost	Budget	Status Id
ACME Web Expr...	Identify server r...	02-AUG-19	03-AUG-19	John Watson	200	500	4
ACME Web Expr...	Determine Web I...	04-AUG-19	04-AUG-19	James Cassidy	600	500	4
ACME Web Expr...	Run installation	07-AUG-19	07-AUG-19	James Cassidy	200	200	4
ACME Web Expr...	Create pilot wor...	09-AUG-19	09-AUG-19	John Watson	100	100	4
ACME Web Expr...	Specify security...	14-AUG-19	14-AUG-19	John Watson	200	300	1
ACME Web Expr...	Configure Work...	15-AUG-19	15-AUG-19	John Watson	200	100	1
ACME Web Expr...	Select servers f...	18-AUG-19	20-AUG-19	James Cassidy	200	600	1
Bug Tracker	Document qualit...	18-JUN-19	21-JUN-19	Myra Sutcliff	3000	2000	4
Bug Tracker	Review automat...	22-JUN-19	24-JUN-19	Myra Sutcliff	750	1500	4

# Understanding Interactive Grid: Key Features

- Modern, rich, and interactive multi-row editing component
- JSON-based, lightweight AJAX communications
- Extensible and customizable
- Accessible, key board support, right-to-left support
- Upgrade utility for tabular forms
- Master Detail / Detail



# Creating an Interactive Grid: Example 1

Using the Create Application Wizard

Add Interactive Grid Page

Page Name: Projects Grid

Table or View: EBA\_DEMO\_IR\_PROJECTS

Advanced

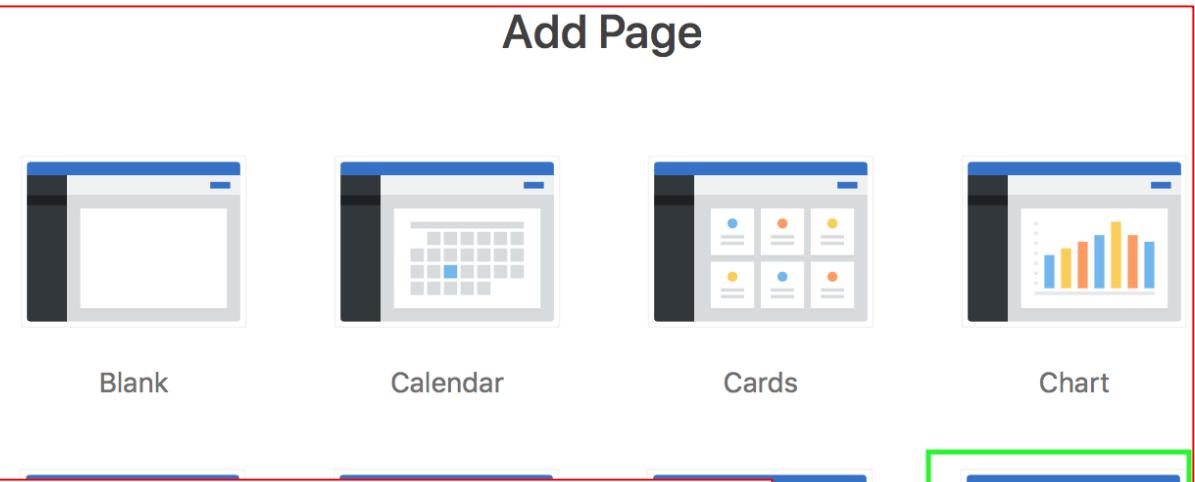
Set Icon

Interactive Grid

Multiple Reports

The screenshot shows the Oracle Application Express (APEX) Create Application Wizard interface. The main title is "Add Interactive Grid Page". A red box highlights the "Page Name" field containing "Projects Grid". Below it, a row of buttons includes "Table or View" (selected), "SQL Query", "Allow Editing", and "Read Only". Another row shows "Table or View" set to "EBA\_DEMO\_IR\_PROJECTS". An "Advanced" button with a circular arrow icon is at the bottom left. To the right, a grid of icons represents different page types: Blank, Calendar, Cards, Chart, Interactive Grid (highlighted with a green border), and Multiple Reports. A "Set Icon" button is also visible.

Add Page



Blank

Calendar

Cards

Chart

# Creating an Interactive Grid: Example 2

**Create a Page**

Page Type

Component Feature ?

1

Blank Page Report Form Map

Dashboard Calendar Tree

2

Interactive Report Interactive Grid Faceted Search Classic Report Report with Form List View

3

Column Toggle Report

**Create Page**

**Create Interactive Grid** x

Page Attributes

Type **Interactive Grid**

\* Page Number 5 ?

\* Page Name Projects Grid ?

Page Mode **Normal** Modal Dialog ?

Breadcrumb - do not use breadcrumbs on page - ?

**Using the Create Page Wizard**

The screenshot illustrates the process of creating an interactive grid in Oracle APEX. It starts with the 'Create a Page' wizard, where the 'Component' tab is selected. In the 'Page Type' section, the 'Report' icon is highlighted with a green circle labeled '1'. In the main list of components, the 'Interactive Grid' icon is also highlighted with a green circle labeled '2'. This leads to the 'Create Interactive Grid' wizard, which is shown in a modal dialog. The 'Page Attributes' section shows the 'Type' set to 'Interactive Grid'. The 'Page Name' field contains 'Projects Grid', which is highlighted with a green rectangle labeled '3'. Other settings include 'Page Number' set to 5, 'Page Mode' set to 'Normal', and a breadcrumb setting to 'do not use breadcrumbs on page'.

# Creating an Interactive Grid: Example 2

## Create Interactive Grid

Navigation Menu

4

Navigation Preference

Do not associate this page with a navigation menu entry

Create a new navigation menu entry

Identify an existing navigation menu entry

\* New Navigation Menu Entry Projects Grid

Parent Navigation Menu Entry - No parent selected -

Home  
Employees Report  
Administration

Report Source

Create Interactive Grid

5

Data Source Local Database REST Enabled SQL Service Web Source

Editing Enabled

\* Source Type Table SQL Query

\* Table / View Owner LOWCODE

\* Table / View Name EBA\_DEMO\_IR\_PROJECTS (table)

Columns

< Cancel Create

# What is a Classic Report?

Projects Classic Report								
Project	Task Name	Start Date	End Date	Assigned To	Cost	Budget	Status Id	
ACME Web Express Configuration	Identify server requirements	02-AUG-19	03-AUG-19	John Watson	200	500	4	
ACME Web Express Configuration	Determine Web listener configuration(s)	04-AUG-19	04-AUG-19	James Cassidy	600	500	4	
ACME Web Express Configuration	Run installation	07-AUG-19	07-AUG-19	James Cassidy	200	200	4	
ACME Web Express Configuration	Create pilot workspace	09-AUG-19	09-AUG-19	John Watson	100	100	4	
ACME Web Express Configuration	Specify security authentication scheme(s)	14-AUG-19	14-AUG-19	John Watson	200	300	1	
ACME Web Express Configuration	Configure Workspace provisioning	15-AUG-19	15-AUG-19	John Watson	200	100	1	
ACME Web Express Configuration	Select servers for Development, Test, Production	18-AUG-19	20-AUG-19	James Cassidy	200	600	1	
Bug Tracker	Document quality assurance procedures	18-JUN-19	21-JUN-19	Myra Sutcliff	3000	2000	4	
Bug Tracker	Review automated testing tools	22-JUN-19	24-JUN-19	Myra Sutcliff	750	1500	4	

# Creating a Classic Report in Page Designer: Example

The screenshot illustrates the process of creating a Classic Report in Oracle Page Designer. The interface is divided into several panels:

- Left Panel (Toolbars and Navigation):** Contains various icons for file operations, layout, component management, and search.
- Central Panel (Content Body):** Shows a "New" dialog with options like COPY, EDIT, PREVIOUS, NEXT, REGION CONTENT, ITEMS, and SUB REGIONS. Below it is a "Page Navigation" section with tabs for Regions, Items, and Buttons, and icons for Breadcrumb, Calendar, Chart, Classic Report, Column Toggle Report, Faceted Search, Form, Help Text, Interactive Grid, and Interactive Report.
- Right Panel (Region Editor):** A detailed configuration panel for the "Region".
  - Identification:** Title is set to "Projects Classic Report" and Type is "Classic Report".
  - Source:** Location is "Local Database" and Type is "SQL Query".
  - SQL Query:** The query is defined as:

```
select ID,  
       ROW_VERSION_NUMBER,  
       PROJECT,  
       TASK_NAME,  
       START_DATE,  
       END_DATE,  
       ASSIGNED_TO,  
       COST,  
       BUDGET,  
       STATUS_ID  
  from EBA_DEMO_IR_PROJECTS
```

A red arrow points from the "Classic Report" icon in the gallery to the "Region" editor, indicating the action of dragging and dropping the report component.

**Draggging and dropping from the gallery**

# Creating a Report with Form

Q ▾ Go Actions ▾ Create

Project	Task Name	Start Date
ACME Web Express Configuration	Identify server requirements	02-AUG-19
ACME Web Express Configuration	Determine Web listener configuration(s)	04-AUG-19
ACME Web Express Configuration	Run installation	07-AUG-19
ACME Web Express Configuration	Create pilot workspace	09-AUG-19
ACME Web Express Configuration	Specify security authentication scheme(s)	14-AUG-19
ACME Web Express Configuration	Configure Workspace provisioning	15-AUG-19
ACME Web Express Configuration	Select servers for Development, Test, Production	18-AUG-19
Bug Tracker	Document quality assurance procedures	18-AUG-19
Bug Tracker	Review automated testing tools	22-JUN-19

Project Details

Project  
ACME Web Express Configuration

Task Name  
Identify server requirements

Start Date  
02-AUG-19

End Date  
03-AUG-19

Assigned To  
John Watson

Cost  
200

Budget  
500

Status Id  
4

Cancel Delete Apply Changes

# Creating a Report with Form: Example

**Create Page**

**1**

**Create Report with Form**

**2**

Page Attributes

Report Type **Interactive Report** Interactive Grid Classic Report ?

\* Report Page Number  ?

\* Report Page Name  ?

\* Form Page Number  ?

\* Form Page Name  ?

Form Page Mode **Normal** Modal Dialog ?

Page Group - Select Page Group - ?

Breadcrumb - do not add breadcrumb region to page - ?

The screenshot shows the Oracle APEX 'Create Page' interface. A red box highlights the 'Create Report with Form' button. A green box highlights the 'Report with Form' item in the report type dropdown. A blue box highlights the 'Interactive Grid' icon. A red circle with the number '1' is on the 'Report with Form' item. A green circle with the number '2' is on the 'Create Report with Form' button.

# Creating a Report with Form: Example

Create Report with Form

Navigation Menu

Navigation Preference

Do not associate this page with a navigation menu entry  
 Create a new navigation menu entry  
 Identify an existing navigation menu entry

\* New Navigation Menu Entry: Projects Report

Parent Navigation Menu Entry: - No parent selected -  
Home  
Employees Report  
Administration  
Projects Grid

Data Source

Data Source: Local Database

\* Source Type: Table

\* Table / View Owner: LOWCODE

\* Table / View Name: EBA\_DEMO\_IR\_PROJECTS (table)

Select Columns to be shown in the report

ID (Number)  
ROW\_VERSION\_NUMBER (Number)  
PROJECT (Varchar2)  
TASK\_NAME (Varchar2)  
START\_DATE (Date)  
END\_DATE (Date)  
ASSIGNED\_TO (Varchar2)  
COST (Number)

3

4

# Creating a Report with Form: Example

>Create Form - Columns and Primary Key

Form Page

\* Select Columns to be displayed in the form [?](#)

5

Primary Key Type  Managed by Database (ROWID)  Select Primary Key Column(s)

Primary Key Column ID (Number)

Secondary Key Column - Select Column -

< Cancel Create

ID (Number)  
ROW\_VERSION\_NUMBER (Number)  
PROJECT (Varchar2)  
TASK\_NAME (Varchar2)  
START\_DATE (Date)  
END\_DATE (Date)  
ASSIGNED\_TO (Varchar2)  
COST (Number)

# Creating a Faceted Search Page

# Creating a Faceted Search Page: Example

### Create a Page

Page Type **Component** Feature ?

Blank Page Report Form Master Detail Plug-ins

Report

Dashboard Interactive Report Interactive Grid Faceted Search Classic Report

Column Toggle Report Reflow Report

### Create Faceted Search

Report Source

Data Source Local Database REST Enabled SQL Service Web Source ?

\* Source Type Table SQL Query ?

\* Table / View Owner LOWCODE ?

\* Table / View Name OEHR\_EMPLOYEES (table) : ?

Display as Report Cards

Select the facets you want to include in this report. Note that facet recommendations are based on statistics of data in your table. You can refresh the column statistics to provide better recommendations. Refresh

Column	Facet	Searchable	Nulls	Distinct	Average Length
EMPLOYEE_ID (number)		No	0	107	4
FIRST_NAME (varchar2)	Checkbox	Yes	0	91	7
LAST_NAME (varchar2)		Yes	0	102	8
EMAIL (varchar2)		Yes	0	107	8

< Cancel Create

# Summary

In this lesson, you learned how to create different types of reports in Oracle Application Express. You learned to create:

- Interactive reports
- Interactive grids
- Classic reports
- Report with Form
- Faceted Search





# Hands-on Lab



Oracle **APEX**



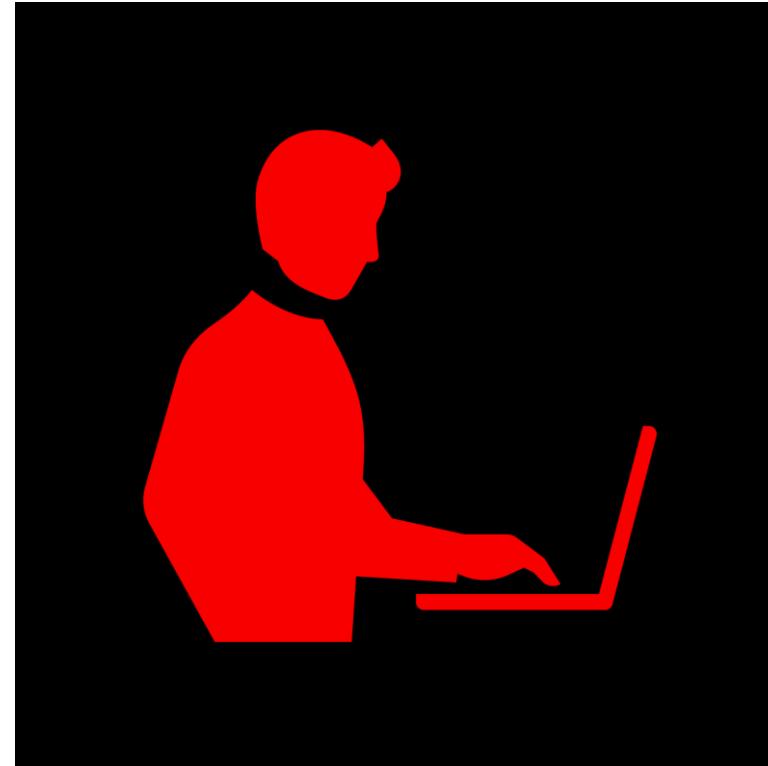
# Unit 6: Managing and Customizing Interactive Reports

# Lesson Objectives

After completing this lesson, you should be able to:

- Describe interactive report components
- Use and customize an interactive report as an end user
- Manage interactive report attributes
- Configure the display of interactive report controls as a developer

# Part 1:Customizing an Interactive Report as an End User



# Using Interactive Report Components

The screenshot illustrates an interactive report interface with several key components:

- Search Bar:** Located at the top left, featuring a search input field, a "Go" button, and a dropdown menu labeled "1. Primary Report".
- Saved Reports:** A dropdown menu showing "1. Primary Report".
- Actions Menu:** A vertical menu on the right side with options like "Actions", "Columns", "Filter", "Data", "Format", "Chart", "Group By", "Pivot", "Report", "Download", "Subscription", and "Help".
- Column Heading Menu:** A context menu for the "Status" column header, listing "Status", "Assigned To", and "Cost". It also includes a "Filter..." option and status categories: "Closed", "On-Hold", "Open", and "Pending".
- Link Column:** A column on the far left containing edit icons.
- Data Table:** The main content area displaying project tasks with columns for Project, Task Name, Start Date, End Date, Status, Assigned To, Cost, and Budget.

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Configuration	Identify server requirements	17-MAY-19	18-MAY-19	Open		200	
ACME Web Configuration	Determine Web listener configuration(s)	18-MAY-19	18-MAY-19	Open		100	
ACME Web Configuration	Specify security authentication scheme(s)	19-MAY-19	21-MAY-19	Open		300	
ACME Web Configuration	Select servers for Development, Test, Production	19-MAY-19	24-MAY-19	Open		600	
ACME Web Configuration	Configure Workspace provisioning	26-MAY-19	26-MAY-19	Open		100	

# Searching for Information in an Interactive Report

Enter your search criteria in the text area and click Go.

The screenshot shows a search interface with a search bar containing 'public', a 'Go' button, and a table below it. The table has columns: Project, Task Name, Start Date, End Date, Status, Assigned To, Cost, and Budget. Two rows are visible:

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Configuration	Identify server requirements	17-MAY-19	18-MAY-19	Closed	John Watson	100	200
ACME Web Configuration	Determine Web listener configuration(s)	18-MAY-19	18-MAY-19	Closed	James Cassidy	100	100

All rows that contain the search criteria are displayed.

The screenshot shows the same search interface after the search was performed. The search bar now displays 'Row text contains 'public''. The table below shows five rows related to the 'Public Website' project:

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
Public Website	Determine host server	21-JUN-19	22-JUN-19	Closed	Tiger Scott	200	200
Public Website	Check software licenses	22-JUN-19	22-JUN-19	Closed	Tom Suess	100	100
Public Website	Plan rollout schedule	05-SEP-19	05-SEP-19	On-Hold	Tom Suess	0	100
Public Website	Develop web pages	28-JUL-19	03-SEP-19	On-Hold	Tiger Scott	800	2,000
Public Website	Purchase additional software licenses, if needed	25-JUN-19	20-JUL-19	On-Hold	AI Bines	300	1,000

1 - 5

# Searching for Information Within a Specific Column

Select columns to search

1 All Columns  
Project

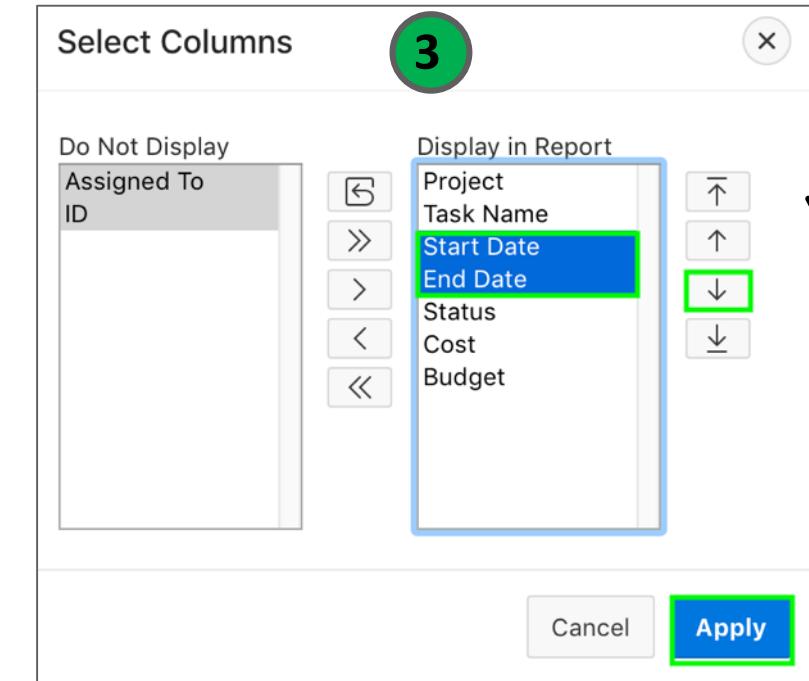
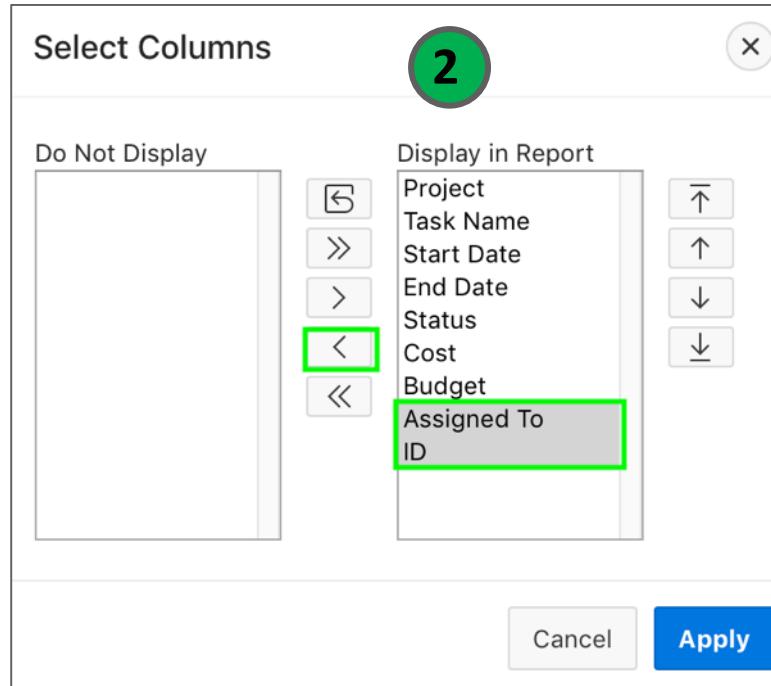
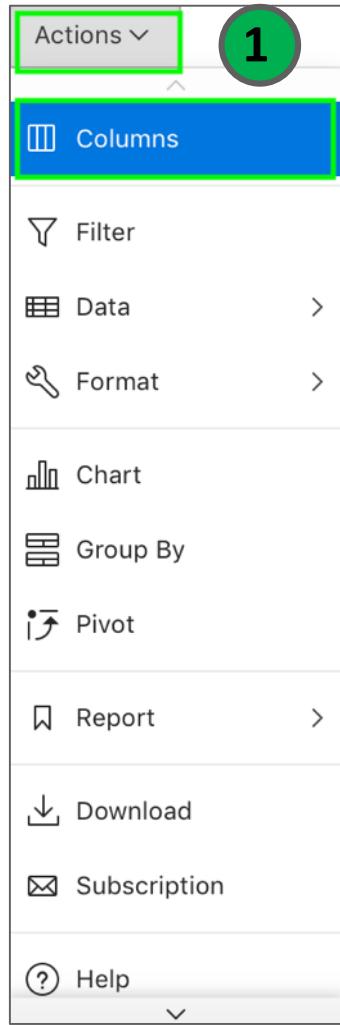
2 project

3 Project contains 'project'

Search performed within the selected column

	Task Name	Start Date	End Date	Status	
<input type="checkbox"/>	Software Projects Tracking	Conduct project kickoff meeting	20-JUN-19	20-JUN-19	Closed
<input type="checkbox"/>	Software Projects Tracking	Customize Software Projects software	02-JUL-19	07-AUG-19	Open
<input type="checkbox"/>	Software Projects Tracking	Load current tasks and enhancements	27-JUN-19	03-JUL-19	Closed
<input type="checkbox"/>	Software Projects Tracking	Enter base data (Projects, Milestones, etc.)	25-JUN-19	26-JUN-19	Closed

# Selecting Columns To Display



Reordering columns

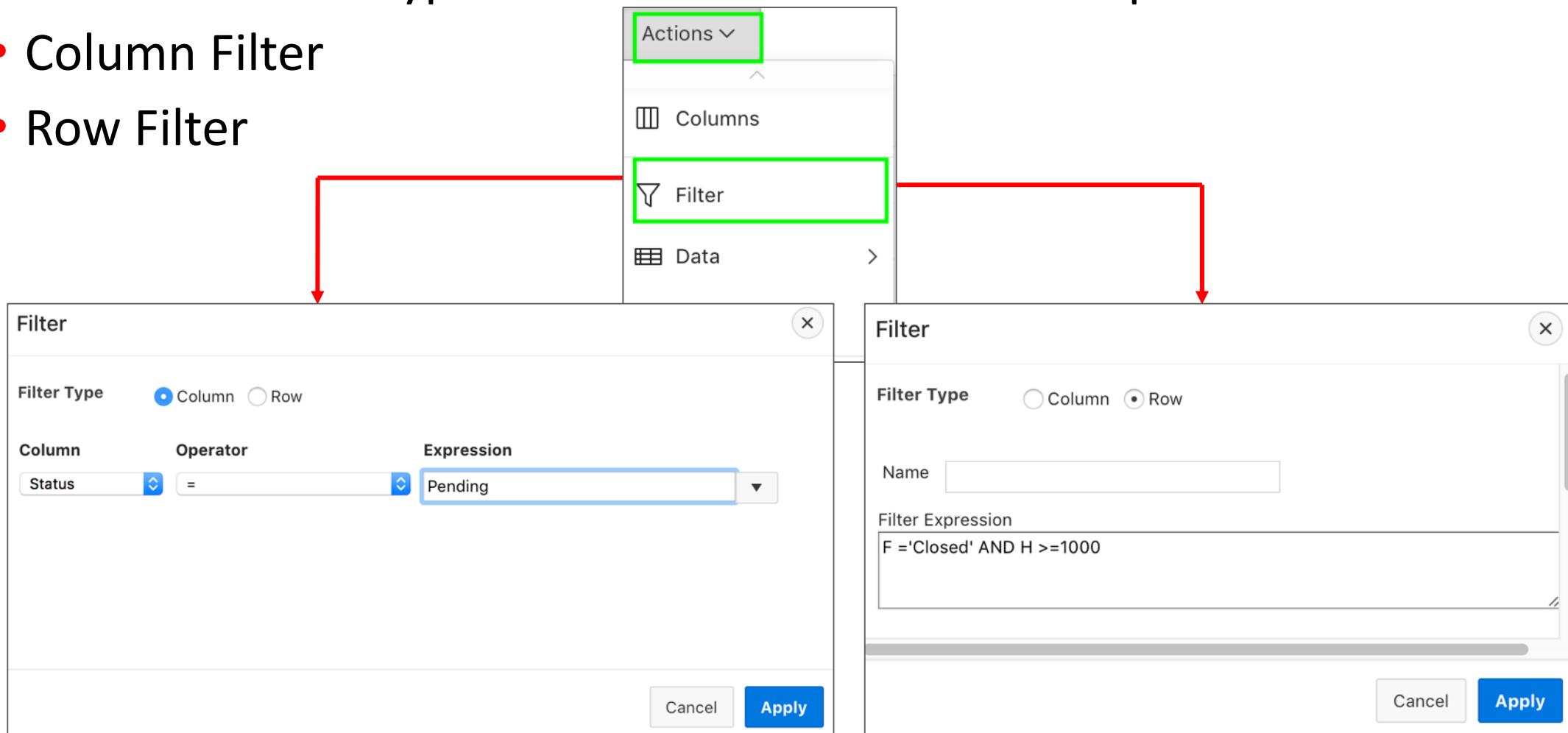
The report interface shows a table with the following columns: Project (sorted ascending), Task Name, Status, Cost, Budget, Start Date, and End Date. The table displays five rows of data related to ACME Web Configuration tasks. A red box highlights the 'Start Date' and 'End Date' columns, and a red arrow points from the 'Start Date' column in the table back to the 'Start Date' item in the 'Display in Report' list of the 'Select Columns' dialog in step 3.

Project	Task Name	Status	Cost	Budget	Start Date	End Date
ACME Web Configuration	Identify server requirements	Closed	100	200	17-MAY-19	18-MAY-19
ACME Web Configuration	Determine Web listener configuration(s)	Closed	100	100	18-MAY-19	18-MAY-19
ACME Web Configuration	Specify security authentication scheme(s)	Closed	200	300	19-MAY-19	21-MAY-19
ACME Web Configuration	Select servers for Development, Test, Production	Closed	200	600	19-MAY-19	24-MAY-19
ACME Web Configuration	Configure Workspace provisioning	Closed	200	100	26-MAY-19	26-MAY-19

# Adding a Filter in an Interactive Report

You can create two types of filters in an interactive report:

- Column Filter
- Row Filter



# Adding a Column Filter

Actions ▾

Columns

Filter

**Filter**

Filter Type  Column  Row

Column Operator Expression

Status = Closed

Cancel Apply

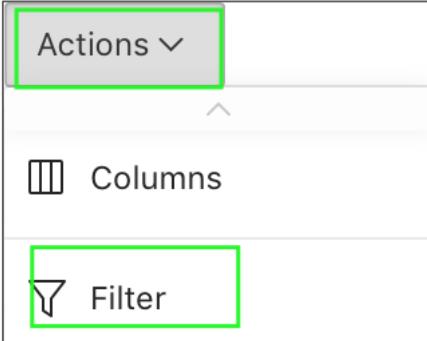
Go 1. Primary Report Actions ▾

Status = 'Closed'

Project ↑	Task Name	Status	Cost
ACME Web Configuration	Identify server requirements	Closed	100
ACME Web Configuration	Determine Web listener configuration(s)	Closed	100
ACME Web Configuration	Specify security authentication scheme(s)	Closed	200
ACME Web Configuration	Select servers for Development, Test, Production	Closed	200
ACME Web Configuration	Run installation	Closed	100
ACME Web Configuration	Configure Workspace provisioning	Closed	200
ACME Web Configuration	Create pilot workspace	Closed	100
Bug Tracker	Implement bug tracking software	Closed	100

# Adding a Row Filter

1



Filter

Filter Type  Column  Row

Name **Row Filter**

Filter Expression **F ='Open' AND I >3000**

Columns Functions / Operators

A. ID !**=** B. Project <

2

Cancel **Apply**

Actions ▾

Columns

Filter

1. Primary Report ▾

Row Filter

Project ↑	Task Name	Status	Cost	Budget
Bug Tracker	Document quality assurance procedures	Open	3,500	4,000
Client Server Conversion	Migrate client server apps	Open	300	12,000
Convert Spreadsheet	Collect mission-critical spreadsheets	Open	2,500	4,000
Convert Spreadsheet	Create web applications from spreadsheets	Open	10,000	6,000
Load Packaged Applications	Customize solutions	Open	1,500	4,000
Migrate Desktop Application	User acceptance testing	Open	1,500	6,000
Migrate Desktop Application	Migrate Desktop Applications	Open	1,000	8,000

# Selecting Column Sort Order

The screenshot illustrates the process of selecting column sort order in a data analysis tool.

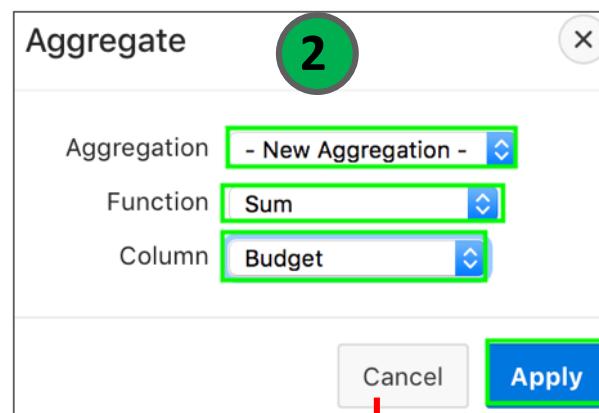
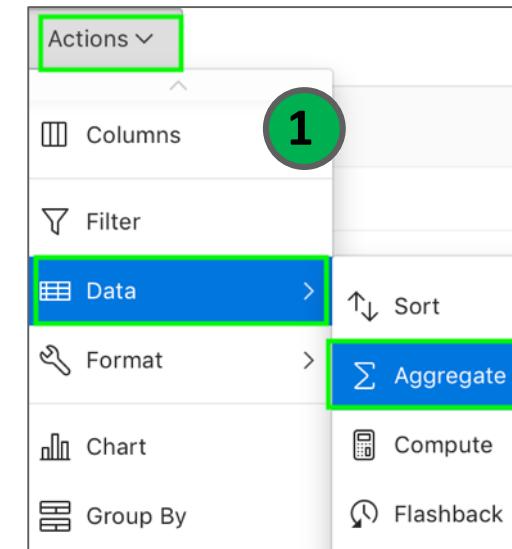
**Step 1:** In the main interface, the "Actions" menu is open, and the "Sort" option under the "Data" section is selected. A green box highlights the "Actions" menu, and a green circle with the number "1" highlights the "Sort" button.

**Step 2:** The "Sort" dialog box is displayed. It lists six columns with their current sorting direction and null sorting behavior. The first three columns (Start Date, End Date, Project) have "Ascending" direction and "Default" null sorting. The next three columns (- Select Column -) also have "Ascending" direction and "Default" null sorting. A green box highlights the "Sort" button in the main interface, and a green circle with the number "2" highlights the "Apply" button in the dialog. A red arrow points from the "Sort" button in the main interface down to the "Apply" button in the dialog.

**Main Report View:** Below the dialog, the main report view shows a table with data rows. The table has columns: Project, Task Name, Start Date, and End Date. The "Start Date" column is sorted ascending, as indicated by the blue arrow icon in the header. The data rows are:

	Project	Task Name	Start Date ↑	End Date
	Bug Tracker	Review automated testing tools	01-JUN-19	02-JUL-19
	Software Projects Tracking	Customize Software Projects software	02-JUL-19	07-AUG-19
	Convert Spreadsheet	Collect mission-critical spreadsheets	02-JUL-19	03-SEP-19
	Convert Spreadsheet	Lock spreadsheets	02-JUL-19	16-DEC-19
	Convert Spreadsheet	Create web applications from spreadsheets	02-JUL-19	16-DEC-19
	Bug Tracker	Document quality assurance procedures	03-JUL-19	06-AUG-19

# Creating an Aggregation Against a Column



The screenshot shows a dashboard with three project tables:

- Project : ACME Web Configuration**: Shows two tasks with closed status. The 'Budget' column is present but not yet aggregated.
- Project : Convert Spreadsheet**: Shows four tasks. The 'Budget' column is present and has been aggregated. A red box highlights the 'Sum of Budget' value of 12,300 in the bottom right corner of the table.
- Project : Discussion Forum**: Shows three tasks. The 'Budget' column is present and has been aggregated. A red box highlights the 'Sum of Budget' value of 900 in the bottom right corner of the table.

Annotations with orange arrows point from the 'Aggregate' dialog box to the 'Sum of Budget' values in the second and third tables.

Project	Task Name	Status	Cost	Budget	Start Date	End Date
Project : ACME Web Configuration	Identify server requirements	Closed	100	200	17-MAY-19	18-MAY-19
	Determine Web listener configuration(s)	Closed	100	100	18-MAY-19	18-MAY-19
Project : Convert Spreadsheet	Collect mission-critical spreadsheets	Open	2,500	4,000	02-JUL-19	03-SEP-19
	Send links to previous spreadsheet owners	Open	1,000	1,500	03-JUL-19	18-DEC-19
	Create web applications from spreadsheets	Open	10,000	6,000	02-JUL-19	16-DEC-19
	Lock spreadsheets	Open	1,000	800	02-JUL-19	16-DEC-19
					12,300	
Project : Discussion Forum	Install web application on production server	Closed	100	100	14-JUL-19	14-JUL-19
	Monitor participation	Open	450	500	15-JUL-19	23-JUL-19
	Identify owners	Closed	250	300	06-JUL-19	09-JUL-19
				900		

# Adding a Computed Column

The screenshot illustrates the process of adding a computed column to a database table.

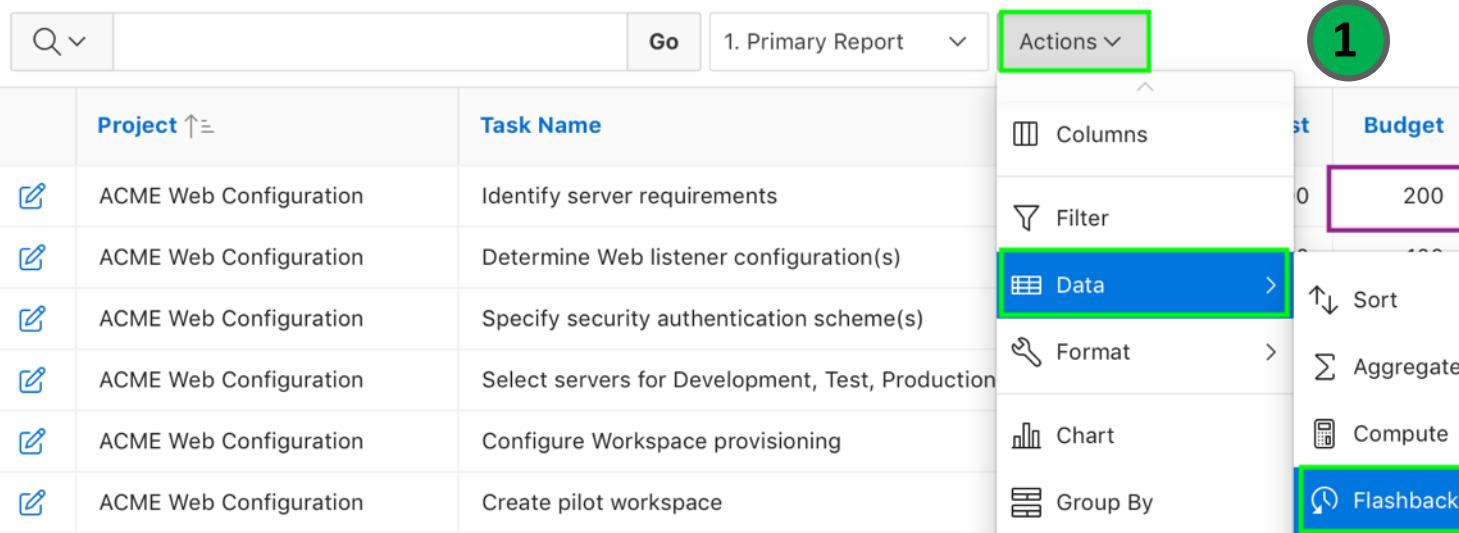
**Step 1:** In the left sidebar, under the **Data** section, the **Compute** button is highlighted with a green box and circled with a green circle containing the number 1.

**Step 2:** The **Compute** dialog box is open, showing the configuration for the new computation. The **Column Label** is set to **Cost Analysis**, and the **Format Mask** is set to **FML999G999G999G999G990D0**. The **Computation Expression** field contains the formula **I - H**. The dialog also includes sections for **Columns**, **Keypad**, and **Functions / Operators**.

**Computed column:** A red arrow points from the **Cost Analysis** column in the report preview below to the **Cost Analysis** column header in the table, indicating the result of the computation.

Project	Task Name	Status	Cost	Budget	Cost Analysis
ACME Web Configuration	Identify server requirements	Closed	100	200	\$100.00
ACME Web Configuration	Determine Web listener configuration(s)	Closed	100	100	\$0.00
ACME Web Configuration	Specify security authentication scheme(s)	Closed	200	300	\$100.00
ACME Web Configuration	Select servers for Development, Test, Production	Closed	200	600	\$400.00
ACME Web Configuration	Configure Workspace provisioning	Closed	200	100	-\$100.00

# Performing a Flashback Query



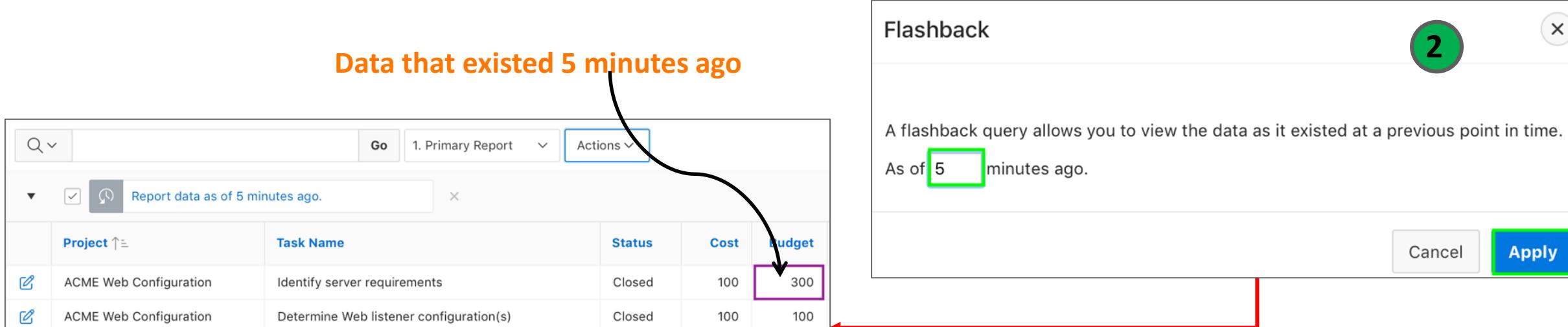
1

Actions ▾

- Columns
- Filter
- Data
- Format
- Chart
- Group By
- Flashback

Project ↑	Task Name	Status	Cost	Budget
ACME Web Configuration	Identify server requirements	Open	100	200
ACME Web Configuration	Determine Web listener configuration(s)	Open	100	100
ACME Web Configuration	Specify security authentication scheme(s)	Open	100	100
ACME Web Configuration	Select servers for Development, Test, Production	Open	100	100
ACME Web Configuration	Configure Workspace provisioning	Open	100	100
ACME Web Configuration	Create pilot workspace	Open	100	100

Data that existed 5 minutes ago



2

Flashback

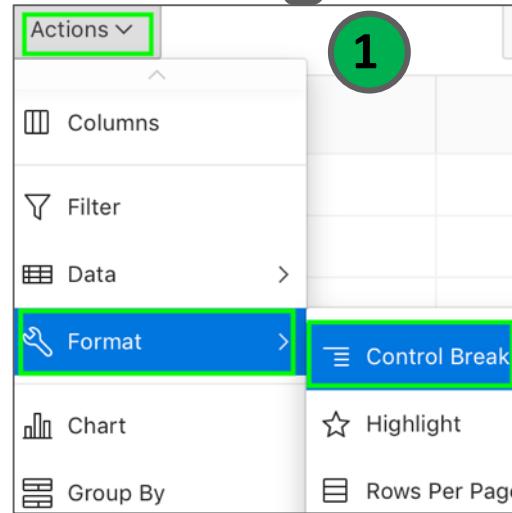
A flashback query allows you to view the data as it existed at a previous point in time.

As of 5 minutes ago.

Cancel Apply

Project ↑	Task Name	Status	Cost	Budget
ACME Web Configuration	Identify server requirements	Closed	100	300
ACME Web Configuration	Determine Web listener configuration(s)	Closed	100	100

# Creating a Control Break



The screenshot shows the 'Control Break' configuration dialog. It has two columns: 'Column' and 'Status'. The first row has 'Project' selected in the 'Column' dropdown and 'Enabled' in the 'Status' dropdown. A red arrow points from this row to the corresponding row in the main report view on the right.

Column	Status
1 Project	Enabled
2 - Select Column -	Enabled
3 - Select Column -	Enabled
4 - Select Column -	Enabled
5 - Select Column -	Enabled
6 - Select Column -	Enabled

Control break on the Project column

The screenshot shows the main report view with two sections: 'Project : ACME Web Configuration' and 'Project : Bug Tracker'. Each section contains a table with columns: Task Name, Status, Cost, and Budget. The 'ACME Web Configuration' section has 7 tasks, all of which are Closed. The 'Bug Tracker' section has 3 tasks: one Closed, one On-Hold, and one Open.

Project : ACME Web Configuration			
Task Name	Status	Cost	Budget
Identify server requirements	Closed	100	200
Determine Web listener configuration(s)	Closed	100	100
Specify security authentication scheme(s)	Closed	200	300
Select servers for Development, Test, Production	Closed	200	600
Configure Workspace provisioning	Closed	200	100
Create pilot workspace	Closed	100	100
Run installation	Closed	100	100

Project : Bug Tracker			
Task Name	Status	Cost	Budget
Implement bug tracking software	Closed	100	100
Review automated testing tools	On-Hold	2,750	1,500
Document quality assurance procedures	Open	3,500	4,000

# Adding Highlighting in an Interactive Report

1

Actions ▾

Columns

Filter

Data >

Format > **Highlight**

Chart

Group By

**Highlight**

Name: Completed Tasks

Sequence: 10

Enabled: Yes

Highlight Type: Row

Background Color: #FFFF99 [yellow] [green] [blue] [orange] [red]

Text Color: #FF7755 [yellow] [green] [blue] [orange] [red]

Highlight Condition:

Column	Operator	Expression
Status	=	Closed

Cancel Delete Apply

2

Rows with Status 'Closed' are highlighted

Go: 1. Primary Report Actions ▾ Reset Create

Project: ACME Web Configuration

	Task Name	Status	Cost	Budget
<a href="#">Configure Workspace provisioning</a>	Closed	200	100	
<a href="#">Create pilot workspace</a>	Closed	100	100	
<a href="#">Determine Web listener configuration(s)</a>	Closed	100	100	
<a href="#">Identify server requirements</a>	Closed	100	200	
<a href="#">Run installation</a>	Closed	100	100	
<a href="#">Select servers for Development, Test, Production</a>	Closed	200	600	
<a href="#">Specify security authentication scheme(s)</a>	Closed	200	300	

Project: Bug Tracker

	Task Name	Status	Cost	Budget
<a href="#">Document quality assurance procedures</a>	Open	3,500	4,000	
<a href="#">Implement bug tracking software</a>	Closed	100	100	
<a href="#">Measure effectiveness of improved QA</a>	Pending	0	1,500	

# Creating a Chart

Actions ▾ Reset

1

Columns

Filter

Data >

Format >

Chart

2

Chart

Chart Type  Bar  Line  Pie  Scatter

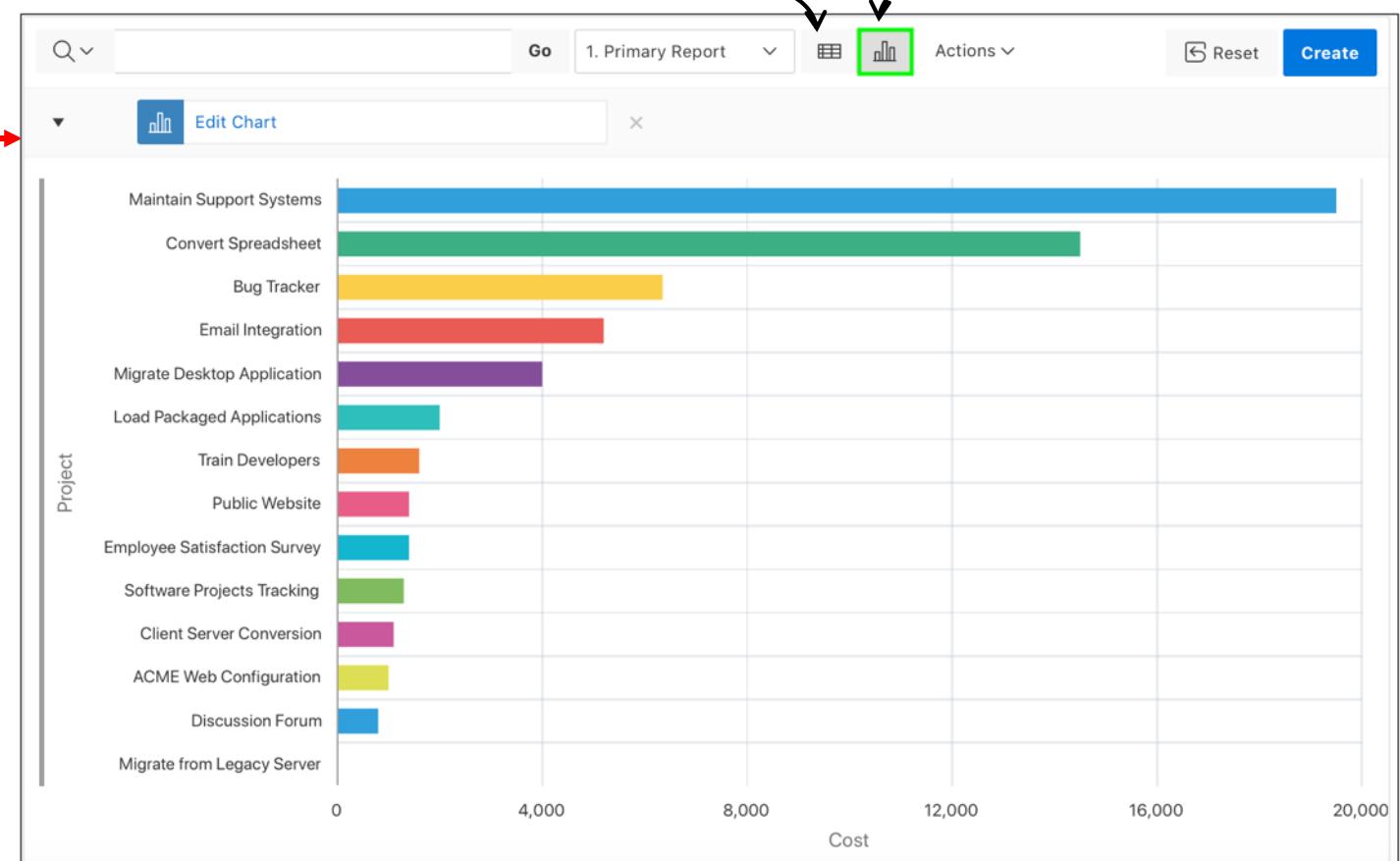
Label Project Axis Title for Label Project

Value Cost Axis Title for Value Cost

Function Sum Orientation Horizontal

Sort Default

Cancel Delete Apply



# Creating a Group By

The screenshot illustrates the process of creating a group by for a report. The interface is divided into several sections:

- Top Bar:** Actions (with a green box), Reset, Go, 1. Primary Report, Actions, and Create.
- Left Sidebar:** Columns (marked with a green circle labeled 1), Filter, Data, Format, Chart, and Group By (marked with a green box).
- Main Content Area:** A table titled "Edit Group By" showing a list of projects and their total costs. The table has columns for Project and Total Cost.
- Bottom Modal:** A "Group By" configuration dialog (marked with a green circle labeled 2). It shows a single grouping for "Project" under "Cost". The "Label" is "Total Cost", "Format Mask" is "FML999G999G999G999G990D00", and the "Sum" function is selected. There is also an "Add Function" button.
- Buttons at the bottom:** Cancel and Apply (the "Apply" button is highlighted with a green box).

Project	Total Cost
Email Integration	\$5,200.00
Migrate Desktop Application	\$4,000.00
ACME Web Configuration	\$1,000.00
Discussion Forum	\$800.00
Public Website	\$1,400.00
Software Projects Tracking	\$1,300.00
Load Packaged Applications	\$2,000.00
	\$14,500.00
	\$1,600.00
	\$1,400.00
	\$0.00
	\$6,350.00
	\$19,500.00
	\$1,100.00
	\$60,150.00

# Specifying a Group By Sort Order

The screenshot shows the Oracle Database interface with the 'Edit Group By' dialog open. The 'Actions' dropdown menu is highlighted with a green box and a circled '1'. The 'Group By Sort' option is also highlighted with a green box and a circled '2'.

The screenshot shows the Oracle Database interface with the 'Group By Sort' dialog open. The 'Group By Sort' dialog has two rows of settings:

Column	Direction	Null Sorting
1 Total Cost	Descending	Default
2 - Select Column -	Ascending	Default

A red arrow points from the 'Apply' button in the dialog to the right-hand report area. The report lists various projects with their total costs, sorted by 'Total Cost' in descending order. The first project listed is 'Maintain Support Systems' with a cost of \$19,500.00.

Project	Total Cost
Maintain Support Systems	\$19,500.00
Convert Spreadsheet	\$14,500.00
Bug Tracker	\$6,350.00
Email Integration	\$5,200.00
Migrate Desktop Application	\$4,000.00
Load Packaged Applications	\$2,000.00
Train Developers	\$1,600.00
Public Website	\$1,400.00
Employee Satisfaction Survey	\$1,400.00

# Creating a Pivot Report

1

Actions ▾

Columns

Filter

Data >

Format >

Chart

Group By

Pivot

Pivot

Pivot Columns

1 Status

Add Pivot Column

Row Columns

1 Project

Add Row Column

Functions

Column

Label

Format Mask

Sum

1 Count Task Name Task Count

Add Function

Cancel Apply

2

Go 1. Primary Report Actions ▾

Edit Pivot

Pivot Column

Project

Migrate Desktop Application

Convert Spreadsheet

Maintain Support Systems

Discussion Forum

Load Packaged Applications

Bug Tracker

Closed

On-Hold

Open

Pending

Task Count

Task Count

Task Count

Task Count

4 0 3 0

0 0 4 0

0 2 2 0

2 0 1 0

2 0 2 1

1 2 1 1

2 0 1 1

2 3 0 0

3 0 1 0

4 0 1 4

0 3 0 0

0 0 0 10

0 0 0 0

2 1 0 0

7 0 0 0

29 11 16 17

Row Column

	Closed	On-Hold	Open	Pending
Migrate Desktop Application	4	0	3	0
Convert Spreadsheet	0	0	4	0
Maintain Support Systems	0	2	2	0
Discussion Forum	2	0	1	0
Load Packaged Applications	2	0	2	1
Bug Tracker	1	2	1	1
	2	0	1	1
	2	3	0	0
	3	0	1	0
	4	0	1	4
	0	3	0	0
	0	0	0	10
	0	0	0	0
	2	1	0	0
	7	0	0	0
	29	11	16	17

# Saving an Interactive Report

The screenshot illustrates the steps to save an interactive report. A red box highlights the main report area, which displays a grid of products (Bag and Belt) with columns for Image, Name, Category, Available, Price, Units, Sales, and Customers. A context menu is open over the first product, listing options: Default, 1. Primary Report, Private, and 1. New Products Report. A green box highlights the 'Actions' button in the top right corner of the report header. A green box also highlights the 'Save Report' button in the bottom right corner of the 'Save Report' dialog.

1. Primary Report  
Private  
1. New Products Report

Actions

Category Available

Image	Name	Category	Available	Price	Units	Sales	Customers
	Bag	Accessories	Yes	\$125.00	16	\$2,000.00	6
	Belt	Accessories	Yes	\$30.00	11	\$330.00	3

2. Save Report

Save As Named Report  
Name New Products Report  
Description

(Only displayed for developers)  
 Public

Cancel Apply

# Resetting a Report

The screenshot shows a report interface with a search bar, a 'Go' button, a dropdown for '1. Primary Report', and various action buttons like 'Actions', 'Reset', and 'Create'. A red box highlights the 'Reset' button on the left. A modal window titled 'Edit Pivot' is open, containing a table with four rows: 'Create Desktop Application', 'Insert Spreadsheet', 'Maintain Support Systems', and 'Discussion Forum'. The last row has a red box around it. On the right, a context menu is open with items: 'Filter', 'Data', 'Format', 'Pivot', 'Report' (which is highlighted with a green box), 'Save Report', 'Download', and 'Reset' (which is also highlighted with a green box). A red arrow points from the 'Reset' button in the main toolbar to the 'Reset' item in the context menu.

Task	Status	Task Count	Task Count
Create Desktop Application	Closed	4	0
Insert Spreadsheet	On-Hold	0	0
Maintain Support Systems	Closed	0	2
Discussion Forum	On-Hold	2	0

The screenshot shows the same report interface after the 'Reset' operation. The 'Reset' dialog is no longer visible. The report table now displays three rows of data for the project 'ACME Web Configuration':

- Identify server requirements (Closed, 100 cost, 200 budget)
- Determine Web listener configuration(s) (Closed, 100 cost, 100 budget)
- Specify security authentication scheme(s) (Closed, 200 cost, 300 budget)

A red box highlights the first row, and a red arrow points from the 'After reset' label to the first row of the table.

	Project ↑	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
	ACME Web Configuration	Identify server requirements	17-MAY-19	18-MAY-19	Closed	John Watson	100	200
	ACME Web Configuration	Determine Web listener configuration(s)	18-MAY-19	18-MAY-19	Closed	James Cassidy	100	100
	ACME Web Configuration	Specify security authentication scheme(s)	19-MAY-19	21-MAY-19	Closed	John Watson	200	300

After reset

# Downloading a Report

The screenshot shows a project management application interface. At the top, there is a search bar, a 'Go' button, and a dropdown labeled '1. Primary Report'. Below this is a table with columns: 'Project', 'Task Name', and 'Start Date'. The table lists five tasks related to 'ACME Web Configuration'. To the right of the table is a context menu with a green border and a circled '1' over the 'Actions' dropdown. The menu items include: Columns, Filter, Data (with a right arrow), Format (with a right arrow), Chart, Group By, Pivot, Report (with a right arrow), Download (highlighted with a green box and circled '2'), and Subscription.

**Download**

Choose report download format:

- CSV
- HTML
- Email
- XLS
- PDF
- RTF

Cancel

A1	Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
1	ACME Web C	Identify server requirements	17-May-19	18-May-19	Closed	John Watson	100	200
2	ACME Web C	Determine Web listener configuration(s)	18-May-19	18-May-19	Closed	James Cassic	100	100
3	ACME Web C	Specify security authentication scheme(s)	19-May-19	21-May-19	Closed	John Watson	200	300
4	ACME Web C	Select servers for Development, Test, Production	19-May-19	24-May-19	Closed	James Cassic	200	600
5	ACME Web C	Configure Workspace provisioning	26-May-19	26-May-19	Closed	John Watson	200	100
6	ACME Web C	Create pilot environment	26-May-19	26-May-19	Closed	John Watson	100	100
7	ACME Web C	Run installation	27-May-19	27-May-19	Closed	James Cassic	100	100
8	Bug Tracker	Implement bug tracking system	31-May-19	31-May-19	Closed	Myra Sutcliff	100	100
9	Bug Tracker	Review automated tests	01-Jun-19	02-Jul-19	On-Hold	Myra Sutcliff	2,750	1,500
10	Bug Tracker	Document quality issues	03-Jul-19	06-Aug-19	Open	Myra Sutcliff	3,500	4,000
11	Bug Tracker	Train developers	07-Aug-19	27-Sep-19	On-Hold	Myra Sutcliff	0	2,000
12	Bug Tracker	Measure effectiveness	19-Aug-19	19-Sep-19	Pending	Myra Sutcliff	0	1,500
13	Client Server	Identify pilot environment	20-Jun-19	21-Jun-19	Closed	Scott Spence	200	200
14	Client Server	Migrate pilot environment	22-Jun-19	07-Jul-19	Closed	Scott Spence	400	500
15	Client Server	Post-migration review	08-Jul-19	08-Jul-19	Closed	Pam King	100	100
16	Client Server	Plan migration strategy	09-Jul-19	09-Jul-19	Closed	Pam King	100	100
17	Client Server	Migrate client applications	13-Jul-19	21-Nov-19	Open	Pam King	300	12,000
18	Client Server	Test migrated applications	19-Aug-19	11-Dec-19	Pending	Russ Saunde	0	6,000
19	Client Server	User acceptance testing	04-Sep-19	06-Dec-19	Pending	Russ Saunde	0	2,500
20	Client Server	End-user training	06-Oct-19	18-Dec-19	Pending	Myra Sutcliff	0	2,500
21	Client Server	Rollout migration plan	09-Dec-19	20-Dec-19	Pending	Pam King	0	500
22	Convert Spreadsheets	Collect missing data	02-Jul-19	03-Sep-19	Open	Pam King	2,500	4,000
23	Convert Spreadsheets	Send links to stakeholders	03-Jul-19	18-Dec-19	Open	Pam King	1,000	1,500
24	Convert Spreadsheets	Create web-based reports	02-Jul-19	16-Dec-19	Open	Pam King	10,000	6,000
25	Convert Spreadsheets	Lock spreadsheets	02-Jul-19	16-Dec-19	Open	Pam King	1,000	800
26	Discussion Forum	Install web application	14-Jul-19	14-Jul-19	Closed	Hank Davis	100	100
27	Discussion Forum	Monitor part participation	15-Jul-19	23-Jul-19	Open	Hank Davis	450	500
28	Discussion Forum	Identify ownership issues	06-Jul-19	09-Jul-19	Closed	Hank Davis	250	300
29	Email Integration	Get RFPs from clients	30-Jun-19	21-Jul-19	Open	Mark Nile	2,000	1,000

# Using the Column Heading Menu

Sort Ascending      Sort Descending      Hide Column      Control Break

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Configuration	Configure server requirements	17-MAY-19	18-MAY-19	Closed	John Watson	100	200
Bug Tracker	Define Web listener configuration(s)	18-MAY-19	18-MAY-19	Closed	James Cassidy	100	100
Client Server Conversion	Configure security authentication	19-MAY-19	21-MAY-19	Closed	John Watson	200	300
Convert Spreadsheet	Setup servers for Development, Test, Production	19-MAY-19	24-MAY-19	Closed	James Cassidy	200	600
Discussion Forum	Configure Workspace provisioning	26-MAY-19	26-MAY-19	Closed	John Watson	200	100

The screenshot shows a table interface with a context menu open over the first row. The menu items are: Sort Ascending, Sort Descending, Hide Column, and Control Break. The 'Project' column header is highlighted with a green box. The 'Task Name' column header is also visible. The menu is displayed over the first five rows of the table.

Sort Ascending      Sort Descending      Hide Column      Control Break

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Configuration	Configure server requirements	17-MAY-19	18-MAY-19	Closed	John Watson	100	200
Bug Tracker	Define Web listener configuration(s)	18-MAY-19	18-MAY-19	Closed	James Cassidy	100	100
Client Server Conversion	Configure security authentication	19-MAY-19	21-MAY-19	Closed	John Watson	200	300
Convert Spreadsheet	Setup servers for Development, Test, Production	19-MAY-19	24-MAY-19	Closed	James Cassidy	200	600
Discussion Forum	Configure Workspace provisioning	26-MAY-19	26-MAY-19	Closed	John Watson	200	100

# Part 2: Customizing an interactive report as a developer



# Editing Interactive Report Region Attributes

The screenshot shows the Oracle Application Express Page Designer interface. On the left, the navigation tree under 'Page 2: Projects' shows 'Regions' expanded, with 'Content Body' selected. A sub-tree under 'Content Body' shows 'Tasks' selected, highlighted with a blue bar. An orange arrow points from the text 'Report region' to this blue bar. In the center, the main workspace displays a page titled 'Tasks' with sections for 'PREVIOUS', 'ITEMS', 'REGION CONTENT', and 'SUB REGIONS'. Below these are 'RIGHT OF INTERACTIVE REPORT SEARCH BAR' buttons for 'RESET\_REPORT' and 'CREATE'. At the bottom are tabs for 'Regions', 'Items', and 'Buttons', followed by a grid of report-related icons: Breadcrumb, Calendar, Chart, Classic Report, Column Toggle Report, Form, Help Text, Interactive Grid, Interactive Report (selected), List, List View, Map Chart, PL/SQL Dynamic Content, Reflow Report, and Region Display Selector. On the right, the 'Region' panel is open, showing the 'Identification' tab with 'Title' set to 'Tasks' and 'Type' set to 'Interactive'. The 'Source' tab is collapsed. The 'SQL Query' tab is selected, displaying the following SQL code:

```
select ID,  
       PROJECT,  
       TASK_NAME,  
       START_DATE,  
       END_DATE,  
       STATUS,  
       ASSIGNED_TO,  
       COST,  
       BUDGET  
  from TASKS
```

The 'Optimizer Hint' section at the bottom right contains the hint: '/\*+ INDEX(TASKS ID) \*/'.

# Modifying an Interactive Report Source Query

The screenshot shows the Oracle Application Express Page Designer interface. A red box highlights the 'Identification' section on the right, which contains the report title ('Emp') and type ('Interactive Report'). Another red box highlights the 'Source' section, showing the location as 'Local Database' and type as 'SQL Query'. A green box highlights the 'SQL Query' code editor, which contains the following SQL:

```
select EMPNO,
       ENAME,
       JOB,
       MGR,
       HIREDATE,
       SAL,
       COMM AS Commission,
       DEPTNO,
       ( select l.DNAME from DEPT l where l.DEPTNO = m.DEPTNO) DEPTNO_L$1
  from EMP m
```

A red arrow points from the 'Commission' column in the code editor to the 'Commission' column in the 'Content Body' region of the page designer. The text 'Commission column added' is overlaid in orange at the bottom right.

# Editing Interactive Report Attributes

The screenshot shows the Oracle APEX Page Designer interface. The left sidebar lists page regions: Pre-Rendering, Regions (Breadcrumb Bar, Content Body), Content Body (Tasks, Attributes, Region Buttons, Dynamic Actions), and Post-Rendering. The 'Attributes' link under 'Content Body' is highlighted with a green box. The main workspace displays the 'Breadcrumb' region, which contains items like PAGE HEADER, PAGE NAVIGATION, and BREADCRUMB BAR. The 'Attributes' tab is selected in the breadcrumb navigation bar. The right panel shows the 'Attributes' configuration screen with sections for Authorization Scheme, Condition Type, Appearance, Show Null Values as, Pagination, and Display Position. A red box highlights the 'Pagination' section. A callout box labeled 'Setting Pagination' points to the 'Display Position' dropdown menu, which is also highlighted with a red box. The 'Bottom - Right' option is selected and highlighted with a blue box.

Application 53503 \ Page Designer

Layout Components Messages Page Search Help

Attributes

Filter

Authorization Scheme - Select -

Condition Type - Select -

Appearance

Show Null Values as

Pagination

Type None Row Ranges X to Y of Z **Row Ranges X to Y**

Display Position Bottom - Right

**Pagination**

Type **Row Ranges X to Y**

Display Position **Bottom - Right**

Display Position Top - Left Top - Right Top and Bottom - Left Top and Bottom - Right

Messages

Setting Pagination

# Customizing the Search Bar

Application 53503 \ Page Designer

Layout Components Messages Page Search Help

1 = 2 = 3 = 4 =

Page 2: Projects

- > Pre-Rendering
- Regions
  - Breadcrumb Bar
    - Breadcrumb
  - Attributes
  - Content Body
    - Tasks
      - Columns
        - ID
        - PROJECT
        - TASK\_NAME
        - START\_DATE
        - END\_DATE
        - STATUS
        - ASSIGNED\_TO
        - COST
        - BUDGET

Projects

PAGE HEADER  
PAGE NAVIGATION  
BREADCRUMB BAR

Breadcrumb

ITEMS  
REGION CONTENT  
SUB REGIONS  
PREVIOUS CLOSE DELETE HELP CHANGE EDIT COPY  
CREATE NEXT

BEFORE CONTENT BODY  
CONTENT BODY

Tasks

PREVIOUS  
ITEMS  
REGION CONTENT

RIGHT OF INTERACTIVE REPORT SEARCH BAR

RESET\_REPORT CREATE

Regions Items Buttons

Attributes

Column Groups

Saved Reports

Attributes

Filter

When More Data Found

The maximum row count for this report is #MAX\_ROW\_COUNT# rows. Please apply a filter to reduce the number of records in your query.

Search Bar

Include Search Bar  Yes  No

Search Field  Yes  No

Finder Drop Down  Yes  No

Reports Select List  Yes  No

Rows Per Page Selector Yes  No

Search Button Label

Maximum Rows Per Page

Actions Menu

Download

Save

Print

# Customizing the Actions Menu

The screenshot shows the Oracle APEX Page Designer interface. On the left, the page structure is defined with regions like 'Regions' and 'Content Body'. In the 'Content Body' region, there is a 'Tasks' section with columns for ID, PROJECT, TASK\_NAME, START\_DATE, END\_DATE, STATUS, ASSIGNED\_TO, COST, and BUDGET. Below this, an 'Attributes' section is highlighted with a green border. On the right, the 'Attributes' panel is open, showing the 'Actions Menu' configuration. This menu includes various options such as 'Include Actions Menu', 'Filter', 'Select Columns', 'Rows Per Page', 'Sort', 'Control Break', 'Highlight', 'Compute', 'Aggregate', 'Chart', 'Group By', 'Pivot', 'Flashback', 'Save Report', 'Save Public Report', and 'Download'. Each option has a 'Yes' or 'No' button next to it. The 'Actions Menu' section is also highlighted with a purple border.

Actions Menu	
Include Actions Menu	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Filter	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Select Columns	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rows Per Page	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sort	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Control Break	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Highlight	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Compute	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Aggregate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Chart	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Group By	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Pivot	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Flashback	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Save Report	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Save Public Report	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Save Public Report Authorization	<input type="button" value=" - Select -"/>
Reset	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Help	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Subscription	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Download	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

# Specifying the Download Formats

The screenshot shows the Oracle APEX Page Designer interface. On the left, the page structure tree shows 'Page 2: Projects' with regions like 'Breadcrumb Bar' and 'Content Body'. In the center, the 'Breadcrumb' region is selected, displaying navigation items: 'Projects', 'PAGE HEADER', 'PAGE NAVIGATION', 'BREADCRUMB BAR', 'ITEMS', 'REGION CONTENT', 'SUB REGIONS', 'PREVIOUS', 'CLOSE', 'DELETE', 'HELP', 'CHANGE', 'EDIT', 'COPY', 'CREATE', 'NEXT'. Below this is the 'CONTENT BODY' section with 'Tasks' and 'REGION CONTENT'. On the right, the 'Attributes' panel is open for the 'Download' region. It includes settings for 'Help' (Yes/No), 'Subscription' (Yes/No), and 'Download' (Yes/No). The 'Download' section is highlighted with a purple border and contains a list of 'Download Formats' with checkboxes: CSV, HTML, Email, XLS, PDF, and RTF, all of which are checked. Other settings include 'CSV Separator', 'CSV Enclosed By', 'Filename', 'Heading' (disabled), 'Fixed To' (set to 'Page'), and 'Icon View' (disabled). At the bottom of the Attributes panel are 'Show' (Yes/No) and 'Buttons' tabs. A callout bubble points to the 'Download' checkbox with the text 'Specify download formats'. Another callout bubble points to the 'Show' checkbox in the Attributes panel with the text 'Include Download'. To the right of the main panel is a separate 'Attributes' panel for a 'Search Bar' region. It has settings for 'Include Search Bar' (Yes/No), 'Search Field' (Yes/No), 'Finder Drop Down' (Yes/No), and 'Reports Select List' (Yes/No). The 'Include Search Bar' checkbox is highlighted with a green box and an arrow pointing from the main panel's 'Download' checkbox.

Specify download formats

Include Download

Include Search Bar

Setting	Value	Description
Help	Yes	Help button
Subscription	Yes	Subscription button
Download	Yes	Download button
CSV	checked	CSV format
HTML	checked	HTML format
Email	checked	Email format
XLS	checked	XLS format
PDF	checked	PDF format
RTF	checked	RTF format
CSV Separator		CSV separator setting
CSV Enclosed By		CSV enclosed by setting
Filename		Filename setting
Heading	(disabled)	Heading setting
Fixed To	Page	Fixed To setting
Icon View	(disabled)	Icon View setting
Show	Yes	Show setting

# Including the Icon and Detail Views

Attributes

Icon View

Show Yes  No

Custom Yes  No

Columns Per Row 5

Link Column ICON\_LINK

Image Source Column DETAIL\_IMG\_NO\_STYLE

Label Column PRODUCT\_NAME

Image Attributes width="75" height="75"

HTML ALT Text

HTML TITLE Text

Detail View

Show Yes  No

Before Rows

```
<style>
table.apexir_WORKSHEET_CUSTOM { border: none !important; -moz-box-shadow: none; box-shadow: none; -webkit-box-shadow: none; }
.apexir_WORKSHEET_DATA td {border-bottom: none !important;}
table.reportDetail td {
    padding: 2px 4px !important;
    border: none !important;
    font: 11px/16px Arial, sans-serif;
}
```

Products Add Product

Icon View

Detail View

Grid View  List View

Bag

Belt

Ladies Shoes

Mens Shoes

Bag

Belt

Blouse

Business Shirt

Jacket

Category: Accessories Available: Yes Last Date Sold: 8/8/2019

Description: Unisex bag suitable for carrying laptops with room for many additional items

Price: Units Sales Customers

\$125.00 16 \$2,000.00 6

Category: Accessories Available: Yes Last Date Sold: 7/25/2019

Description: Leather belt

Price: Units Sales Customers

\$30.00 11 \$330.00 3

Category: Womens Available: Yes Last Date Sold: 8/8/2019

Description: Silk blouse ideal for all business women

Price: Units Sales Customers

\$60.00 16 \$960.00 5

Category: Mens Available: Yes Last Date Sold: 8/11/2019

Description: Wrinkle-free cotton business shirt

Price: Units Sales Customers

\$50.00 23 \$1,150.00 5

Category: Mens Available: Yes Last Date Sold: 8/11/2019

# Managing Link Columns

Q ▾ Go 1. Primary Report Actions ▾ ⌂ Reset Create

Project ↑	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Configuration	Identify server requirements						
ACME Web Configuration	Determine system requirements						
ACME Web Configuration	Specify system requirements						
ACME Web Configuration	Select server hardware						
ACME Web Configuration	Configure server software						

< Report View Row 1 of 73 >

ID	1
Project	ACME Web Configuration
Task Name	Identify server requirements
Start Date	17-MAY-19
End Date	18-MAY-19
Status	Closed
Assigned To	John Watson
Cost	100
Budget	200

# Managing Link Columns

Attributes

Filter

Link

Link Column  Link to Single Row View

Uniquely Identify Rows by

- Link to Custom Target
- Exclude Link Column

Attributes

Filter

Link

Link Column Link to Single Row View

Uniquely Identify Rows by ROWID

Link Icon

```

```

Link Attributes

Authorization Scheme - Select -

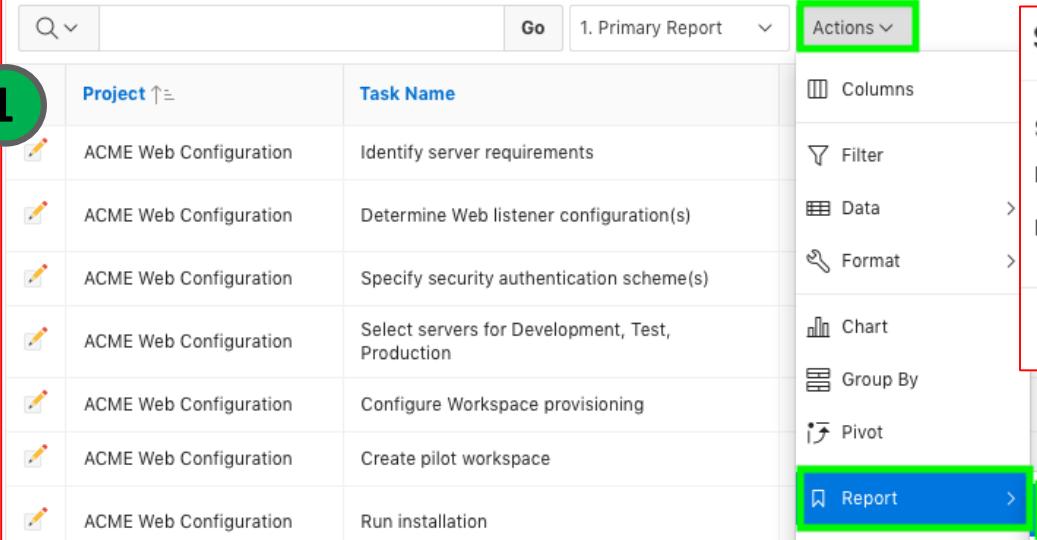
Condition Type - Select -

Single Row View

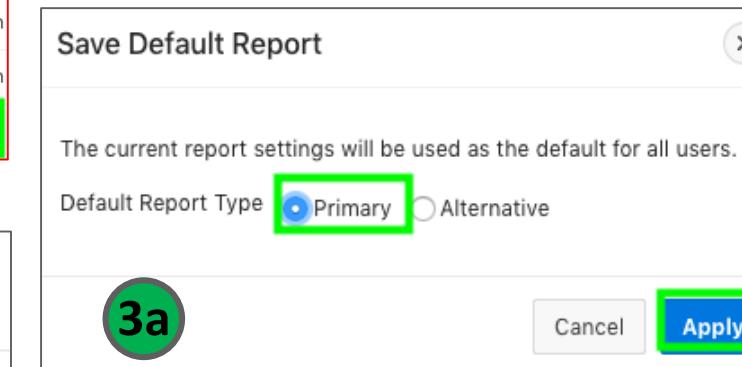
Exclude Null Values Yes No

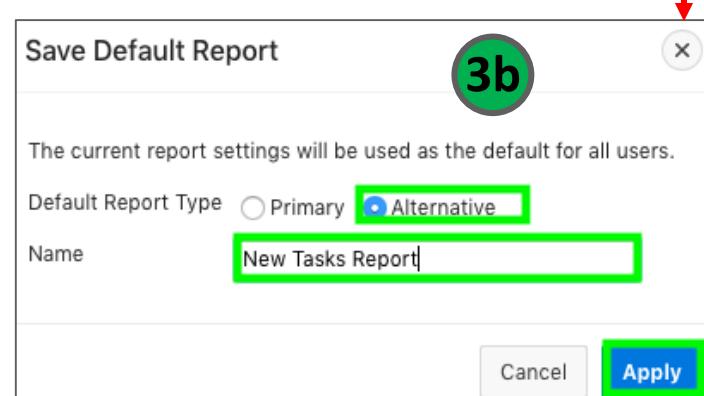
Only Displayed Columns Yes No

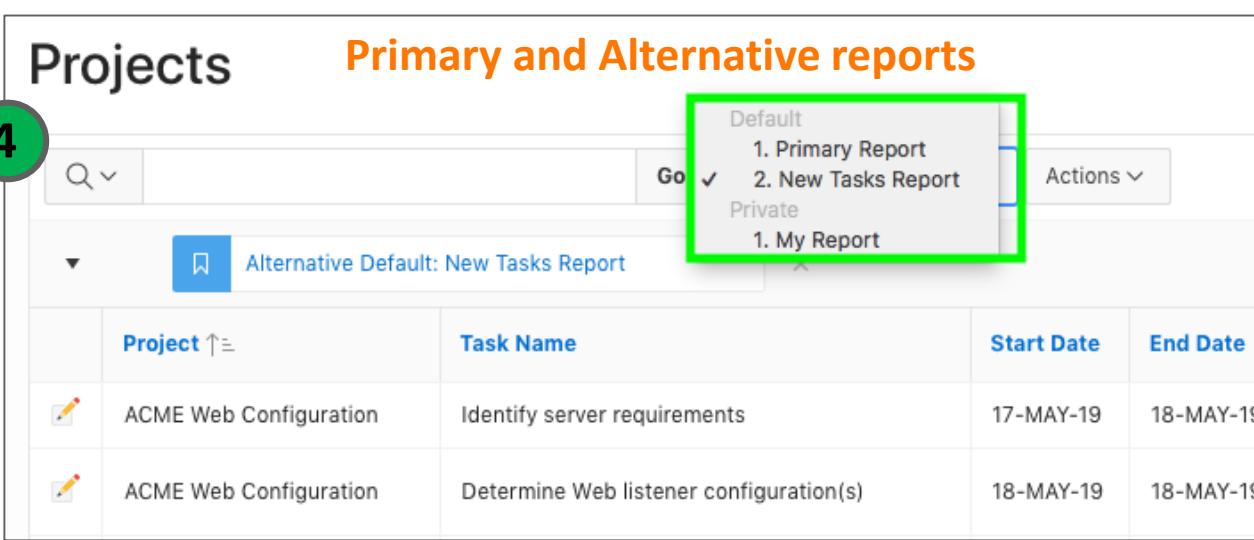
# Saving an Interactive Report

**1**  A screenshot of a report interface showing a table of tasks under 'ACME Web Configuration'. The table has columns for Project, Task Name, Start Date, and End Date. The first task is 'Identify server requirements'.

**2**  A 'Save Report' dialog box is open. It shows 'Save Name' with 'As Named Report' checked and 'As Default Report Settings' highlighted with a green box. There are also 'Description' and 'Public' checkboxes. Buttons for 'Cancel' and 'Apply' are at the bottom.

**3a**  A 'Save Default Report' dialog box for 'Primary' report type is shown. It says 'The current report settings will be used as the default for all users.' and has a radio button for 'Primary' selected. Buttons for 'Cancel' and 'Apply' are at the bottom.

**3b**  A 'Save Default Report' dialog box for 'Alternative' report type is shown. It says 'The current report settings will be used as the default for all users.' and has a radio button for 'Alternative' selected. It also has a 'Name' field containing 'New Tasks Report' and buttons for 'Cancel' and 'Apply'.

**4**  A 'Projects' screen is shown. It displays a table of tasks and a sidebar titled 'Primary and Alternative reports'. Under 'Alternative Default', it shows 'New Tasks Report' selected. A dropdown menu lists 'Default' (selected), 'Primary Report', 'New Tasks Report', 'Private', and 'My Report'.

# Summary

In this lesson, you learned how to:

- Customize an interactive report as an end user
- Customize the display of an interactive report as a developer





# Hands-on Lab



Oracle **APEX**



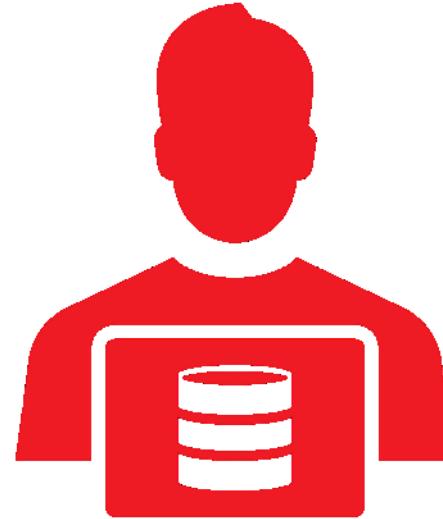
# Unit 7: Managing and Customizing Interactive Grids

# Lesson Objectives

After completing this lesson, you should be able to:

- Manage interactive grid attributes
- Control Interactive Grid Pagination
- Customize the Interactive Grid Toolbar
- Enable Users to Save Public Interactive Grids
- Customize interactive grid as an end user

# Part 1: Customizing an Interactive Grid as a Developer



# Making an Interactive Grid Editable

Read-only Interactive Grid

ID	Project	Task Name	Start Date	End Date	Status	Assigned To
1	ACME Web Co...	Identify server...	17-MAY-19	18-MAY-19	Closed	John Watson
2	Maintain Supp...	HR software u...	17-MAY-19	14-JUL-19	On-Hold	Pam King
3	Maintain Supp...	Apply Billing S...	17-MAY-19	18-JUL-19	On-Hold	Russ Sanders
4	ACME Web Co...	Determine We...	18-MAY-19	18-MAY-19	Closed	James Cassidy
5	ACME Web Co...	Specify securi...	19-MAY-19	21-MAY-19	Closed	John Watson

Editable Interactive Grid

	ID	Project	Task Name	Start Date	End Date	Status	Assigned To
<input type="checkbox"/>	1	ACME Web ...	Identify serv...	17-MAY-19	18-MAY-19	Closed	John Watson
<input type="checkbox"/>	2	Maintain Sup...	HR software ...	17-MAY-19	14-JUL-19	On-Hold	Pam King
<input type="checkbox"/>	3	Maintain Sup...	Apply Billing ...	17-MAY-19	18-JUL-19	On-Hold	Russ Sanders
<input type="checkbox"/>	4	ACME Web ...	Determine W...	18-MAY-19	18-MAY-19	Closed	James Cassi...
<input type="checkbox"/>	5	ACME Web ...	Specify secu...	19-MAY-19	21-MAY-19	Closed	John Watson

Attributes

Filter

Edit

Enabled Yes  No

Allowed Operations

Add Row  
 Update Row  
 Delete Row

Allowed Row Operations Column - Select -

Lost Update Type Row Values

Add Row If Empty Yes  No

# Adding Column Group Headers

Column groups defined: Identity, Compensation, Notes

The screenshot shows a database grid interface with the following features:

- Search Bar:** "Search: All Text Columns" with a "Go" button.
- Actions:** A dropdown menu labeled "Actions".
- Reset:** A "Reset" button.
- Column Headers:** The columns are grouped into three main sections:
  - Identity:** Contains columns: Department, Name, Job, Manager, and Hire Date.
  - Compensation:** Contains columns: Salary and Commission.
  - Notes:** Contains columns: Onleave and Notes.
- Data Rows:** 14 rows of employee data, each row containing values for the columns defined in the Identity, Compensation, and Notes groups.

Identity			Compensation			Notes		
Department	Name	Job	Manager	Hire Date	Salary	Commission	Onleave	Notes
10	KING	PRESIDENT	-	17-NOV-81	5000	-	N	-
30	BLAKE	MANAGER	7839	01-MAY-81	2850	-	N	Lorem ipsum d...
10	CLARK	MANAGER	7839	09-JUN-81	2450	-	N	-
20	JONES	MANAGER	7839	02-APR-81	2975	-	N	-
20	SCOTT	ANALYST	7566	09-DEC-82	3000	-	N	-
20	FORD	ANALYST	7566	03-DEC-81	3000	-	N	-
20	SMITH	CLERK	7902	17-DEC-80	800	-	N	-
30	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	N	-
30	WARD	SALESMAN	7698	22-FEB-81	1250	500	N	-
30	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	N	-
30	TURNER	SALESMAN	7698	08-SEP-81	1500	0	N	-
20	ADAMS	CLERK	7788	12-JAN-83	1100	-	Y	Medical Leave
30	JAMES	CLERK	7698	03-DEC-81	950	-	N	-
10	MILLER	CLERK	7782	23-JAN-82	1300	-	N	-

# Adding Column Group Headers: Example and Steps

Rendering   Dynamic A...   Processing   ▲

1 = 2 = Δ =

Page 8: Employees Grid

> Pre-Rendering

Regions

  Breadcrumb Bar

    Breadcrumb

      Attributes

  Content Body

    Employees Grid

      Columns

      Attributes

    Column Groups

> Post-Rendering

Create Column Group

Expand All Below

Collapse All Below

Column Group

Filter

Heading

Heading Identity

Alternative Label

A screenshot of the Oracle ADF Faces Designer interface. The left pane shows the page structure with sections like 'Regions', 'Breadcrumb Bar', 'Content Body', and 'Post-Rendering'. The 'Content Body' section contains an 'Employees Grid' component. The 'Columns' section under 'Employees Grid' is highlighted with a green box. A red arrow points from this area down to a modal dialog titled 'Column Group' on the right. The 'Heading' field in this dialog also has a green box around it.

### Assigning column groups to columns

Page 8: Employees Grid

> Pre-Rendering

Regions

  Breadcrumb Bar

    Breadcrumb

      Attributes

  Content Body

    Employees Grid

      Columns

        ROWID

        EMPNO

        ENAME

        JOB

        MGR

        HIREDATE

        SAL

  BREADCRUMB BAR

Breadcrumb

ITEMS

REGION CONTENT

SUB REGIONS

PREVIOUS CLOSE

DELETE HELP

CHANGE EDIT

COPY CREATE

NEXT

BEFORE CONTENT BODY

CONTENT BODY

Employees Grid

Columns

group

- Select - Compensation

Group Identity

Use Group For Notes

A screenshot of the Oracle ADF Faces Designer interface. The right pane shows the 'Columns' section of the page editor. A context menu is open over the 'ENAME' column in the 'Employees Grid' table. The 'Group' option in the menu is selected, and a sub-menu shows 'Identity' checked. A red arrow points from the 'Identity' option in the sub-menu up to the 'Heading' field in the 'Column Group' dialog on the left.

# Controlling Interactive Grid Pagination: Example 1

The screenshot illustrates the configuration of an interactive grid's pagination settings within the Oracle ADF Page Designer.

**Page Designer View:** The left panel shows the page structure with regions like Breadcrumb Bar, Content Body, and Post-Rendering. The "Attributes" section of the Content Body region is highlighted with a blue box and a red arrow pointing to the right panel.

**Grid Configuration Panel:** The right panel displays the grid's configuration options under the "Edit" tab. The "Appearance" section is expanded, and the "Pagination" sub-section is selected and highlighted with a green box. The "Type" dropdown is set to "Page". The "Show Total Row Count" checkbox is also highlighted with a green box. The "Toolbar" section is partially visible at the bottom.

**Interactive Grid:** The main area shows a table with 11 rows of historical figures. The columns are labeled: Popularity (sorted), Name, Country, Born, Died, Age, and Category. The first few rows include Leonardo da Vinci, Julius Caesar, Archimedes, Charlemagne, Michelangelo, Napoleon Bonaparte, Isaac Newton, Albert Einstein, Christopher Columbus, Johann Sebastian Bach, and Ludwig van Beethoven.

**Pagination Control:** At the bottom right, a purple box highlights the pagination controls, which show page 1 of 4133.

	Popularity ↓	Name	Country	Born	Died	Age	Category
1	31.464428	Leonardo da Vinci	Italy	1452	1519	67	Science & Technolo
2	31.116139	Julius Caesar	Italy	-100	-44	56	Politics
3	30.990697	Archimedes	Italy	-287	-212	75	Science & Technolo
4	30.48367	Charlemagne	Belgium	742	814	72	Politics
5	30.438274	Michelangelo	Italy	1475	1564	89	Arts
6	30.326292	Napoleon Bonaparte	France	1769	1821	52	Politics
7	30.288867	Isaac Newton	United Kingdom	1642	1726	84	Science & Technolo
8	30.210614	Albert Einstein	Germany	1879	1955	76	Science & Technolo
9	30.17526	Christopher Columbus	Italy	1451	1506	55	Arts
10	30.167197	Johann Sebastian Bach	Germany	1685	1750	65	Arts
11	30.109331	Ludwig van Beethoven	Germany	1770	1827	57	Arts

# Controlling Interactive Grid Pagination: Example 2

Attributes

Filter

Edit

Performance

Appearance

Pagination

Type: Scroll

Show Total Row Count: Yes

Search: All Text Columns Go Actions Reset

	Popularity ↓	N...	Country	Born	Died	Age	Category	Gender
1	31.464428	Le...	Italy	1452	1519	67	Science & Technology	Male
2	31.116139	Ju...	Italy	-100	-44	56	Politics	Male
3	Popularity ↓	N...	Country	Born	Died	Age	Category	Gender
4	4122	21.937986	C...	United States	1965	-	54	Arts
5	4123	21.93781	Ju...	United Kingdom	1950	-	69	Arts
	4124	21.935553	Ev...	United States	1924	-	95	Arts
	4125	21.935467	D...	United Kingdom	1938	-	81	Arts
	4126	21.935032	A...	United Kingdom	1954	-	65	Arts
	4127	21.93361	Ell...	United States	1958	-	61	Arts
	4128	21.930327	La...	United States	1912	2007	95	Business & Law
	4129	21.929167	M...	Egypt	1951	-	68	Politics
	4130	21.928916	Jo...	United States	1931	-	88	Science & Technology
	4131	21.928003	H...	United States	1917	2011	94	Science & Technology
	4132	21.927672	Di...	United States	1940	-	79	Arts
	4133	21.923777	M...	United States	1957	-	62	Arts

1 rows selected Total 4133

Scroll Paging

# Enabling Users to Save Public Interactive Grids

The screenshot shows the Oracle Database Control interface for managing grid settings. A red box highlights the 'Enable Users To' checkbox, which is checked. Below it, under 'Save Public Report', the 'Yes' button is selected. A dropdown menu for 'Save Public Report Authorization' is open, showing options: '- Select -', 'Oracle Text is available', 'Must Not Be Public User', and '{Not Oracle Text is available}'. A red arrow points from this section to the bottom grid.

Attributes

Filter

Toolbar

Enable Users To

Save Public Report  Yes  No

Save Public Report Authorization

- Select -

- Oracle Text is available
- Must Not Be Public User
- {Not Oracle Text is available}

Flashback

Define Chart View  Yes  No

Download  Yes  No

End User Saves Public Report

	Popularity ↓	Name	Country	Born	Died	Age	Category
1	31.464428	Leonardo da Vinci	Italy	1452	1519	67	Science & Technology
2	31.116139	Julius Caesar	Italy	-100	-44	56	Politics
3	30.990697	Archimedes	Italy	-287	-212	75	Science & Technology
4	30.48367	Charlemagne	Belgium	742	814	72	Politics
5	30.438274	Michelangelo	Italy	1475	1564	89	Arts

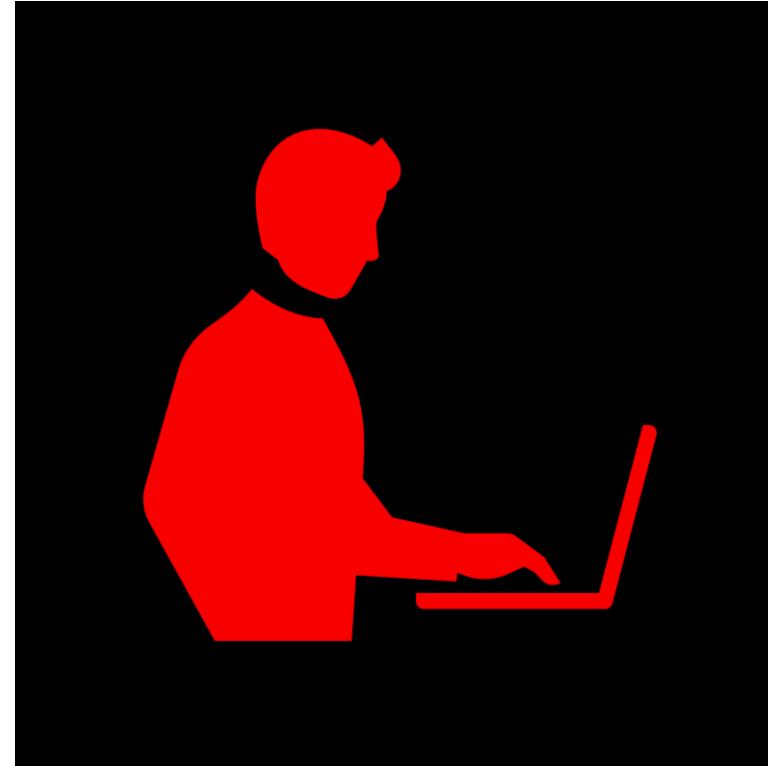
# Modifying the SQL Source of an Interactive Grid

The screenshot shows the Oracle Application Express (APEX) Page Designer interface. A red box highlights the 'Employees Grid' item in the 'Content Body' section of the left sidebar. A green box highlights the 'SQL Query' field in the 'Source' section of the right panel. A red arrow points from the green box to a 'Code Editor - SQL Query' window, which displays the following SQL code:

```
1 select EMPNO,  
2        ENAME,  
3        JOB,  
4        MGR,  
5        HIREDATE,  
6        SAL,  
7        COMM,  
8        ONLEAVE,  
9        NOTES,  
10       DEPTNO  
11  from EBA_DEMO_IG_EMP  
12
```

The 'OK' button in the bottom right corner of the code editor is also highlighted with a green box.

## Part 2:Customizing an Interactive Grid as an End User



# Searching in an Interactive Grid

## Employees Grid Searching all text columns

Emp ID	Name	Job	Manager
7839	KING	PRESIDENT	-
7698	BLAKE	MANAGER	7839
7782	CLARK	MANAGER	7839

## Employees Grid Searching a specific column

Case Sensitive	Name	Job
All Text Columns	KING	PRESIDENT
Name	BLAKE	MANAGER
<input checked="" type="radio"/> Job	CLARK	MANAGER
On Leave	JONES	MANAGER
Notes	SCOTT	ANALYST
	FORD	ANALYST

Employees Grid

Search: All Text Columns Go Actions ▾ Reset

▼   Search for 'clerk' X

Emp ID	Name	Job	Hire Date	Salary	Commission
7369	SMITH	CLERK	17-DEC-80	800	-
7876	ADAMS	CLERK	12-JAN-83	1100	-
7900	JAMES	CLERK	03-DEC-81	950	-
7934	MILLER	CLERK	23-JAN-82	1300	-

Total 4

Employees Grid

Enable / disable filter Remove filter

 Job contains clerk X

Emp ID	Name	Job	Hire Date	Salary	Commission
7369	SMITH	CLERK	17-DEC-80	800	-
7876	ADAMS	CLERK	12-JAN-83	1100	-
7900	JAMES	CLERK	03-DEC-81	950	-
7934	MILLER	CLERK	23-JAN-82	1300	-

Total 4

# Rearranging and Resizing Columns

Employees Grid

Rearranging columns by drag and drop

Emp ID	Name	Job	Salary	Commission	Hire Date
7839	KING	PRESIDENT	5000	-	17-NOV-81
7698	BLAKE	MANAGER	2850	-	01-MAY-81
7782	CLARK	MANAGER	2450	-	09-JUN-81

Employees Grid

Emp ID	Name	Job	Hire Date	Salary	Commission
7839	KING	PRESIDENT	17-NOV-81	5000	-
7698	BLAKE	MANAGER	01-MAY-81	2850	-
7782	CLARK	MANAGER	09-JUN-81	2450	-

Employees Grid

Resizing a column

Emp ID	Name	Job	Hire Date	Salary	Commission
7839	KING	PRESIDENT	17-NOV-81	5000	-
7698	BLAKE	MANAGER	01-MAY-81	2850	-
7782	CLARK	MANAGER	09-JUN-81	2450	-

Employees Grid

Emp ID	Name	Job	Hire Date	Salary	Commission
7839	KING	PRESIDENT	17-NOV-81	5000	-
7698	BLAKE	MANAGER	01-MAY-81	2850	-
7782	CLARK	MANAGER	09-JUN-81	2450	-

# Sorting Columns in an Interactive Grid

Employees Grid

Sort ascending

Emp ID	Name	Salary	Commission
7839	KING	5000	-
7698	BLAKE	2850	-
7782	CLARK	2450	-
7566	JONES	2975	-
7788	SCOTT	3000	-

Employees Grid

Emp ID	Name	Salary ↑	Commission
7369	SMITH	800	-
7900	JAMES	950	-
7876	ADAMS	1100	-
7654	MARTIN	1250	1400
7521	WARD	1250	500

Employees Grid

Sort descending

Emp ID	Name	Salary ↓	Commission
7369	SMITH	800	-
7900	JAMES	950	-
7876	ADAMS	1100	-
7654	MARTIN	1250	1400
7521	WARD	1250	500

Employees Grid

Emp ID	Name	Salary ↓	Commission
7839	KING	5000	-
7788	SCOTT	3000	-
7902	FORD	3000	-
7566	JONES	2975	-
7698	BLAKE	2850	-

# Using Interactive Grid Components: Column Heading Menu

Employees Grid

Search Bar

Sort Order Buttons

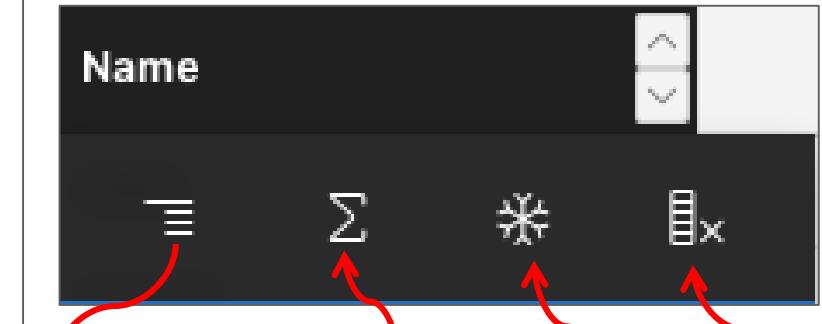
Buttons toolbar

Text Filter

Unique list Of Column Content

The screenshot shows a grid interface for employees. At the top, there's a search bar with a magnifying glass icon, a dropdown menu, and the word "clerk". Next to it are "Go", "Actions", and "Reset" buttons. Below the search bar is a "Buttons toolbar" with icons for sorting, filtering, and other operations. A "Text Filter" button is also present. The main area displays employee data with columns for Emp ID, Name, and Salary. The Name column has a dropdown menu open, showing a "Unique list Of Column Content" with names like ADAMS, ALLEN, BLAKE, CLARK, and FORD.

Emp ID	Name	Salary
7839	ADAMS	5000
7788	ALLEN	3000
7902	BLAKE	3000
7566	CLARK	2975
7698	FRANCIS	2850
7782	JAMES	2450
7499	KING	1600
7844	MARTIN	1500



# Using Interactive Grid Components: Actions Menu

Employees Grid

Actions ▾

Emp ID	Name
7839	KING
7788	SCOTT
7902	FORD
7566	JONES
7698	BLAKE
7782	CLARK
7499	ALLEN
7844	TURNER
7934	MILLER
7654	MARTIN

Actions Menu

Actions ▾

- Columns
- Filter
- Data >
- Format >
- Selection >
- Chart
- Report >
- Download
- Help

Data Submenu

Format Submenu

- Sort
- Aggregate
- Refresh
- Flashback

- Control Break
- Highlight
- Stretch Column Widths

# Using Charts in an Interactive Grid

**Chart**

Type

Area	<b>Bar</b>	Bubble	Donut	Funnel	Line	Line with Area
Pie	Polar	Radar	Range	Scatter	Stock	

Projects Grid			Actions
Project	Task Name	Start Date	Columns
ACME Web Config...	Identify server req...	17-MAY-19	Filter
Maintain Support S...	HR software upgra...	17-MAY-19	Data
Maintain Support S...	Apply Billing Syste...	17-MAY-19	Format
st...	st...	18-MAY-19	Selection
au...	au...	19-MAY-19	
r ...	r ...	19-MAY-19	<b>Chart</b>

# Using Charts in an Interactive Grid

Orientation  
Vertical

Label  
Project

Value  
Cost

Z  
- Select -

Series  
- Select -

Sort By

Label Axis Title  
Project

Value Axis Title  
Cost

3

Aggregation  
Sum

Aggregation  
- Select -

Projects Grid

Search: All Text ColumnsGoEdit ChartActions ▾Reset

Cost

Project	Cost
Bug Tracker	7,000
Load Packaged Application	2,500
Software Projects Tracking	1,500
Client Server Conversion	1,000
ACME Web Configuration	1,000
Discussion Forum	500
Convert Spreadsheets	15,000
Employee Satisfaction Survey	1,500
Email Integration	5,000
Train Developers	1,500
Migrate Desktop Applications	4,000
Public Website	1,000
Migrate from Legacy Systems	1,000
Maintain Support Systems	20,000

Chart View

# Changing the Column Display in an Interactive Grid

Search: All Text Columns Go Actions ▾ Reset

Project	Task Name	Start Date	End Date	Assigned To	Cost	Budget
ACME Web C...	Identify serve...	17-MAY-19	18-MAY-19	John Watson	100	200
Maintain Sup...	HR software ...	17-MAY-19	14-JUN-19			
Maintain Sup...	Apply Billing ...	17-MAY-19	18-JUN-19			
ACME Web C...	Determine W...	18-MAY-19	18-MAY-19			
ACME Web C...	Specify secur...	19-MAY-19	21-MAY-19			

1

Columns

Filter

Da

Fo

Se

2

Column

Task Name

Minimum Column Width (Pixel)

300

Help Cancel Save

Columns

Displayed Column

Project

Task Name

Start Date

End Date

Status

Assigned To

^ v ⌂ v

# Changing the Column Display in an Interactive Grid

The screenshot illustrates the process of changing column displays in an interactive grid. It consists of three main sections:

- Left Panel (Column Configuration):** Shows a list of columns with checkboxes for "Displayed". A red box highlights the "Columns" header and the first row. A green circle labeled "3" is placed over the "Columns" header. Below it, a red box highlights the "Displayed" and "Column" headers of a sub-table. A green box highlights the "Project" column in the main list and the "Project" column in the sub-table. A black arrow points from the "Project" label in the sub-table to the "Project" label in the main list. Another black arrow points from the "Project" label in the sub-table to a green box around the "Project" checkbox in the sub-table's list.
- Middle Panel (Column Selection):** A red box highlights the "Columns" header and the first row of a list of columns. A green circle labeled "4" is placed over the "Columns" header. Below it, a red box highlights the "Displayed" and "Column" headers of a sub-table. A green box highlights the "Project" column in the main list and the "Project" column in the sub-table. A black arrow points from the "Project" label in the sub-table to the "Project" label in the main list. Another black arrow points from the "Project" label in the sub-table to a green box around the "Project" checkbox in the sub-table's list.
- Right Panel (Data View):** A red box highlights the search bar ("Search: All Text Columns") and the "Actions" dropdown. Below it is a table with columns: Project, Task Name, Status, Cost, Budget, Start Date, and End Date. The table contains five rows of project data.

**Table Data:**

Project	Task Name	Status	Cost	Budget	Start Date	End Date
ACME We...	Identify server requirements	Closed	100	200	17-MAY-19	18-MAY-19
Maintain ...	HR software upgrades	On-Hold	8000	7000	17-MAY-19	14-JUL-19
Maintain ...	Apply Billing System updates	On-Hold	9500	7000	17-MAY-19	18-JUL-19
ACME We...	Determine Web listener configuration(s)	Closed	100	100	18-MAY-19	18-MAY-19
ACME We...	Specify security authentication scheme(s)	Closed	200	300	19-MAY-19	21-MAY-19

# Creating a Column Filter

Project	Task Name	Cost
ACME Web Config...	Identify server req...	8000
Maintain Support ...	HR software upgra...	9500
Maintain Support ...	Apply Billing Syste...	9500
ACME Web Config...	Determine Web lis...	1000

Enabled	Name
<input checked="" type="checkbox"/>	Budget greater than

Project	Task Name	Cost	Budget	Status
Maintain Support ...	HR software upgra...	8000	7000	On-Hold
Maintain Support ...	Apply Billing Syste...	9500	7000	On-Hold
Email Integration	Complete plan	3000	1500	Closed
Bug Tracker	Review automated...	2750	1500	On-Hold
Train Developers	Publish developme...	1000	2000	On-Hold

Projects with budget greater than 1000 are displayed

# Adding Highlighting to an Interactive Grid

The screenshot illustrates the process of adding highlighting to an interactive grid. It shows a main grid interface and a configuration dialog.

**Main Grid Interface:** The left side shows a data grid with columns: Project, Task Name, Cost, Budget, and Status. A filter bar at the top is set to "Expensive Projects". A red box highlights the first two rows of the grid, which have a cost greater than 500.

**Highlight Configuration Dialog:** The right side shows the "Highlight" configuration dialog. A green box highlights the "Name" field, which contains "Expensive Projects". A red arrow points from the highlighted row in the grid to this field. A green circle labeled "1" is on the "Actions" button in the dialog. Another green box highlights the "Highlight" dropdown, which is set to "Row".

**Context Menu:** A red box highlights the "Format" item in a context menu that appears over the grid. A green box highlights the "Highlight" item in the "Selection" section of the same menu.

**Text Annotation:** The text "Rows with project cost greater than 500 are highlighted" is displayed in orange at the bottom left, with a black arrow pointing upwards towards the highlighted rows in the grid.

Project	Task Name	Cost	Budget	Status
ACME Web Configuration	Identify server re...	100	200	Closed
Maintain Support Syste...	HR software upgr...	8000	7000	On-Hold
Maintain Support Syste...	Apply Billing Syst...	9500	7000	On-Hold
ACME Web Configuration	Determine Web li...	100	100	Closed
ACME Web Configuration	Specify security ...	200	300	Closed
ACME Web Configuration	Select servers for...	200	600	Closed
Email Integration	Complete plan	3000	1500	Closed
ACME Web Configuration	Configure Works...	200	100	Closed

# Creating a Control Break in an Interactive Grid

Control break on projects

The screenshot illustrates the process of creating a control break in an interactive grid. On the left, a grid displays project tasks with columns for Task Name, Cost, Budget, and Status. A callout points from the text "Control break on projects" to the grid. On the right, a "Control Break" configuration panel is open, containing settings for "Column" (set to "Project"), "Direction" (set to "Ascending"), and "Nulls" (set to "Last"). A large red box highlights the "Actions" button in the main toolbar of the grid, which is circled with a green border and labeled "1". Another red box highlights the "Control Break" option in the "Format" section of the context menu, which is also circled with a green border and labeled "2".

Task Name	Cost	Budget	Status
▼ Project: ACME Web Configuration			
Identify server requirements	100	200	Closed
Determine Web listener config...	100	100	Closed
Specify security authenticati...	200	300	Closed
Select servers for Developme...	200	600	Closed
Configure Workspace provisi...	200	100	Closed
Create pilot workspace	100	100	Closed
Run installation	100	100	Closed
▼ Project: Bug Tracker			
Implement bug tracking soft...	100	100	Closed
Review automated testing tools	2750	1500	On-Hold

# Saving your Customized Interactive Grid as a Report

The image illustrates the process of saving a customized interactive grid as a private report. It consists of three main panels:

- Left Panel (Sidebar Menu):** Shows a list of actions: Actions (highlighted with a green border), Columns, Filter, Data, Format, Selection, Chart, Report (highlighted with a blue background), Download, and Help. The 'Report' item has a dropdown menu with Save and Save As options, both highlighted with green boxes.
- Middle Panel (Report - Save As Dialog):** A modal window titled "Report - Save As". It contains fields for Type (set to Private) and Name (set to Project Break-up). At the bottom are buttons for Help, Cancel, and Save (highlighted with a green box).
- Right Panel (Main Grid View):** An interactive grid titled "Project". The top navigation bar shows "Default", "Primary Report", "Private" (unchecked), and "Project Break-up" (checked and highlighted with a purple box). The grid displays task data across columns: Task Name, Status, Budget, and Assigned To. Two red arrows point from the "Save As" dialog to the "Project Break-up" report type in the top right of the grid. A large red bracket at the bottom right points to the text "Interactive grid saved as a private report".

Interactive grid saved as a private report

Task Name	Status	Budget	Assigned To
Project: ACME Web Configuration			
Identify server requir...	Closed	200	John Watson
Determine Web liste...	Closed	100	James Cassidy
Specify security auth...	Closed	300	John Watson
Select servers for De...	Closed	600	James Cassidy
Configure Workspac...	Closed	100	John Watson
Create pilot workspace	Closed	100	John Watson
Run installation	Closed	100	James Cassidy
Project: Bug Tracker			
Implement bug tracki...	Closed	100	Myra Sutcliff

# Downloading or Emailing an Interactive Grid

Actions ▾

1

Columns

Filter

Data >

Format >

Selection >

Chart

Report >

Download

2

Download

Choose Format

CSV

HTML

Send as Email

Recipient (to)  
abc@yourcompany.com

Copy (cc)  
xyz@yourcompany.com

Blind Copy (bcc)  
Separate multiple addresses with commas

Subject  
Project Break-up Report

Message  
Hi,  
Please find attached Project Break-up Report.

Help Cancel Send as Email

A	B	C	D	E	F	G	
1	Task Name	Status	Budget	Assigned To	Start Date	End Date	Cost
2	Identify serv	Closed	200	John Watson	17-May-19	18-May-19	100
3	Determine V	Closed	100	James Cassidy	18-May-19	18-May-19	100
4	Specify secur	Closed	300	John Watson	19-May-19	21-May-19	200
5	Select server	Closed	600	James Cassidy	19-May-19	24-May-19	200
6	Configure W	Closed	100	John Watson	26-May-19	26-May-19	200
7	Create pilot	Closed	100	John Watson	26-May-19	26-May-19	100
8	Run installat	Closed	100	James Cassidy	27-May-19	27-May-19	100
9	Implement b	Closed	100	Myra Sutcliff	31-May-19	31-May-19	100
10	Review auto	On-Hold	1500	Myra Sutcliff	01-Jun-19	02-Jul-19	2750
11	Document qu	Open	4000	Myra Sutcliff	03-Jul-19	06-Aug-19	3500
12	Train develo	On-Hold	2000	Myra Sutcliff	07-Aug-19	27-Sep-19	0
13	Measure effi	Pending	1500	Myra Sutcliff	19-Aug-19	19-Sep-19	0
14	Identify pilot	Closed	200	Scott Spence	20-Jun-19	21-Jun-19	200

Report sent as Email attachment

# Refreshing an Interactive Grid

Update an interactive grid with the most current data available on the database

Projects Grid

ID	Project	Task Name	Start Date	End Date	Lead To	Cost	Budget
1	ACME Web C...	Identify serve...	17-MAY-19	18-MAY-19	Person	100	200
2	Maintain Sup...	HR software ...	17-MAY-19	14-JUL-19			7000
3	Maintain Sup...	Apply Billing ...	17-MAY-19	18-JUL-19			7000
4	ACME Web C...	Determine W...	18-MAY-19	18-MAY-19			100
5	ACME Web C...	Specify secur...	19-MAY-19	21-MAY-19			300
6	ACME Web C...	Select server...	19-MAY-19	24-MAY-19			600
7	Email Integrat...	Complete plan	24-MAY-19	01-JUL-19		3000	1500
8	ACME Web C...	Configure Wo...	26-MAY-19	26-MAY-19	Person	200	100

The screenshot shows an Oracle Database application interface. At the top, there's a search bar with a magnifying glass icon, a 'Go' button, a dropdown for 'Primary Report', and an 'Actions' button which is highlighted with a green box. A context menu is open from the 'Actions' button, containing options like 'Columns', 'Filter', 'Data' (which is highlighted with a blue box), 'Format', 'Selection', 'Chart', 'Report', 'Sort', 'Aggregate', 'Refresh' (which is highlighted with a green box), and 'Flashback'. The main area displays a grid of project tasks with columns for ID, Project, Task Name, Start Date, End Date, Lead To, Cost, and Budget.

# Reversing an Interactive Grid to a Previous State

1

Actions

Save

Reset

Flashback

Minutes ago

5

Help

Cancel

Save

	Emp ID	Name	Job	Hire Date	Salary	Commission
	7839	KING	PRESIDENT	17-NOV-81	5000	-
<input checked="" type="checkbox"/>	7698	BLAKE	MANAGER	01-MAY-81	4000	-
	7782	CLARK	MANAGER	09-JUN-81	2450	-
	7566	JONES	MANAGER	02-APR-81	2975	-
	7788	SCOTT	ANALYST	09-DEC-82	3000	-
	7902	FORD	ANALYST	03-DEC-81	3000	-

Report data as of 5 minutes ago

	Emp ID	Name	Job	Hire Date	Salary	Commission
	7839	KING	PRESIDENT	17-NOV-81	5000	-
<input checked="" type="checkbox"/>	7698	BLAKE	MANAGER	01-MAY-81	2850	-
	7782	CLARK	MANAGER	09-JUN-81	2450	-
	7566	JONES	MANAGER	02-APR-81	2975	-
	7788	SCOTT	ANALYST	09-DEC-82	3000	-
	7902	FORD	ANALYST	03-DEC-81	3000	-

# Summary

In this lesson, you learned how to:

- Manage interactive grid attributes
- Control Interactive Grid Pagination
- Customize the Interactive Grid Toolbar
- Enable Users to Save Public Interactive Grids
- Customize interactive grid as an end user





# Hands-on Lab



Oracle **APEX**



# Unit 8: Creating and Using Forms

# Lesson Objectives

After completing this lesson, you should be able to:

- Describe an application form in Oracle APEX
- List the different types of application forms that you can create in Oracle APEX
- List the different wizards you use to create forms
- Create an editable interactive grid
- Create a simple form and link a report to this form
- Create the following types of master detail forms:
  - ✓ Stacked
  - ✓ Side by Side
  - ✓ Drill Down
- Modify a form

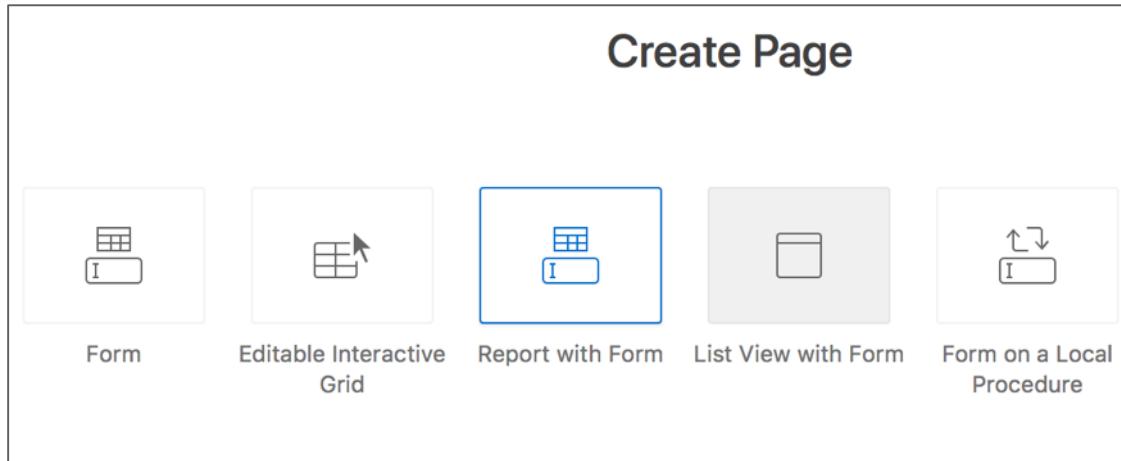
# Understanding Forms in Oracle APEX

- Forms are application components that are used to manipulate database objects
- You can create forms either manually or by using wizards
- You can create a form as a:
  - New page in an application
  - Region on an existing page in an application

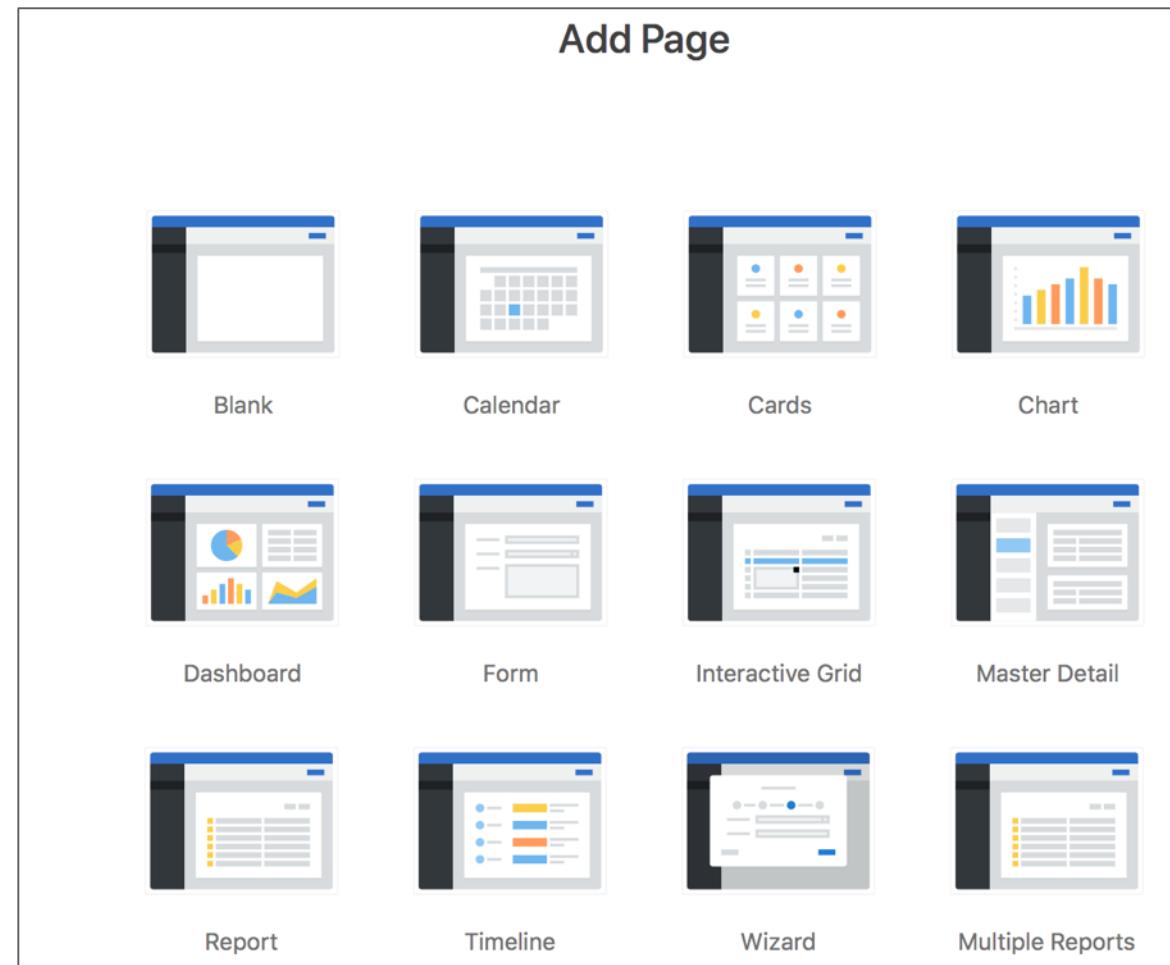


# Developing Forms in Oracle APEX

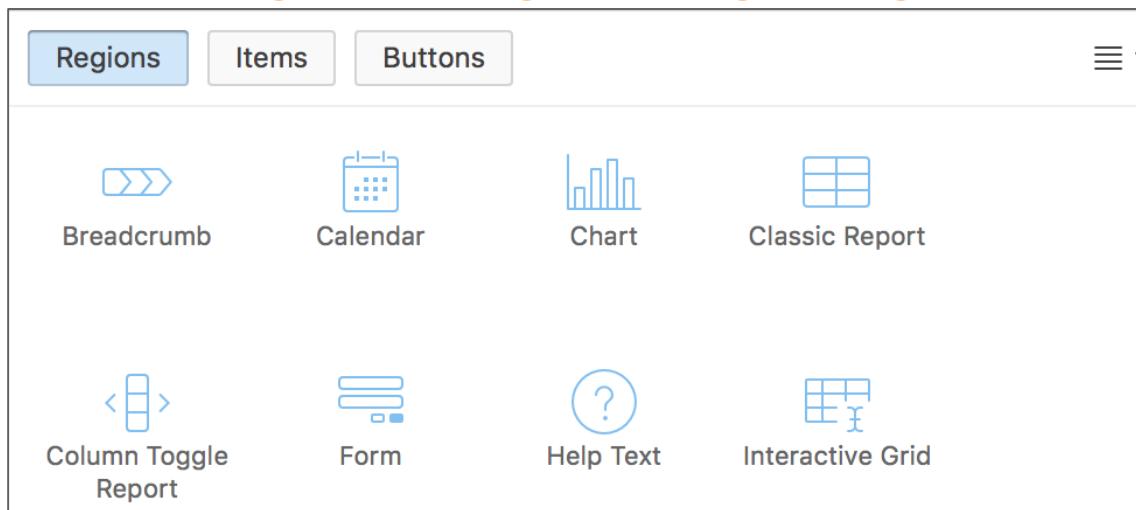
## Using the Create Page Wizard



## Using the Create Application Wizard



## Creating a Form region in Page Designer

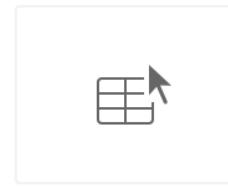


# Understanding Form Types

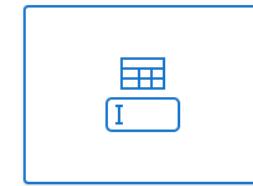
## Create Page



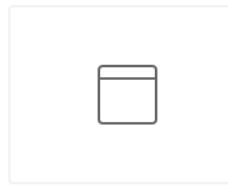
Form



Editable Interactive Grid



Report with Form



List View with Form

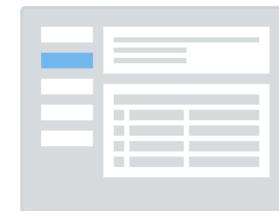


Form on a Local Procedure

## Create Master Detail



Stacked



Side by Side



Drill Down

# Creating a Form using the Create Page Wizard

## Create a Page

Page Type

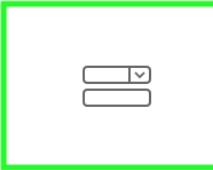
**Component** Feature 



Blank Page



Report



Form



Master Detail



Plug-ins



Chart

## Create Page



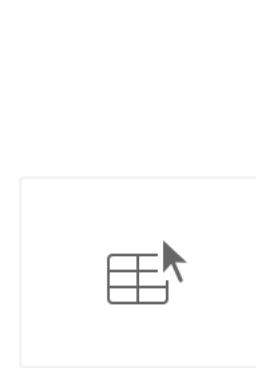
Dashboard



Calendar



Form



Editable Interactive Grid



Report with Form



List View with Form



Form on a Local Procedure

# Creating a Form Using the Create Application Wizard

ORACLE APEX App Builder SQL Workshop Team Development App Gallery

Add Page

Create Form Page

Name Demo App

Page Name Employee Details Set Icon

Table EBA\_DEMO\_IG\_EMP

Include Report Advanced

Blank Calendar

Dashboard Form

Report Timeline

Home

Add Page

Add Page

Advanced

Add Page

# Creating a Form: Example

Employee Details

Name

Job

Manager

Hire Date

Salary

Commission

Department

Cancel

Create

# Creating a Form: Example

1

## Create Page

Form      Editable Interactive Grid      Report with Form      List

Page Attributes

\* Page Number: 3            [?](#)

\* Page Name: Employee Details            [?](#)

Page Mode: **Normal**      **Modal Dialog**      [?](#)

Page Group: - Select Page Group -            [?](#)

\* Branch Here on Submit: 2            [?](#)

\* Cancel and Go To Page: 2     

x

2

## Create Form

Navigation Menu

Navigation Preference:  **Do not associate this page with a navigation menu entry**      [?](#)

Create a new navigation menu entry

Identify an existing navigation menu entry for this page

Breadcrumb: - do not add breadcrumb region to page -            [?](#)

3

# Creating a Form: Example

### Data Source

Local Database REST Enabled SQL Service Web Source

\* Source Type  Table  SQL Query

\* Table / View Owner LOWCODE

\* Table / View Name EBA\_DEMO\_IR\_EMP (table)

4

< Cancel

### Create Form - Columns and Primary Key

\* Select Columns to be displayed in the form

EMPNO (Number)
ENAME (Varchar2)
JOB (Varchar2)
MGR (Number)
HIREDATE (Date)
SAL (Number)
COMM (Number)
DEPTNO (Number)

Primary Key Type  Managed by Database (ROWID)  Select Primary Key Column(s)

Primary Key Column EMPNO (Number)

Secondary Key Column - Select Column -

5

< Cancel Create

# Linking a Report to a Form

Attributes

Filter

Link

Link Column **Link to Custom Target**

Target **No Link Defined**

1

Link Builder - Target

Target

Type **Page in this application**

Page **3**

Set Items

Name	Value
P3_EMPNO	#EMPNO#

Clear Session State

Clear Cache **3**

Reset Pagination **Yes** **No**

Advanced

Cancel Clear OK

2

# Linking a Report to a Form

Go Actions ▾

	Name	Job	Department	Count
	KING	PRESIDENT	RESEARCH & DEVELOPMENT	10
	BLAKE	MANAGER	SALES	30
	CLARK	MANAGER	SALES	10
	JONES	MANAGER	SALES	20
	SCOTT	ANALYST	MARKETING	20
	FORD	ANALYST	MARKETING	20

**Employee Details**

Name  
KING

Job  
PRESIDENT

Manager

Hire Date  
17-NOV-81

Salary  
5000

Commission

Department  
10

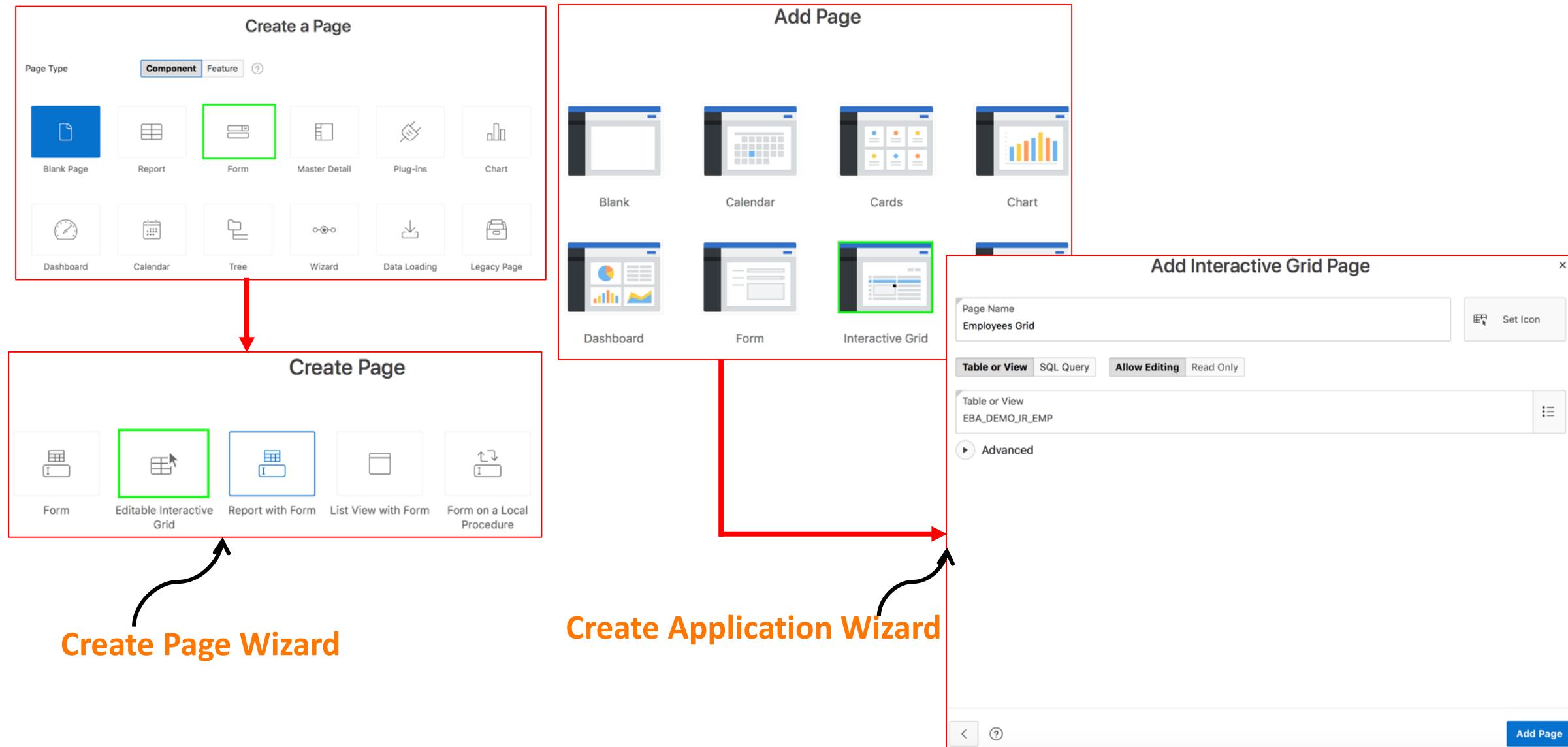
Cancel Delete Apply Changes

# Creating an Editable Interactive Grid

Employee Details

		Search: All Text Columns		Go	Actions	Edit	Save	Add Row	Reset
<input type="checkbox"/>	☰	Emp ID	Name	Job	Manager	Hire Date	Salary	Commiss...	Department
<input checked="" type="checkbox"/>	☰	7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
<input type="checkbox"/>	☰	7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
<input type="checkbox"/>	☰	7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
<input type="checkbox"/>	☰	7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
<input type="checkbox"/>	☰	7788	SCOTT	ANALYST	7566	09-DEC-82	3000	-	20
<input type="checkbox"/>	☰	7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20
<input type="checkbox"/>	☰	7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
<input type="checkbox"/>	☰	7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
<input type="checkbox"/>	☰	7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
<input type="checkbox"/>	☰	7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
<input type="checkbox"/>	☰	7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
<input type="checkbox"/>	☰	7876	ADAMS	CLERK	7788	12-JAN-83	1100	-	20

# Creating an Editable Interactive Grid: Different Wizards



# Creating an Editable Interactive Grid: Steps

1

Create Page

Form      Editable Interactive Grid

2

Create Interactive Grid

x

Page Attributes

Type **Interactive Grid**

\* Page Number  ?

\* Page Name  ?

Page Mode **Normal** Modal Dialog ?

Breadcrumb - do not use breadcrumbs on page - ▾ ?

# Creating an Editable Interactive Grid: Steps

**3**

### Create Interactive Grid

**Navigation Menu**

Navigation Preference  Do not associate this page with a navigation menu  
 Create a new navigation menu entry  
 Identify an existing navigation menu entry for this page

\* New Navigation Menu Entry

Parent Navigation Menu Entry   
Home  
Employees Report

**4**

### Create Interactive Grid

**Report Source**

Data Source **Local Database** REST Enabled SQL Service Web Source

Editing Enabled

\* Source Type **Table** SQL Query

\* Table / View Owner LOWCODE

\* Table / View Name EBA\_DEMO\_IR\_EMP (table)

**Columns**

\* Select Columns

EMPNO (Number)
ENAME (Varchar2)
JOB (Varchar2)
MGR (Number)
HIREDATE (Date)
SAL (Number)
COMM (Number)
DEPTNO (Number)

Cancel **Create**

# Understanding Master Detail Forms

## Create a Page

Page Type

**Component**

Feature



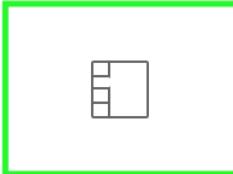
Blank Page



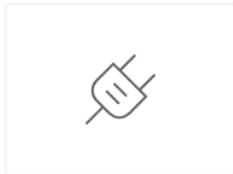
Report



Form



Master Detail



Plug-ins



Chart

## Create Master Detail



Dashboard



Calendar



Tree



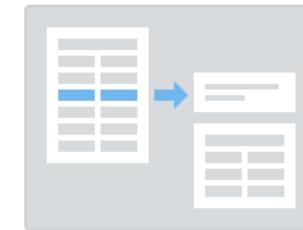
Wizard



Stacked



Side by Side



Drill Down

# Creating a Side by Side Master Detail Form

## Departments

 Reset

 Create

 Search...

ACCOUNTING  
NEW YORK

OPERATIONS  
BOSTON

RESEARCH  
DALLAS

SALES  
CHICAGO

## Departments

 Edit

Department ACCOUNTING

Location NEW YORK

## Employees

 +

	Name	Job	Hire Date	Salary	Commission	On Leave	Notes
	KING	PRESIDENT	17-NOV-81	5,000	-	N	-
	CLARK	MANAGER	09-JUN-81	2,450	-	N	-
	MILLER	CLERK	23-JAN-82	1,300	-	N	-

1 - 3

# Creating a Side by Side Master Detail: Steps

Add Page

Add Master Detail Page

Page Name: Departments

Set Icon

Table: EBA\_DEMO\_IG\_DEPT

Primary Display Column: DNAME

Secondary Display Column: LOC

Detail Table: EBA\_DEMO\_IG\_EMP

Detail Table 2: - Select Table -

Side by Side

Stacked

Advanced

Add Page

A card-based interface with four items.

Cards

A chart interface showing a bar chart.

Chart

An interactive grid interface.

Interactive Grid

A master-detail interface showing a main grid and a detail panel.

Master Detail

A wizard interface with a progress bar.

Wizard

A multiple reports interface showing two separate report cards.

Multiple Reports

# Creating a Stacked Master Detail Form

### Departments

Save

Q  Search: All Text Columns Go Actions ▾ Edit Add Row

	Department	Location	Notes
<input checked="" type="checkbox"/>	ACCOUNTING	NEW YORK	-
<input type="checkbox"/>	RESEARCH	DALLAS	-
<input type="checkbox"/>	SALES	CHICAGO	-
<input type="checkbox"/>	OPERATIONS	BOSTON	-

1 rows selected Total 4

### Employees

Reset

Q  Search: All Text Columns Go Actions ▾ Edit Add Row

	Name	Job	Manager	Hire Date	Salary	Commission	On Leave	Notes
<input checked="" type="checkbox"/>	KING	PRESIDENT	-	17-NOV-81	5000	-	N	-
<input type="checkbox"/>	CLARK	MANAGER	7839	09-JUN-81	2450	-	N	-
<input type="checkbox"/>	MILLER	CLERK	7782	23-JAN-82	1300	-	N	-

1 rows selected Total 3

# Creating a Stacked Master Detail: Steps

## Create a Page

1

Page Type

Component Feature ?

Blank Page Report Form Master Detail Dashboard Calendar Tree

## Create Master Detail

2

Stacked Side by Side Drill Down

# Creating a Stacked Master Detail: Steps

**Create Master Detail**

**3**

**Page Attributes**

\* Page Number  (?)

\* Page Name

Page Mode  Normal  Modal

Breadcrumb

**Create Master Detail**

**4**

**Navigation Menu**

Navigation Preference  Do not associate this page with a navigation menu entry (?)

Create a new navigation menu entry (?)

Identify an existing navigation menu entry for this page

\* New Navigation Menu Entry

Parent Navigation Menu Entry   
Home (?)

# Creating a Stacked Master Detail: Steps

5

### Create Master Detail

Master Source

\* Master Region Title: Departments

Location: Local Database

\* Table / View Owner: LOWCODE

\* Table / View Name: EBA\_DEMO\_IG\_DEPT (table)

\* Primary Key Column: ROWID

\* Select Columns:

- DEPTNO (Number)
- DNAME (Varchar2)
- LOC (Varchar2)
- NOTES (Varchar2)

< Cancel

### Create Master Detail

Detail Source

\* Detail Region Title: Employees

Location: Local Database

Show Only Related Tables: Yes

Table / View Owner: LOWCODE

\* Table / View Name: EBA\_DEMO\_IG\_EMP

\* Primary Key Column: ROWID

\* Master Detail Foreign Key: DEPTNO -> DEPTNO

\* Select Columns:

- EMPNO (Number)
- ENAME (Varchar2)
- JOB (Varchar2)
- MGR (Number)
- HIREDATE (Date)
- SAL (Number)
- COMM (Number)
- ONLEAVE (Varchar2)

< Cancel Create

6

# Creating a Two Page Drill Down Master Detail

The screenshot shows a two-page master-detail drill-down interface. The top page displays a grid of department data with edit icons in the first column. The bottom page shows a detailed form for the selected department, followed by a standard master grid and an interactive detail grid.

**Master Grid:**

	Department	Department Name	Location	Notes
	10	ACCOUNTING	NEW YORK	-
	20	RESEARCH		
	30	SALES		
	40	OPERATION		

**Detail Form:**

Form on Departments

Dname ACCOUNTING
Loc NEW YORK
Notes

1 of 4

**Buttons:** Cancel, Delete, Apply Changes, >

**Annotations:**

- An orange callout points to the master grid with the text: "Interactive Report for the master table".
- A red box highlights the edit icon in the first column of the master grid.
- A red box highlights the entire detail form area.
- A red box highlights the entire master grid area.
- A red arrow points from the master grid annotation to the detail form area.
- A black arrow points from the master grid annotation to the detail form area.
- An orange callout points to the detail grid with the text: "Standard form for the master and interactive grid for the detail".

**Detail Grid:**

	Name	Job	Manager	Hire Date	Salary	Commission	On Leave	Notes
<input checked="" type="checkbox"/>	KING	PRESIDENT	-	17-NOV-81	5000	-	N	-
<input type="checkbox"/>	CLARK	MANAGER	7839	09-JUN-81	2450	-	N	-
<input type="checkbox"/>	MILLER	CLERK	7782	23-JAN-82	1300	-	N	-

1 rows selected

Total 3

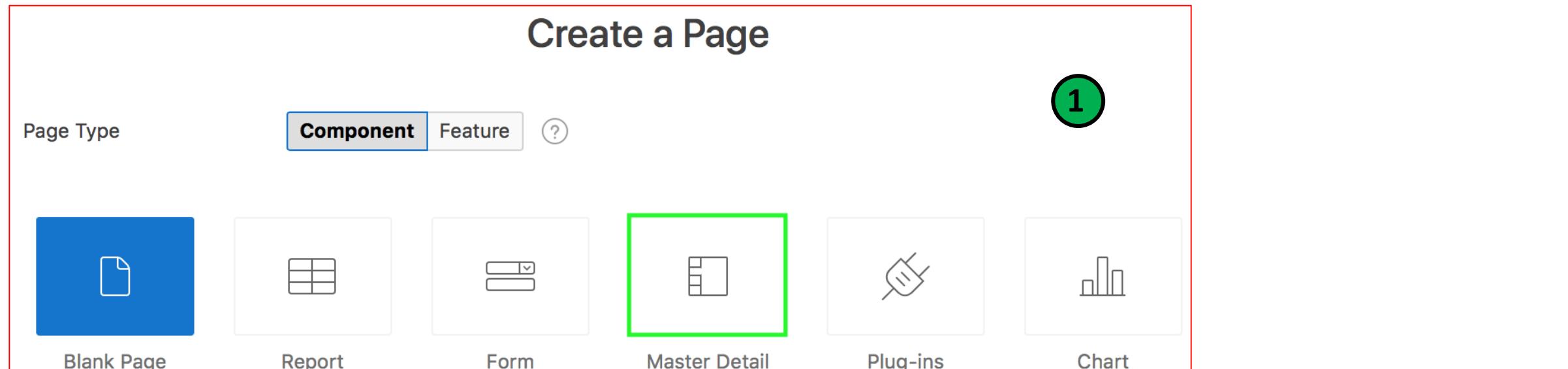
# Creating a Two Page Drill Down Master Detail: Steps

## Create a Page

Page Type

Component Feature ?

Blank Page Report Form Master Detail Plug-ins Chart

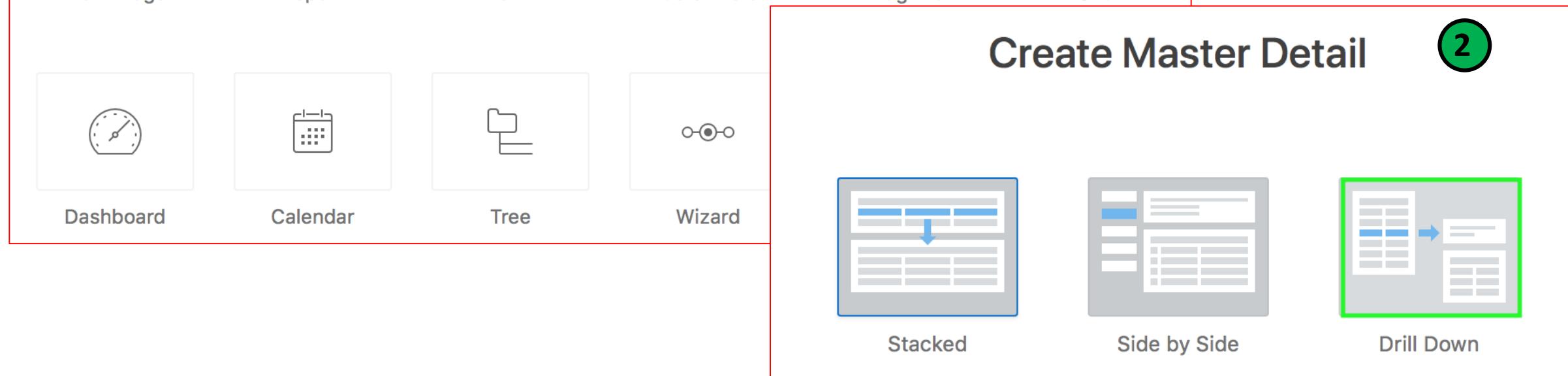


1

## Create Master Detail

Dashboard Calendar Tree Wizard

Stacked Side by Side Drill Down



2

# Creating a Two Page Drill Down Master Detail: Steps

## Create Master Detail

Page Attributes

\* Master Page Number  ?

\* Master Page Name

\* Detail Page Number  ?

\* Detail Page Name

Breadcrumb - do not add breadcrumb regi

Navigation Preference

\* New Navigation Menu Entry

Parent Navigation Menu Entry - No parent selected -  
Home

## Create Master Detail

Navigation Menu

Navigation Preference

\* New Navigation Menu Entry

Parent Navigation Menu Entry - No parent selected -  
Home

3

4

# Creating a Two Page Drill Down Master Detail: Steps

**Create Master Detail**

**Master Source**

Location **Local Database** REST Enabled SQL Service Web Source

\* Table / View Owner LOWCODE

\* Table / View Name **EBA\_DEMO\_IG\_DEPT (table)**

\* Primary Key Column ROWID

\* Form Navigation Order DEPTNO (Number)

\* Select Columns

DEPTNO (Number)  
DNAME (Varchar2)  
LOC (Varchar2)  
NOTES (Varchar2)

< Cancel >

**Detail Source**

Location **Local Database** REST Enabled SQL Service Web Source

Show Only Related Tables:  Yes  No

Table / View Owner LOWCODE

\* Table / View Name **EBA\_DEMO\_IG\_EMP**

\* Primary Key Column ROWID

\* Master Detail Foreign Key DEPTNO -> DEPTNO

\* Select Columns

EMPNO (Number)  
ENAME (Varchar2)  
JOB (Varchar2)  
MGR (Number)  
HIREDATE (Date)  
SAL (Number)  
COMM (Number)  
ONLEAVE (Varchar2)

< Cancel > Create

**5**

**6**

# Editing a Form

The screenshot illustrates the process of editing a form within an Oracle application. The main window displays a "Project Details" page for "ACME Web Configuration". A red arrow points from the "Status" field (set to "Closed") on the page to the "Page Designer" interface on the right.

**Page Designer View:**

- Page Item:** P7\_STATUS
- Type:** Text Field
- Label:** Status
- Settings:**
  - Subtype: Text
  - Trim Spaces: None
  - Submit when Enter pressed: No
  - Disabled: No

**Regions and Items:**

- Regions: P7\_STATUS, P7\_ASSIGNED\_TO
- Items: P7\_ID, P7\_PROJECT, P7\_TASK\_NAME, P7\_START\_DATE, P7\_END\_DATE, P7\_STATUS, P7\_ASSIGNED\_TO

**Assigned To:**

- John Watson
- James Cassidy
- Mark Nile
- John Watson
- John Watson

**Page Footer:**

- Home
- Edit Page 7
- Session
- View Debug
- Debug
- Page Info
- Quick Edit
- Theme Roller

# Modifying the Display Type of a Page Item

The screenshot shows the Oracle APEX Page Designer interface. On the left, the navigation pane displays the application structure: Page 10: Project Tasks, Pre-Rendering, Regions, Content Body, Project Tasks, Attributes, and Items. The 'P10\_STATUS' item is selected and highlighted in blue.

In the center, the page items are listed: P10\_STATUS, P10\_ASSIGNED\_TO, P10\_COST, and P10\_BUDGET. The 'P10\_STATUS' item is currently highlighted with a pink background.

On the right, a context menu is open for the 'P10\_STATUS' item, showing various display types. The 'Type' section is expanded, and 'Select List' is selected, indicated by a checked checkbox. Other options include Checkbox, Color Picker, Date Picker, Display Image, Display Only, File Browse..., Hidden, List Manager, Number Field, Password, Percent Graph, Popup LOV, Radio Group, Rich Text Editor, Shuttle, Switch, Text Field, Text Field with autocomplete, Textarea, and Show Legacy/Unsupported... .

Below the 'Type' section, the 'Label' and 'Settings' sections are partially visible. Under 'Label', there is a 'Label' field which is empty. Under 'Settings', there are two fields: 'Page Action on Selection' set to 'None' and 'Allow Multi Selection' with a 'Yes' button and a 'No' button.

# Altering the Display Order of Page Items

Employee Details	
Name	
Job	
Manager	
Hire Date	<input type="button" value="Calendar"/>
Salary	
Commission	
Department	
Rating	

Before reordering

Employee Details	
Name	
Job	
Manager	
Hire Date	<input type="button" value="Calendar"/>
Rating	
Salary	
Commission	
Department	

After reordering

# Altering the Display Order of Page Items

The screenshot shows the Oracle APEX Page Designer interface. On the left, the page structure is displayed with regions like Content Body and Employee Details. Under Employee Details, there are various items including P12\_ENAME, P12\_JOB, P12\_MGR, P12\_HIREDATE, P12\_SAL, P12\_COMM, P12\_DEPTNO, and P12\_RATING. A context menu is open over the P12\_RATING item, showing options like Move To, Copy To, Hide Empty Legacy Positions, Hide Global Page Components, Hide Buttons, and Hide Items. The 'Move To' option is highlighted. Red arrows point from the text 'Drag and drop in Rendering' to the rendering area where the items are listed, and from the text 'Drag and drop or Use Context Menu in Layout' to the context menu itself.

Application 2108 \ Page Designer

Layout Component ... Messages Page Search Help

Page Item Filter Identification

Name P12\_RATING

Type Number Field

ITEMS

- P12\_ENAME
- P12\_JOB
- P12\_MGR
- P12\_HIREDATE
- P12\_SAL
- P12\_COMM
- P12\_DEPTNO
- P12\_RATING

Display From Page Ctrl+/,D,T

Display From Here Ctrl+/,D,H

Expand Alt+F11

Delete Del

Move To >

Copy To >

✓ Hide Empty Legacy Positions

Hide Empty Positions Ctrl+/,D,E

✓ Hide Global Page Components

Hide Buttons

Hide Items

Region Content

Sub Regions

CLOSE HELP DELETE CHANGE CREATE

CANCEL DELETE SAVE CREATE

Page Item

Filter Identification

Name P12\_RATING

Type Number Field

ITEMS

- P12\_ENAME
- P12\_JOB
- P12\_MGR
- P12\_HIREDATE
- P12\_SAL
- P12\_COMM
- P12\_DEPTNO
- P12\_RATING

Display From Page Ctrl+/,D,T

Display From Here Ctrl+/,D,H

Expand Alt+F11

Delete Del

Move To > Employee Details > Items >

Copy To >

✓ Hide Empty Legacy Positions

Hide Empty Positions Ctrl+/,D,E

✓ Hide Global Page Components

Hide Buttons

Hide Items

Before P12\_HIREDATE >

After P12\_SAL >

Row before P12\_COMM >

Row after P12\_DEPTNO >

Column before

Column after

Region Employee De >

Drag and drop in Rendering

Drag and drop or Use Context Menu in Layout

# Summary

In this lesson, you learned how to:

- Use the different wizards in Oracle APEX to create forms
- Create an editable interactive grid
- Create a simple form and link a report to this form
- Create different types of master detail forms
- Modify a form





# Hands-on Lab



Oracle **APEX**



# Unit 9: Creating Application Page Controls

# Lesson Objectives

After completing this lesson, you should be able to:

- List different types of page-level items
- Create and use page-level items
- Create and use buttons

# Understanding Items

An item is part of an HTML form. There are two types of items:

- Page items
- Application items

The screenshot shows the Oracle APEX Page Designer interface. At the top, it says "Page 6: Product Details". Below that is a tree view of the page structure:

- > Pre-Rendering
- Regions
  - Wizard Progress Bar
  - Wizard Body
    - Product Details
      - Attributes
      - Items
        - P6\_PRODUCT\_ID
        - P6\_PRODUCT\_NAME
        - P6\_PRODUCT\_DESCRIPTION
        - P6\_CATEGORY
        - P6\_PRODUCT\_AVAIL
        - P6\_LIST\_PRICE
        - P6\_PRODUCT\_IMAGE
        - P6\_TAGS
        - P6\_BRANCH

Viewing page items  
in Page Designer

## Page Items: Examples

The screenshot shows the "Sample Database Application - Product Details" page. It contains the following fields with annotations:

- \* Product Name: Text Field (highlighted with a red box and arrow)
- Product Description: Textarea (highlighted with a red box and arrow)
- \* Category: Select List (highlighted with a red box and arrow)
- \* Product Available: Switch (highlighted with a red box and arrow)
- \* List Price: Number Field (highlighted with a red box and arrow)
- Product Image: File Browse... (highlighted with a red box and arrow)
- Tags: (empty input field)

At the bottom are "Cancel", "Delete", and "Apply Changes" buttons.

# Understanding Application Items

The screenshot shows the Oracle Application Express Shared Components interface. The left sidebar, under Application Logic, has a section for Application Definition Attributes with a sub-section for Application Items, which is highlighted with a green border. The main content area shows the Application Items page with a red border around the entire content.

**Application Logic**

- Application Definition Attributes
  - Application Items
  - Application Processes
  - Application Computations
  - Application Settings
- Build Options

**Security**

**Security Attributes**

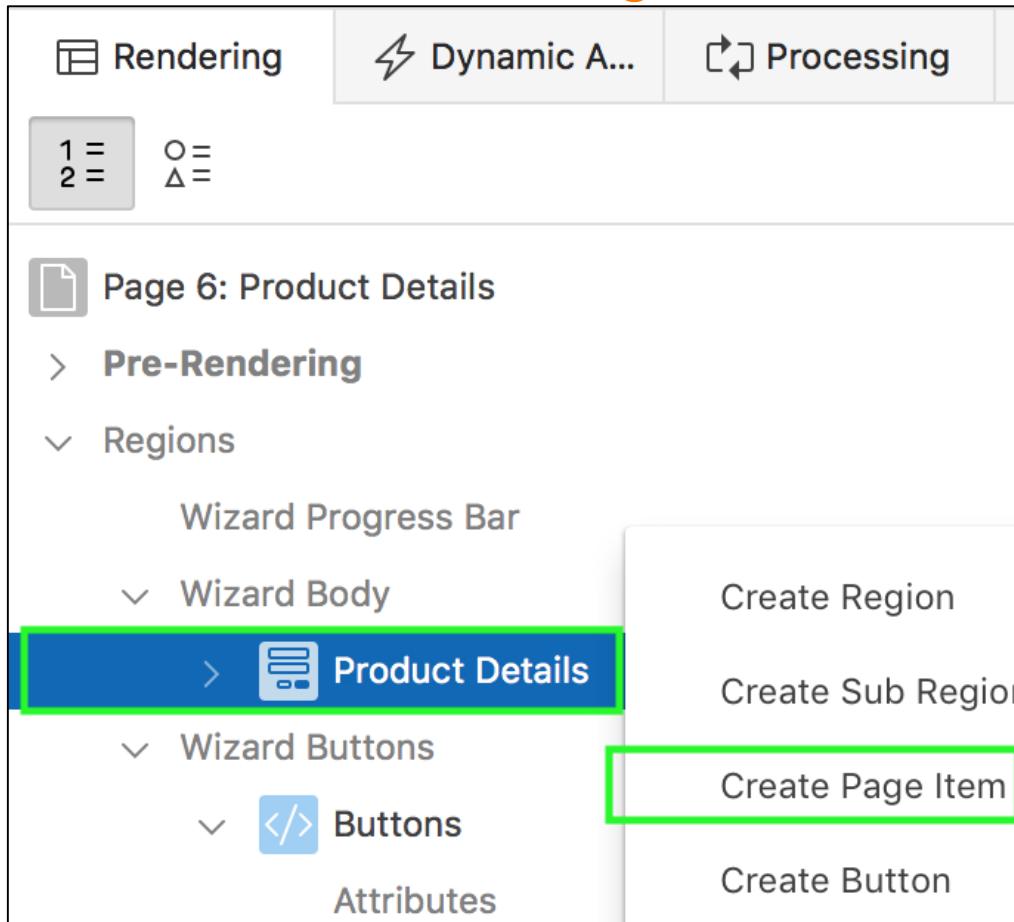
**Application Items**   Utilization   History

Search bar:  Go   Actions ▾   Reset   Create >

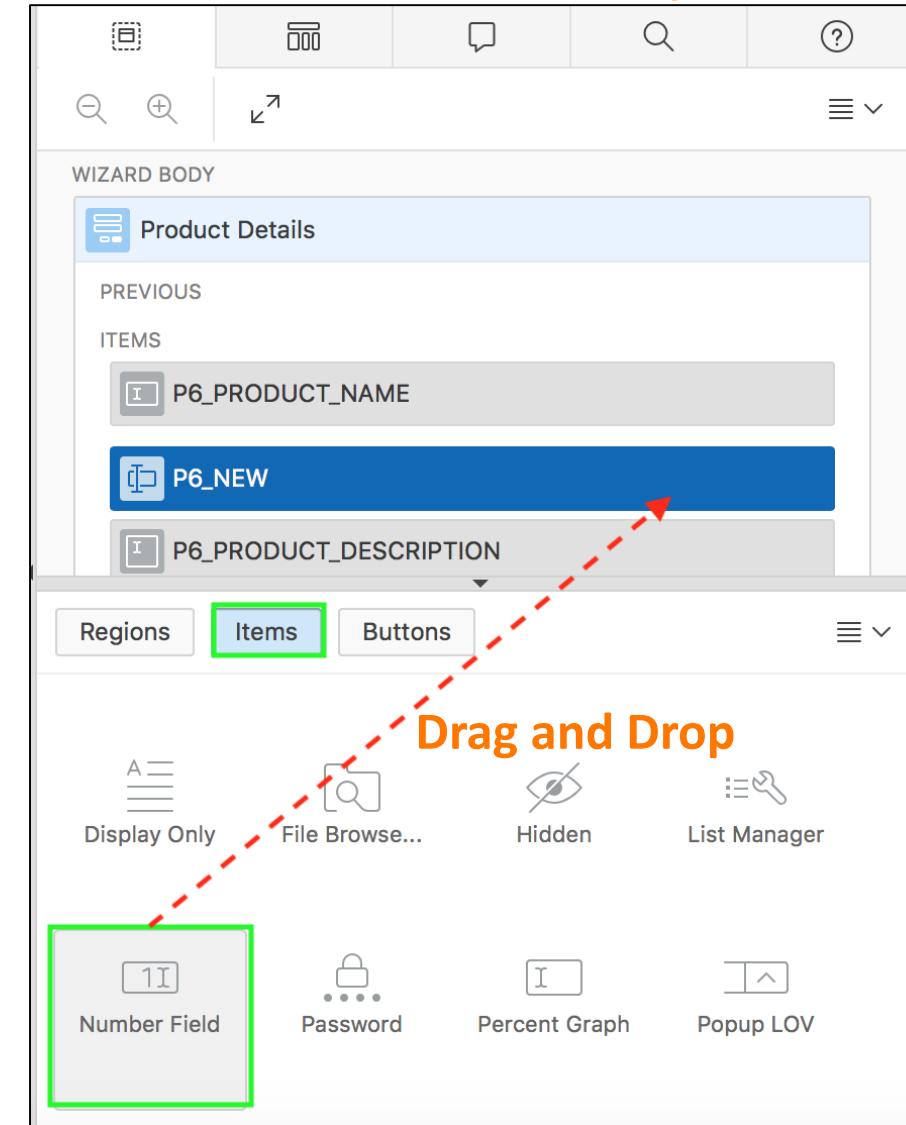
Name ↑	Computed On	Updated	Updated By	Protection Level	Scope
A01	BEFORE_HEADER	-	-	Restricted - May not be set from browser	Application
A02	BEFORE_HEADER	-	-	Restricted - May not be set from browser	Application
A03	BEFORE_HEADER	-	-	Restricted - May not be set from browser	Application
ENABLE_FEEDBACK	-	-	-	Unrestricted	Application
FSP_AFTER_LOGIN_URL	-	-	-	-	Application
G_PAGE_INFO	-	-	-	-	Application
LAST_VIEW	Page: 1 2 3 4 15	-	-	Unrestricted	Application

# Creating a Page Item

From the Rendering tab



From the Gallery



# Different Types of Page Items



Checkbox



Color Picker



Date Picker



Display Image



Display Only



File Browse...



Hidden



List Manager



Number Field



Password



Percent Graph



Popup LOV



Radio Group



Rich Text Editor



Select List



Shuttle



Switch



Text Field

Text Field with  
autocomplete

Textarea

# Creating a Page Item: Example

Search ▾ Go Actions ▾ Create

	Department	Department Name	Location
	10		
	20		
	30		
	40		

Department Details X

Department Name  
ACCOUNTING

Location  
NEW YORK

Employee List

ADAMS		TURNER	
ALLEN			
BLAKE			
CLARK			
FORD			
JAMES			

Cancel Delete Apply Changes

**Shuttle item type**

# Creating a Page Item: Example - Steps

The screenshot illustrates the process of creating a page item in Oracle APEX. It shows two panels of the Page Designer interface.

**Step 1:** The left panel shows the 'Page 15: Department Details' page structure. A context menu is open over the 'Department Details' region, with the 'Create Page Item' option highlighted. The 'Content Body' section of the page structure is also highlighted with a red box.

**Step 2:** The right panel shows the 'Page Item' creation dialog. The 'Identification' section is displayed, with the 'Name' field set to 'P15\_EMP\_LIST' and the 'Type' field set to 'Shuttle'. The 'Label' field contains the text 'Employee List'. The 'Regions' tab is selected in the bottom navigation bar.

# Creating a Page Item: Example - Steps

Page Item 3

Filter

**List of Values**

Type: SQL Query

SQL Query:

```
SELECT ename, empno FROM EMP ORDER BY 1
```

Page Item 4

Filter

**Source**

Form Region: - Select -

Type: SQL Query (return colon separated value)

SQL Query:

```
SELECT empno FROM EMP WHERE deptno = :P15_DEPTNO ORDER BY ename
```

# Editing a Page Item

The screenshot shows the Oracle ADF Page Item editor interface. On the left, the page structure tree for "Page 15: Department Details" is visible, with the "Content Body" section expanded to show the "Department Details" item, which contains the "P15\_DNAME" page item. This page item is currently selected and highlighted in blue. The main workspace displays the "Department Details" dialog header and content body. The content body includes sections for "PREVIOUS", "ITEMS", and "REGION CONTENT". Under "ITEMS", the "P15\_DNAME" page item is selected. The "REGION CONTENT" section shows various button icons for "Regions", "Items", and "Buttons". The right panel is titled "Page Item" and contains a sidebar with a "Filter" search bar and a list of configuration tabs: Identification (selected), Label, Settings, Layout, Appearance, Validation, Advanced, Source, Default, Quick Picks, and Server-side Condition.

Page Item

Identification

Label

Settings

Layout

Appearance

Validation

Advanced

Source

Default

Quick Picks

Server-side Condition

Page 15: Department Details

Pre-Rendering

Regions

Dialog Header

Content Body

Department Details

Attributes

Items

P15\_DEPTNO

P15\_DNAME

P15\_LOC

P15\_EMP\_LIST

Dialog Footer

Buttons

Attributes

Region Buttons

CANCEL

DELETE

SAVE

CREATE

Post-Rendering

Department Details

DIALOG HEADER

CONTENT BODY

Department Details

PREVIOUS

ITEMS

P15\_DNAME

P15\_LOC

P15\_EMP\_LIST

REGION CONTENT

Regions

Items

Buttons

✓ = Checkbox

Color Picker

Date Picker

Display Image

Display Only

File Browse...

Hidden

List Manager

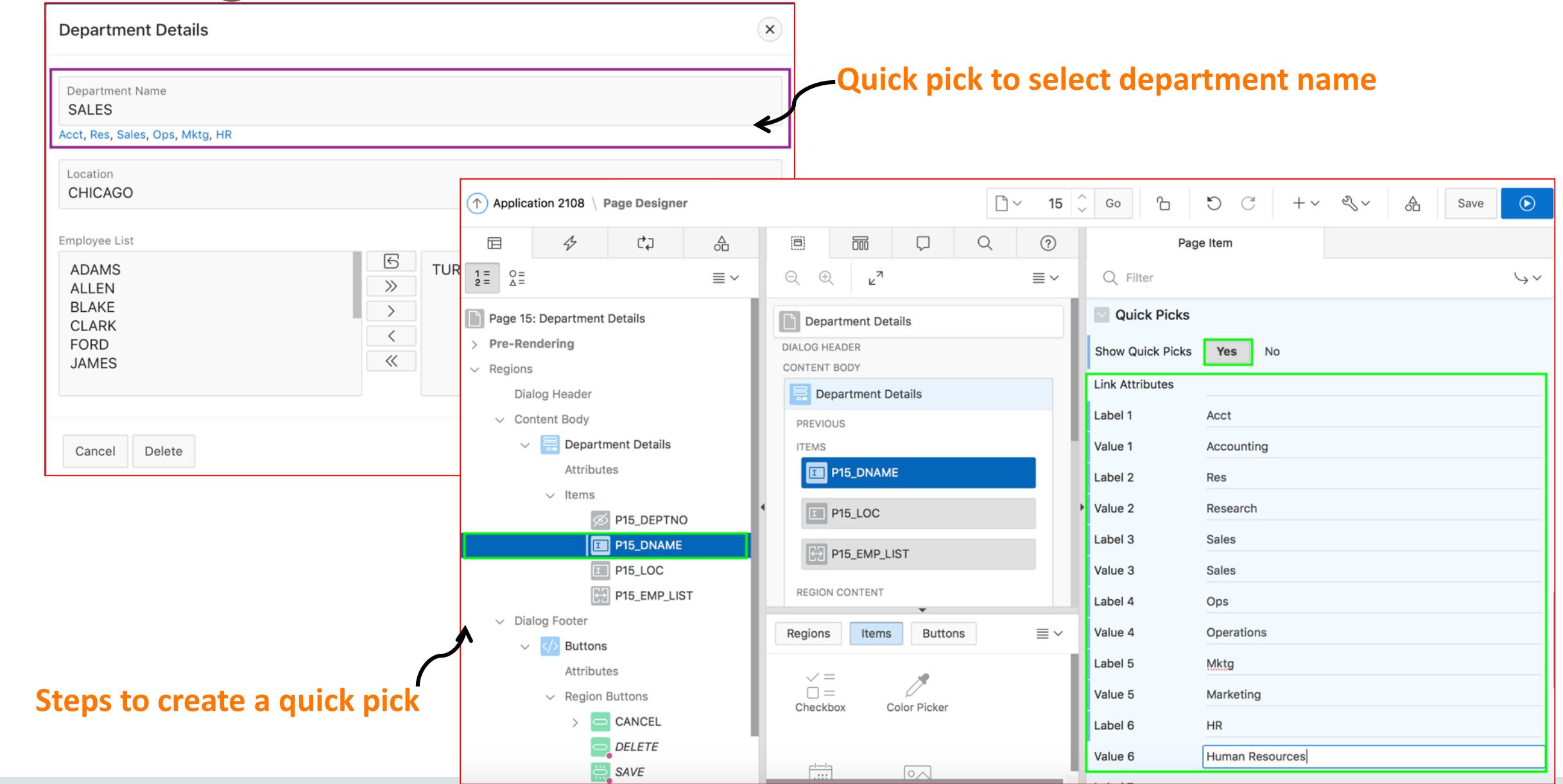
# Referencing Item Values

- You can reference item values stored in session state in regions, computations, processes, validation, and branches
- Syntax for referencing item values:

Type	Syntax
SQL	:MY_ITEM
PL/SQL	V('MY_ITEM')
PL/SQL	NV('MY_NUMERIC_ITEM')
Static Text (exact)	&MY_ITEM.

# **Creating a Quick Pick Selection**

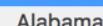
---



# What is a List of Values (LOV)?

First Name *	<input type="text"/>	Last Name *	<input type="text"/>
Street Address	<input type="text"/>		
City	<input type="text"/>	State *	<input type="text"/>
Zip Code *	<input type="text"/>		
Credit Limit *	<input type="text"/>		
Phone Number	999-999-9999	Alternate Number	<input type="text"/>
Email	<input type="text"/>		
Tags	<input type="text"/>		

State \*



- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District Of Columbia
- Florida
- Georgia
- Hawaii
- Idaho

Select List

Popup LOV

\* Customer

Search Dialog

- Bradley, Eugene
- Dulles, John
- Hartsfield, William
- LaGuardia, Fiorello

⋮ ?

# Creating a Static LOV

The screenshot shows the 'Lists of Values' page in Oracle Application Express. At the top, there is a breadcrumb trail: Application 127288 \ Shared Components \ Lists of Values. Below the breadcrumb are several tabs: Lists of Values (which is selected and highlighted in blue), Edit Null Text, Locally Defined, Grid Edit, Conditional Entries, Subscription, Utilization, and History. A green circle labeled '1' is positioned above the 'Utilization' tab. Below the tabs is a search bar with a magnifying glass icon and a dropdown arrow, followed by a text input field, a 'Go' button, and a 'Reset' button. To the right of the search bar are icons for 'Actions' (grid, list, etc.) and 'Copy'. A large green button labeled 'Create >' is highlighted with a green border.

This is the second step of the 'Create List of Values' wizard. It has a title 'Create List of Values' with a green circle labeled '2' above it. On the left, there is a 'Source' section with a blue circular icon. The main content area contains a descriptive paragraph about what a List of Values is and two radio button options: 'From Scratch' (selected) and 'As a Copy of an Existing List of Values'. A question mark icon is located to the right of the radio buttons.

This is the third step of the 'Create List of Values' wizard. It has a title 'Create List of Values' with a green circle labeled '3' above it. On the left, there is a green checkmark icon and a blue circular icon. The main content area contains a paragraph about static vs dynamic lists and two input fields: '\* Name' (Autonomous) and 'Type:' (Static). A question mark icon is located to the right of the 'Type:' field.

This is the fourth step of the 'Create List of Values' wizard. It has a title 'Create List of Values' with a green circle labeled '4' above it. On the left, there is a green checkmark icon and a blue circular icon. The main content area contains a paragraph about entering static display and return values. Below this is a table for defining the list of values:

Sequence	Display Value	Return Value
1	instance1	instance1
2	instance2	instance2

At the bottom of the table are navigation buttons: '<', 'Cancel', and a large green button labeled 'Create List of Values'.

# Creating a Dynamic LOV

The image shows a composite screenshot of the Oracle APEX interface for creating a List of Values (LOV). It consists of four panels, each with numbered callouts:

- Panel 1 (Top Right):** Shows the navigation path: Application 127288 \ Shared Components \ Lists of Values. The "Create >" button is highlighted with a green border.
- Panel 2 (Top Left):** The "Create List of Values" dialog. It has a "Source" tab selected. A note states: "A List of Values is a static or dynamic definition used to display a specific type of page item, such as popup lists of values, a select list, a check box, a radio group, or multiple select lists." Below it, the "Create List of Values:" section shows two options: "From Scratch" (selected) and "As a Copy of an Existing List of Values".
- Panel 3 (Bottom Left):** The "Name and Type" step of the wizard. It contains:
  - A note: "Static lists are based on predefined pairs of display and return values. Dynamic lists are based on a SQL query you write that selects values from a table."
  - An input field for "\* Name" containing "Employees".
  - A radio button group for "Type:" with "Dynamic" selected (highlighted with a green border).
- Panel 4 (Bottom Right):** The "List of Values Source" step of the wizard. It contains:
  - "Data Source": "Local Database" (highlighted with a green border).
  - "\* Source Type": "Table" (selected) (highlighted with a green border).
  - "\* Table / View Owner": "LOWCODE".
  - "\* Table / View Name": "- Select Value -".

# Creating a Dynamic LOV

5

Create List of Values

List of Values Source

\* Source Type  SQL Query  Table  Function Returning SQL

\* Enter a SQL SELECT statement [\(?\)](#)

```
1 SELECT ename d,
2      empno r
3  FROM emp
4 ORDER BY 1
```

SQL Query Example

< Cancel

6

Create List of Values

Column Mappings

\* Return Column R [\(?\)](#)

Display Column D [\(?\)](#)

< Cancel Create

The image displays two screenshots of the Oracle Database SQL Developer interface, illustrating the process of creating a dynamic List of Values (LOV).  
Screenshot 5: The 'Create List of Values' dialog is open. The 'Source Type' is set to 'SQL Query'. An SQL query is entered in the text area:

```
1 SELECT ename d,
2      empno r
3  FROM emp
4 ORDER BY 1
```

  
Screenshot 6: The 'Column Mappings' section of the dialog is shown. The 'Return Column' is mapped to 'R' and the 'Display Column' is mapped to 'D'. A green box highlights the 'Create' button at the bottom right of the dialog.

# Associating a Named LOV with an Item

The image shows three panels illustrating the configuration of a named LOV (List of Values) for a page item.

**Panel 1: Page Item Configuration**

This panel shows the "Page Item" configuration for "P15\_EMP\_LIST". The "Name" field contains "P15\_EMP\_LIST" and the "Type" field is set to "Select List". The "Type" field is highlighted with a green box and circled with a green number 2.

**Panel 2: Item List of Values Settings**

This panel shows the "List of Values" configuration for "P15\_EMP\_LIST". The "Type" is set to "Shared Component" and the "List of Values" is set to "EMPLOYEES". Both fields are highlighted with a green box and circled with a green number 3.

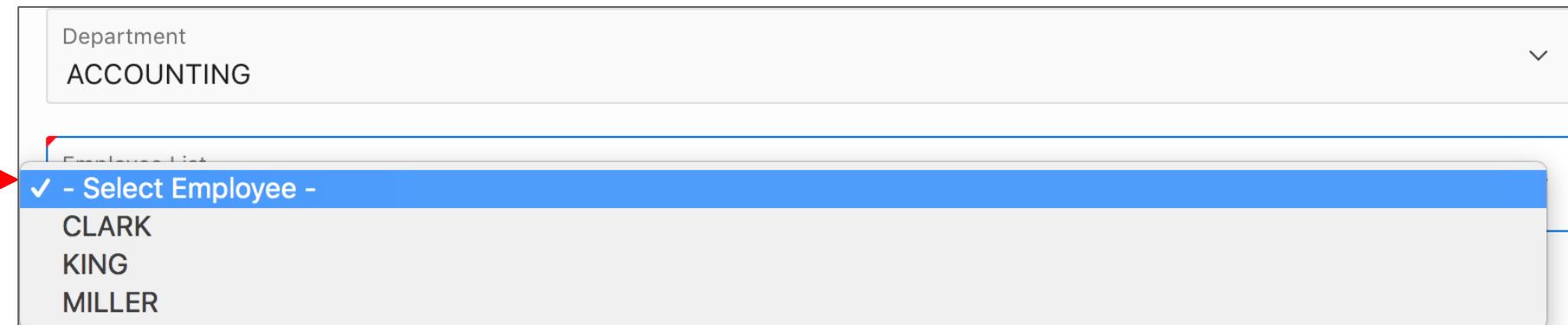
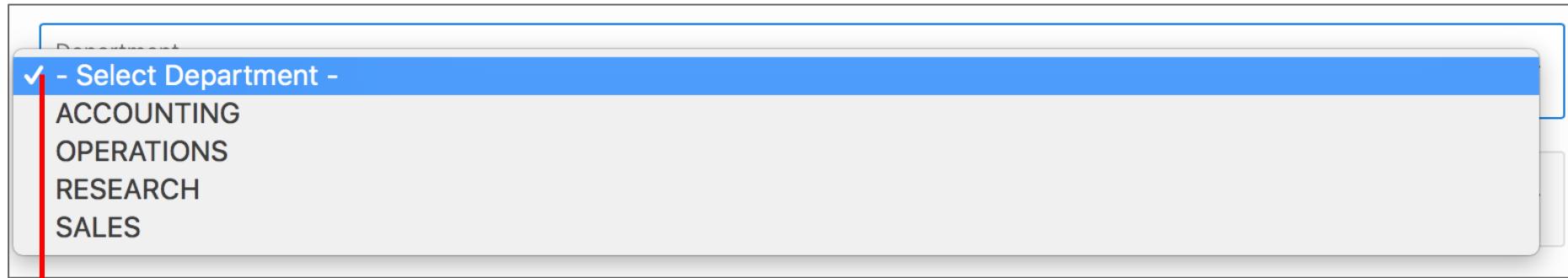
**Panel 3: Page Item Details**

This panel shows the "Page Item" configuration for "P15\_EMP\_LIST". The "Name" field contains "P15\_EMP\_LIST" and the "Type" field is set to "Select List". The "Type" field is highlighted with a green box and circled with a green number 1.

# Creating a Cascading LOV

Department  
- Select Department -

Employee List  
- Select Employee -



Two related select lists  
where the value of the first  
list populates the second.

# Creating a Cascading LOV: Steps

The screenshot shows the Oracle APEX interface for creating page items, specifically for a cascading LOV setup.

**Step 1:** The first panel shows the configuration for the parent page item P20\_DEPTNO. The "Type" field is set to "Select List". The "List of Values" section contains an SQL query to retrieve department names:

```
SELECT dname as d,
       deptno as r
  FROM dept
 ORDER BY dname
```

Below the query, the "Display Extra Values" section has "Yes" selected. The "Display Null Value" section has "Yes" selected, and the "Null Display Value" is set to "- Select Department -".

**Step 2:** The second panel shows the configuration for the child page item P20\_EMPNO. The "Type" field is set to "Select List". The "List of Values" section contains an SQL query to retrieve employee names based on the selected department:

```
SELECT ename as d,
       empno as r
  FROM emp
 WHERE deptno = :P20_DEPTNO
 ORDER BY ename
```

The "Display Extra Values" section has "No" selected. The "Display Null Value" section has "Yes" selected, and the "Null Display Value" is set to "- Select Employee -". The "Cascading LOV Parent Item(s)" field is set to P20\_DEPTNO.

# Creating Buttons

Page 7: Customer Details

- > Pre-Rendering
- Regions
  - Dialog Header
  - Content Body
    - </> Customer
      - Attributes
      - > Items
    - Dialog Footer
      - </> Buttons
        - Attributes
          - Region Buttons
            - > CANCEL
            - DELETE
            - SAVE

Sample Database Application - Customer Details

First Name \* John      Last Name \* Dulles

Street Address 45020 Aviation Drive      Line 2

City Sterling      State \* Virginia

Zip Code \* 20166

Credit Limit \* 1000

Phone Number 703-555-2143      Alternate Number 703-555-8967

Email john.dulles@email.com      URL http://www.johndulles.com

Tags

Cancel Delete Apply Changes

**Region buttons**

**Region button**

# Creating a Button: Steps

The screenshot shows the Oracle APEX page builder interface. A context menu is open over the 'Employee Details' region. The menu items are: Create Region, Create Sub Region, Create Page Item, and Create Button. The 'Create Button' item is highlighted with a green border. A green circle with the number 1 is positioned to the right of the menu.

The screenshot shows the 'Button' creation dialog. Under the 'Identification' section, the 'Button Name' is set to 'CREATE' and the 'Label' is set to 'Create'. A green circle with the number 2 is positioned above the dialog.

The screenshot shows the 'Appearance' tab of the button configuration dialog. It includes fields for 'Button Template' (set to 'Text'), 'Hot' (set to 'Yes'), 'Template Options' (set to 'Use Template Defaults'), 'CSS Classes', and 'Icon'. A green circle with the number 3 is positioned to the right of the dialog.

The screenshot shows the 'Behavior' tab of the button configuration dialog. It includes fields for 'Action' (set to 'Submit Page'), 'Execute Validations' (set to 'Yes'), 'Warn on Unsaved Changes' (set to 'Do Not Check'), and 'Database Action' (set to 'SQL INSERT action'). A green circle with the number 4 is positioned to the right of the dialog.

The screenshot shows the 'Server-side Condition' configuration dialog. It defines a condition where 'Item is NULL' for the item 'P12\_EMPNO'. A green circle with the number 5 is positioned to the right of the dialog.

# Summary

In this lesson, you learned how to create different types of page controls. You learned to create:

- Items
- Buttons

