



Oracle Application Express: Developing Database Web Applications

Hands-On-Labs Guide

Unit 14: Adding Additional Pages to your Application

This exercise includes six hands-on-labs and uses the Demo Projects application.

HOL 14-1 Creating and Customizing a Calendar: In this lab, you add a Calendar in the Demo Projects application. Later, you edit the calendar attributes and enable the drag and drop functionality.

HOL 14-2 Modifying the Dashboard Page: In this hands-on lab, you first create a blank page named Reports. You select Reports as the Parent Navigation Menu Entry when you create the My Outstanding Tasks and the Project Tree page in this application.

HOL 14-3 Updating the Project Tasks Chart: The Project Tasks chart has already been created in the Dashboard page. This lab covers updating the Project Tasks chart to review the completed and incomplete tasks.

HOL 14-4 Adding the Project Milestones Chart: In this lab, you create the Project Milestones chart to depict past milestones and future milestones. You will also create a copy of the Project Tasks chart and then edit the chart attributes including the source query.

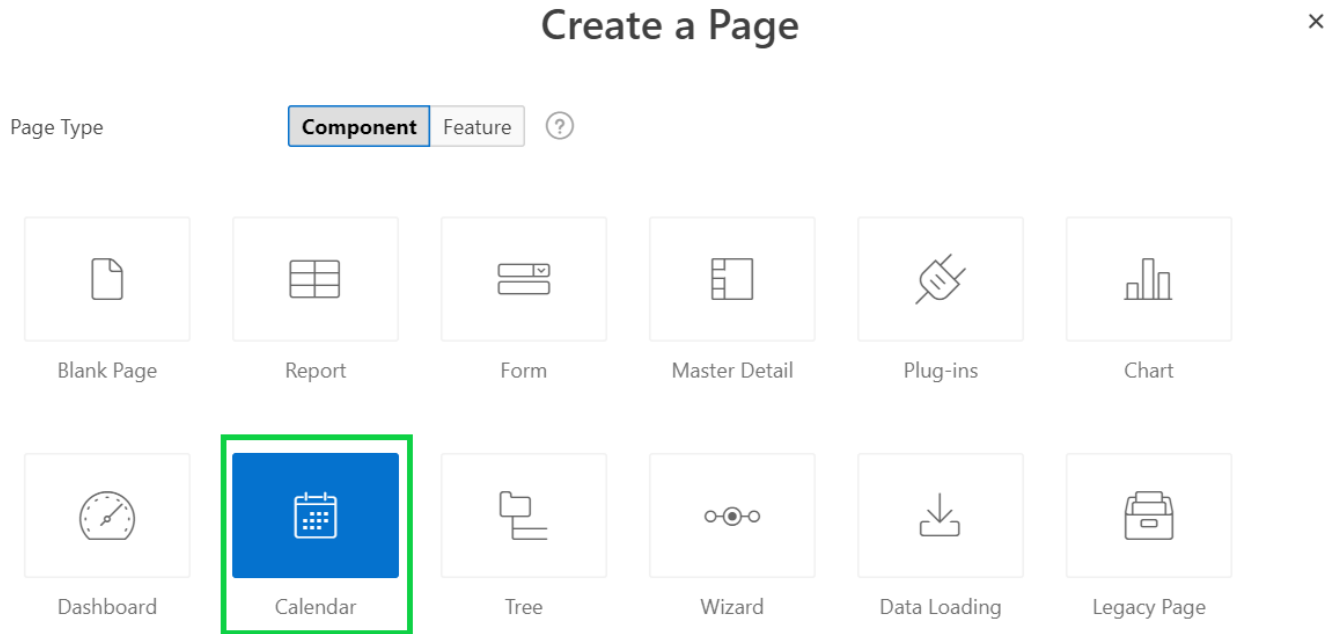
HOL 14-5 Adding the Project Status Chart: In this hands-on lab, you create the Project Status chart to depict the completed, in-progress and assigned status of the projects.

HOL 14-6 Adding the Project Tree: In this hands-on lab, you create a blank page and then create a Tree region. To perform the steps in this lab, you need the Project_Tree.sql file which is included in the apex-course-labs.zip.

HOL 14-1: Creating and Customizing a Calendar

In this hands-on lab, you first add a Calendar in the Demo Projects application. Later, you enhance the calendar by adding the drag and drop functionality.

1. Navigate to **App Builder** and in the report, click **Demo Projects** application.
2. In the application home page, click **Create Page**.
3. Select **Calendar** page type.



4. Enter **Calendar** for Page Name, select **Breadcrumb** for Breadcrumb, and click **Next**.

Create Page ×

✓

●

●

●

●

Page Attributes

Region Type

Calendar

* Page Number

?

* Page Name

?

* Page Mode

Normal

 Modal Dialog ?

Page Group

- Select Page Group -

?

Breadcrumb

Breadcrumb

?

Parent Entry

No parent entry

?

* Entry Name

?

<

Cancel

Next >

5. For Navigation Preference, select the **Create a new navigation menu entry** radio button. Click **Next**.

4

Create Page

✓

✓

●

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

- No parent selected -

Home

Team Members

Projects

Milestones

Tasks

Dashboard

?

< Cancel

Next >

6. Select **DEMO_PROJ_TASKS** for Table/View Name.
Click **Next**.

Create Page

✕

✓

✓

✓

●

●

Source

Data Source Local Database ▼

Source Type ☒ **Table** ☐ SQL Query ?

* Table / View Owner BRHHGSEJHTEWGE ▼ ?

* Table / View Name DEMO_PROJ_TASKS (table) ⋮ ?

* Select Columns ?

⏮

ID (Number)

↑

»

PROJECT_ID (Number)

↑

>

MILESTONE_ID (Number)

↓

<

ASSIGNEE (Number)

↓

<

NAME (Varchar2)

↓

<

DESCRIPTION (Varchar2)

↓

<<

START_DATE (Date)

↓

<<

END_DATE (Date)

↓

IS_COMPLETE_YN (Varchar2)

↓

CREATED (Timestamp(6) With Local Time Zone)

↓

<

Cancel

Next >

7. Select **NAME** for Display Column, and **END_DATE** for End Date Column. Click **Create**.

Create Page

✕

✓ ✓ ✓ ✓ ●

Settings

Display Column NAME ?

Start Date Column START_DATE ?

End Date Column END_DATE ?

Show Time No ?

< Cancel
Create

8. Click **Save and Run Page**. Enter your credentials.
In the Developer Toolbar, click **Edit Page <n>**.

☰ Demo Projects

💬 ? nimuthapa@gmail.com

- 🏠 Home
- 👤 Team Members
- 📁 Projects
- 🚩 Milestones
- ☑ Tasks
- 📊 Dashboard
- 📅 **Calendar**
- ⚙ Administration

Calendar

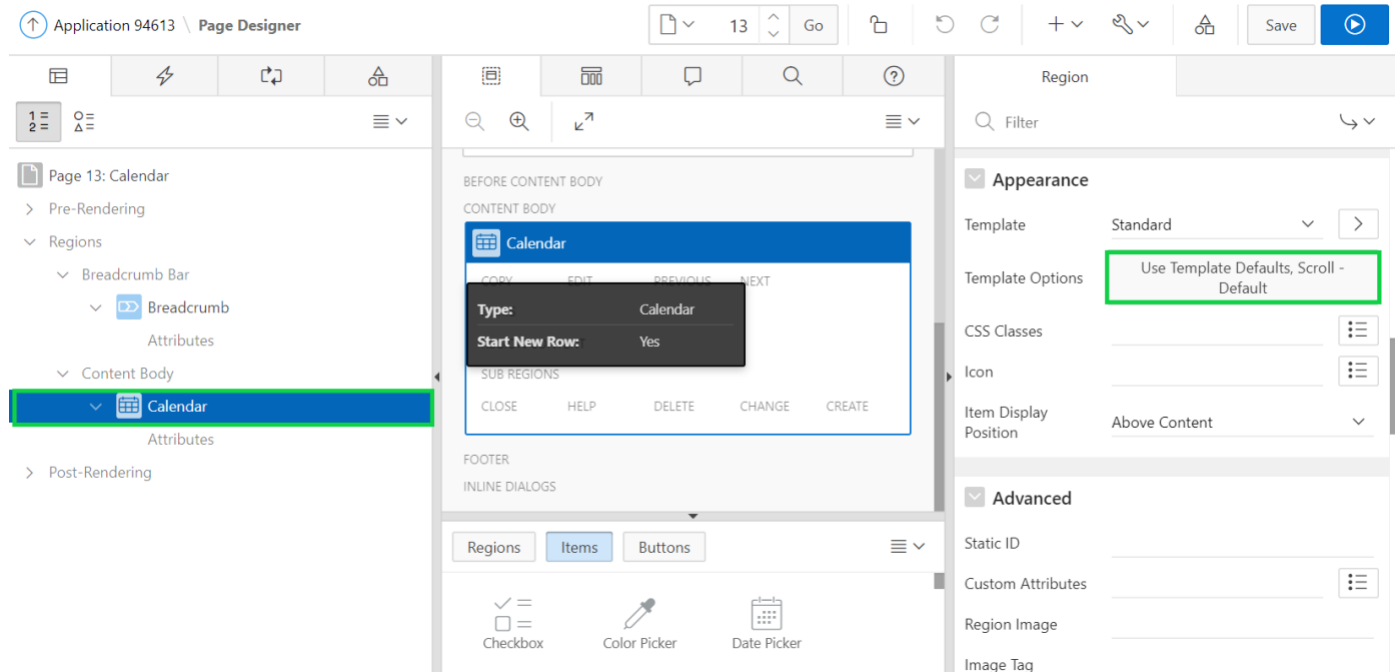
◀ ▶ today

month list

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|--|-----|-----|----------------------|----------------|--|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Design production screens for main Partner Portal app | | | | Train Partners | Monitor Partners | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Monitor Partners | | | Review Beta Feedback | | Add required feature functions Improve existing feature functions | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Add required feature functions Improve existing feature functions | | | | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Add required feature functions | | | | | | |

🏠 Home
📄 Application 94613
✎ Edit Page 13
🕒 Session
🔍 View Debug
⚙ Debug
ℹ Page Info
🔗 Quick Edit
🎨 Theme Roller
⚙

9. The Calendar page displays the region title Calendar, and also has a border around the region.
In the Rendering tree, locate the Calendar region. Click **Calendar**.
In the Property Editor, under Appearance, click the **Template Options** button.



10. In the Template Options dialog, input the following:

- Header - select **Hidden but accessible**
 - Style - select **Remove UI Decoration**
- Click **OK**.

Template Options

✕

▼ Common

General

☒ Use Template Defaults

☐ Remove Body Padding

☐ Show Maximize Button

☐ Show Region Icon

Body Height

Auto - Default

▼

Header

Hidden but accessible

▼

Accent

Default

▼

Style

Remove UI Decoration

▼

▼ Advanced

Body Overflow

Scroll - Default

▼

Item Padding

Default

▼

Cancel

OK

11. Click **Save and Run Page**.



In the Developer Toolbar, click **Application < n >**.

The screenshot shows the Oracle Application Express interface. The top navigation bar is red and contains the text "Demo Projects" and a user profile icon with the email "nimuthapa@gmail.com". The left sidebar is grey and contains a list of navigation links: Home, Team Members, Projects, Milestones, Tasks, Dashboard, Calendar (highlighted with a green box), and Administration. The main content area is white and displays a calendar for December 2019. The calendar has a header with "December 2019" and buttons for "month" and "list". The calendar grid shows days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and dates (1-31). Various tasks are assigned to different dates, such as "Design production screens for main Partner Portal app" on Sunday, December 1st, and "Train Partners" on Wednesday, December 4th. The bottom status bar is grey and contains several icons and links: Home, Application 94613 (highlighted with a green box), Edit Page 13, Session, View Debug, Debug, Page Info, Quick Edit, Theme Roller, and a settings icon.

12. You want to update the navigation menu. In the application home page, click **Shared Components**.
13. Under Navigation, click **Lists**.
14. Under Lists, click **Desktop Navigation Menu**.

Application 94613 \ Shared Components \ Lists

Lists List Details Unused Conditional Entries Utilization History

Q Go   Actions Reset Copy Create >

| Name ↑ | Type | Entries | References | Updated | Navigation Bar | Navigation Menu |
|---------------------------|--------|---------|------------|----------------|----------------|-----------------|
| Access Control | Static | 2 | 1 | 2 weeks ago | No | No |
| Activity Reports | Static | 5 | 1 | 2 weeks ago | No | No |
| Application Configuration | Static | 1 | 1 | 2 weeks ago | No | No |
| Desktop Navigation Bar | Static | 8 | 0 | 2 weeks ago | Yes | No |
| Desktop Navigation Menu | Static | 8 | 0 | 62 minutes ago | No | Yes |
| Feedback | Static | 1 | 1 | 2 weeks ago | No | No |
| Page Navigation | Static | 4 | 1 | 5 days ago | No | No |
| User Interface | Static | 1 | 1 | 2 weeks ago | No | No |








15. Under List Details, click **Calendar**.

Application 94613 \ Shared Components \ Lists \ List Details

Lists List Details Unused Conditional Entries Utilization History

List Desktop Navigation Menu Grid Edit Edit List Create Entry >

Q Go Rows 50 Actions

| Sequence ↑ | Name | Parent Entry | Target | Conditional | Updated | Level | Authorization Scheme | Copy |
|------------|--------------|--------------|---------------------------------------|-------------|----------------|-------|----------------------|---|
| 10 | Home | - | f?p=&APP_ID.:1:&APP_SESSION.:&DEBUG.: | - | 2 weeks ago | 1 | - |  |
| 20 | Team Members | - | f?p=&APP_ID.:2:&SESSION.:&DEBUG.: | - | 5 days ago | 1 | - |  |
| 30 | Projects | - | f?p=&APP_ID.:4:&SESSION.:&DEBUG.: | - | 5 days ago | 1 | - |  |
| 40 | Milestones | - | f?p=&APP_ID.:6:&SESSION.:&DEBUG.: | - | 5 days ago | 1 | - |  |
| 50 | Tasks | - | f?p=&APP_ID.:8:&SESSION.:&DEBUG.: | - | 5 days ago | 1 | - |  |
| 60 | Dashboard | - | f?p=&APP_ID.:10:&SESSION.:&DEBUG.: | - | 5 days ago | 1 | - |  |
| 70 | Calendar | - | f?p=&APP_ID.:13:&SESSION.:&DEBUG.: | - | 65 minutes ago | 1 | - |  |

Each list may contain any number of list entries. Edit the List to set the list name and list template.

Tasks

- Add this list to the current page >
- Copy List >
- Copy List Entries from one List to Another >
- Reparent List Entries within this List >
- Manage Orphaned List Entries >
- Resequence List Entries >

16. On the Calendar list entry, for Image/Class enter **fa-calendar**.
Click **Apply Changes**.

<

>

List Entry

Cancel

Delete

Apply Changes

Show All

Entry

Target

Current List E...

Conditions

Authorization

Configuration

Click Counting

User Defined...

Developer Re...

Entry

List: Desktop Navigation Menu ?

Parent List Entry

- No Parent List Item - ?

Sequence

70 ?

Image/Class

fa-calendar ?

Attributes

?

Alt Attribute

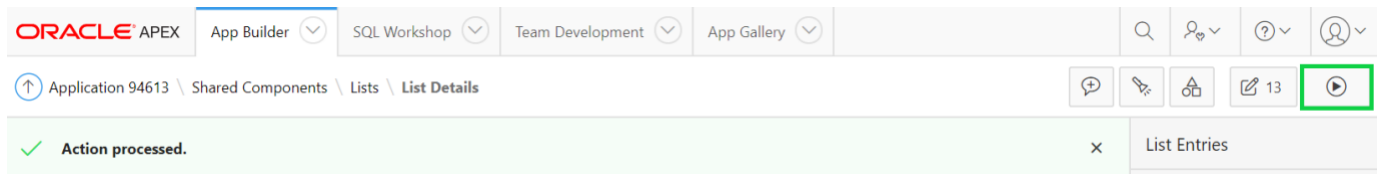
?

* List Entry Label

Calendar

?

17. In the Application Express toolbar, click **Run Page <n>**.



18. In the navigation menu, notice the new icon. In the Developer Toolbar, click **Edit Page <n>**.

19. You need to add the Create and View / Edit links. In the Rendering tree, locate the **Calendar** region.

Click **Attributes** under the Calendar region.

In the Property Editor, locate **Create Link** and click **No Link Defined**.

20. In the Link Builder – Create Link dialog, select **9** for Page, and enter **9** for Clear Cache.
Click **OK**.
21. In the Property Editor, locate **View/Edit Link** and click **No Link Defined**.
22. In the Link Builder – View / Edit Link dialog, input the following:
 - Page - select **9 - Maintain Task**
 - Name - select **P9_ID**
 - Value - select **ID** or enter **&ID.**
 - Clear Cache - enter **9**
 Click **OK**.

Link Builder - View / Edit Link ✕

Target

Type Page in this application ▼

Page 9 ⋮

Set Items

| Name | Value |
|-------|-------|
| P9_ID | &ID. |
| | |

✕

Clear Session State

Clear Cache 9 ⋮

Reset Pagination ☒

Advanced

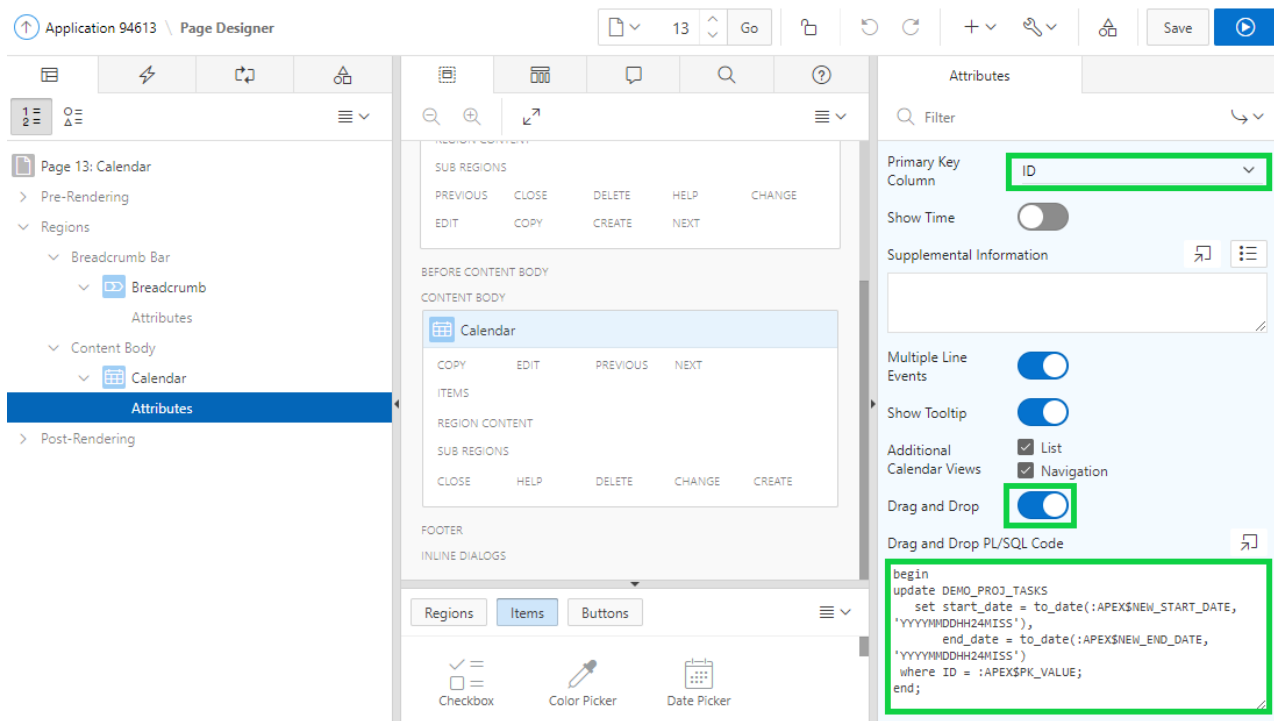
Cancel Clear OK

23. You can enable calendar drag and drop by using the component attribute Drag and Drop. Your SQL query must select a primary key column and you must have set the Primary Key Column calendar attribute. Then enter the PL/SQL code to update the event row in the database in the Drag and Drop PL/SQL Code attribute. That PL/SQL code typically performs a SQL update on the database table - the bind variables :APEX\$PK_VALUE., :APEX\$NEW_START_DATE and :APEX\$NEW_END_DATE contain the dragged events primary key value as well as the new start and new end timestamp.
 - In the property editor, navigate to Primary Key Column, and select **ID**.
 - Click the status bar to **Enable** Drag and Drop.

For Drag and Drop PL/SQL Code, copy and paste the following code:

```
begin
update DEMO_PROJ_TASKS
  set start_date = to_date(:APEX$NEW_START_DATE,
'YYYYMMDDHH24MISS'),
      end_date = to_date(:APEX$NEW_END_DATE,
'YYYYMMDDHH24MISS')
  where ID = :APEX$PK_VALUE;
end;
```

Then, Click **Save**.



24. Click **Save and Run Page**.

Notice that you can now drag and drop tasks in the calendar.

In the Developer Toolbar, click **Application < n >**.

≡

Demo Projects

Home

Team Members

Projects

Milestones

Tasks

Dashboard

Calendar

Administration

Calendar

◀ ▶ today

December 2019

month list

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|-----|-----|----------------------|------------------|-----|------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Design production screens for main Partner Portal app | | | | | | |
| | | | Train Partners | Monitor Partners | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Monitor Partners | | | Review Beta Feedback | | | Add required feature functions |
| | | | | | | Improve existing feature functions |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Add required feature functions | | | | | | |
| Improve existing feature functions | | | | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Add required feature functions | | | | | | |
| Improve existing feature functions | | | | | | |
| | | | | | | Load full production |

Release 1.0

Built with using Oracle APEX

Home

Application 94613

Edit Page 13

Session

View Debug

Debug

Page Info

Quick Edit

Theme Roller

⚙

HOL 14-2: Modifying the Dashboard Page

In this hands-on lab, first you create a blank page named Reports. You select Reports as the Parent Navigation Menu Entry for the My Outstanding Tasks report and the Tree page you create in the Demo Projects application.

You move the My Outstanding Tasks report region in the Dashboard to a new page.

1. First, create a blank page in the Demo Projects application. In the application home page, click **Create Page**.
2. Select **Blank Page**.
3. Enter **Reports** for Name, select **Breadcrumb** for Breadcrumb, and click **Next**.

×

Create a Blank Page

Page Attributes

* Page Number ?

* Name ?

* Page Mode **Normal** Modal Dialog Non-Modal Dialog ?

Page Group - Select Page Group - ?

Breadcrumb ?

Parent Entry No parent entry ?

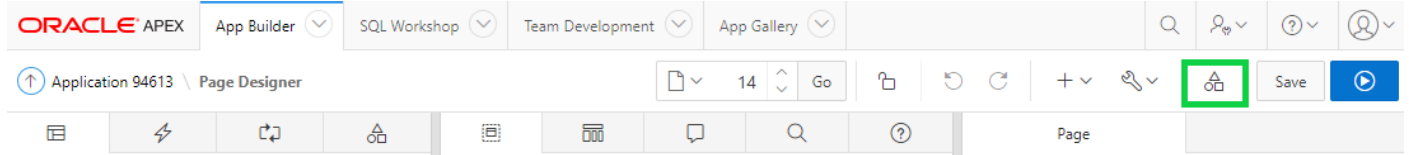
Entry Name ?

> **Optional Static Content Regions**

Next >

4. Select **Create a new navigation menu entry** for Navigation Preference. Click **Next**.
5. On the confirmation page, click **Finish**.

6. In the page designer toolbar, click **Shared Components**. (not Page Shared Components).



7. Under Navigation, select **Lists**.

8. Under Lists, select **Desktop Navigation Menu**.

9. Under List Details, select **Reports**.

List

Desktop Navigation Menu

?

Grid Edit

Edit List

Create Entry >

Q

Go

Rows 50

Actions

| Sequence ↑ | Name | Parent Entry | Target | Conditional | Updated | Level | Authorization Scheme | Copy |
|---------------|--------------|--------------|--|-------------|----------------|-------|----------------------|------|
| 10 | Home | - | f?p=&APP_ID.:1:&APP_SESSION.::&DEBUG.: | - | 2 weeks ago | 1 | - | |
| 20 | Team Members | - | f?p=&APP_ID.:2:&SESSION.::&DEBUG.:::: | - | 5 days ago | 1 | - | |
| 30 | Projects | - | f?p=&APP_ID.:4:&SESSION.::&DEBUG.:::: | - | 5 days ago | 1 | - | |
| 40 | Milestones | - | f?p=&APP_ID.:6:&SESSION.::&DEBUG.:::: | - | 5 days ago | 1 | - | |
| 50 | Tasks | - | f?p=&APP_ID.:8:&SESSION.::&DEBUG.:::: | - | 5 days ago | 1 | - | |
| 60 | Dashboard | - | f?p=&APP_ID.:10:&SESSION.::&DEBUG.:::: | - | 5 days ago | 1 | - | |
| 70 | Calendar | - | f?p=&APP_ID.:13:&SESSION.::&DEBUG.:::: | - | 23 minutes ago | 1 | - | |
| 80 | Reports | - | f?p=&APP_ID.:14:&SESSION.::&DEBUG.: | - | 96 seconds ago | 1 | - | |

10. For Image/Class, enter **fa-table**.

Click **Apply Changes**.

Application 94613 \ Shared Components \ Lists \ List Details \ Create / Edit

< > List Entry Cancel Delete **Apply Changes**

Show All Entry Target Current List E... Conditions Authorization Configuration Click Counting User Defined ... Developer Re...

Entry

List: Desktop Navigation Menu ?

Parent List Entry - No Parent List Item - ?

Sequence 80 ?

Image/Class fa-table ?

Attributes ?

Alt Attribute ?

* List Entry Label Reports

11. In the Application Express toolbar, click **Run Page 14**.

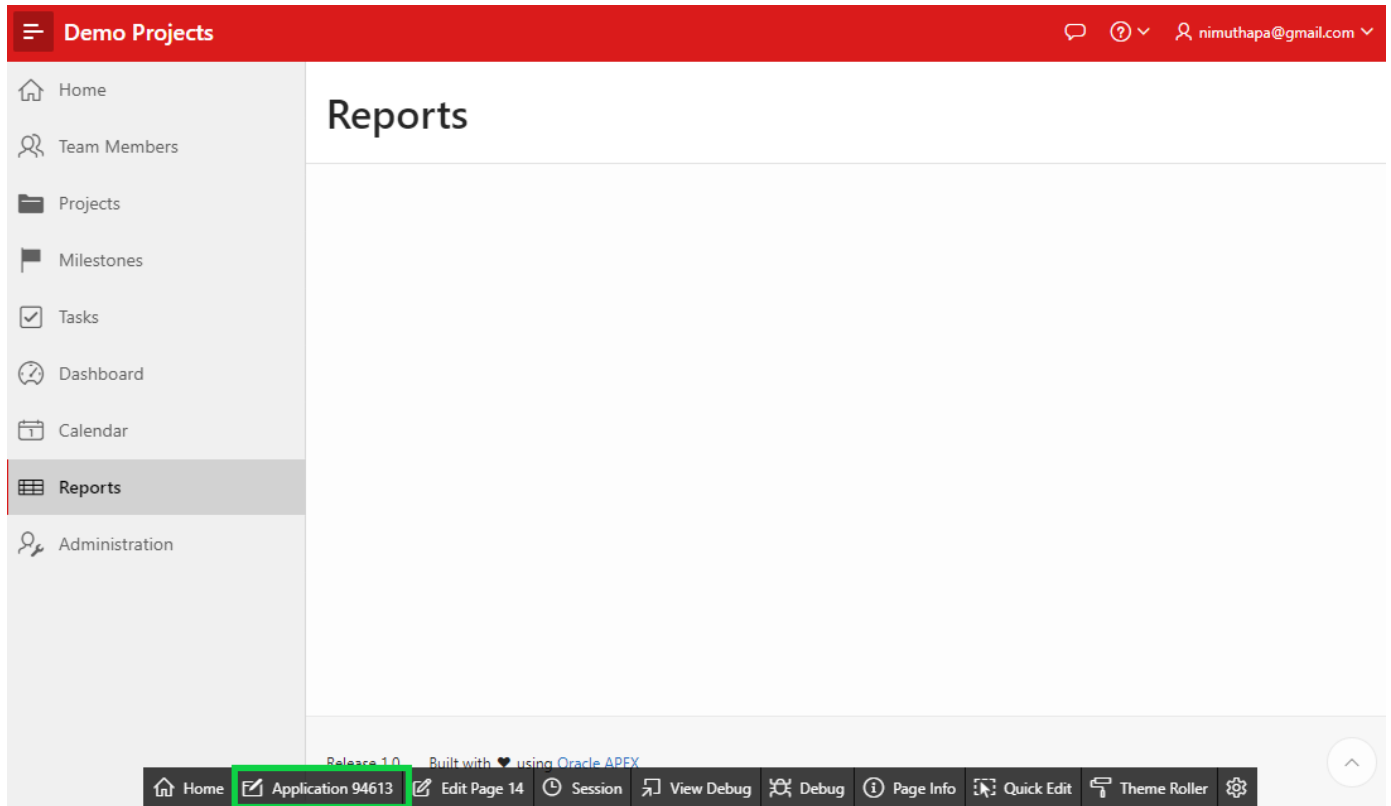
ORACLE APEX App Builder SQL Workshop Team Development App Gallery

Application 94613 \ Shared Components \ Lists \ List Details

14

✓ Action processed. x List Entries

12. Notice the icon for Reports in the navigation menu.
Now you add charts and reports to the Demo Projects application.
In the Developer Toolbar, click **Application < n >**.



13. In the application home page, click **Create Page**.
14. Select **Blank Page** and click **Next**.
15. Enter **My Outstanding Tasks** for Name, select **Breadcrumb** for Breadcrumb, **Reports** for Parent Entry, and click **Next**.

Create a Blank Page ×

● ————— ● ————— ●

Page Attributes

* Page Number (?)

* Name (?)

* Page Mode **Normal** Modal Dialog Non-Modal Dialog (?)

Page Group (?)

Breadcrumb (?)

Parent Entry (?)

Entry Name (?)

> **Optional Static Content Regions**

< Cancel
Next >

16. Select **Create a new navigation menu entry** for Navigation Preference.
 Select **Reports** for Parent Navigation Menu Entry.
 Click **Next**.

Create a Blank Page ×

● ————— ● ————— ●

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

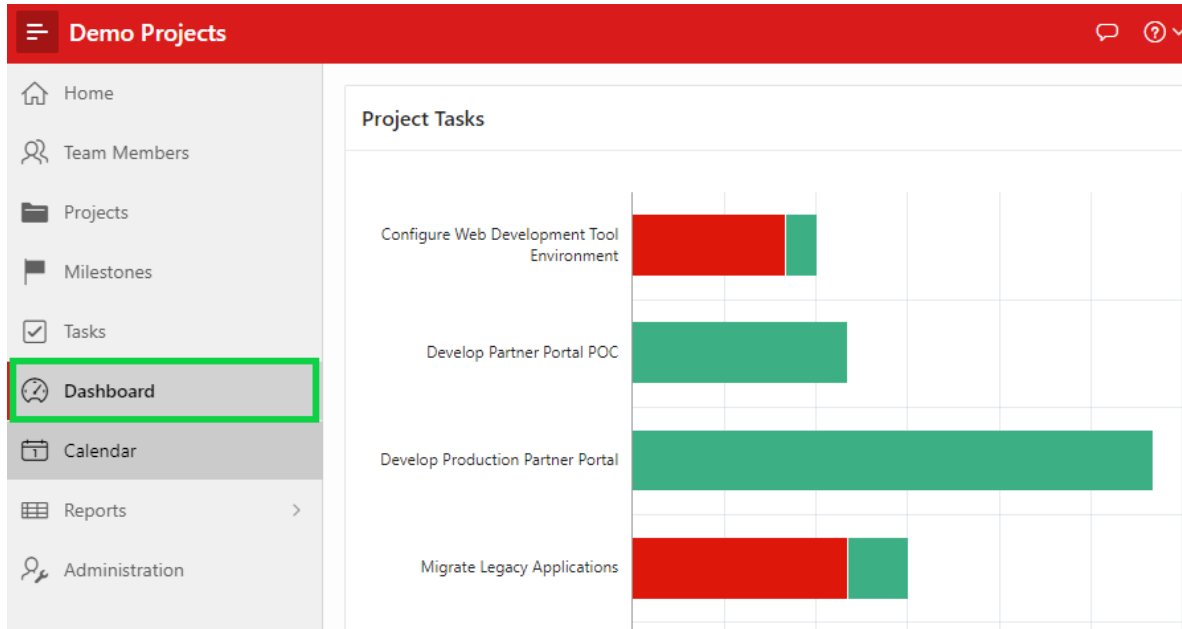
Projects
 Milestones
 Tasks
 Dashboard
 Calendar
Reports
 Administration

 (?)

< Cancel
Next >

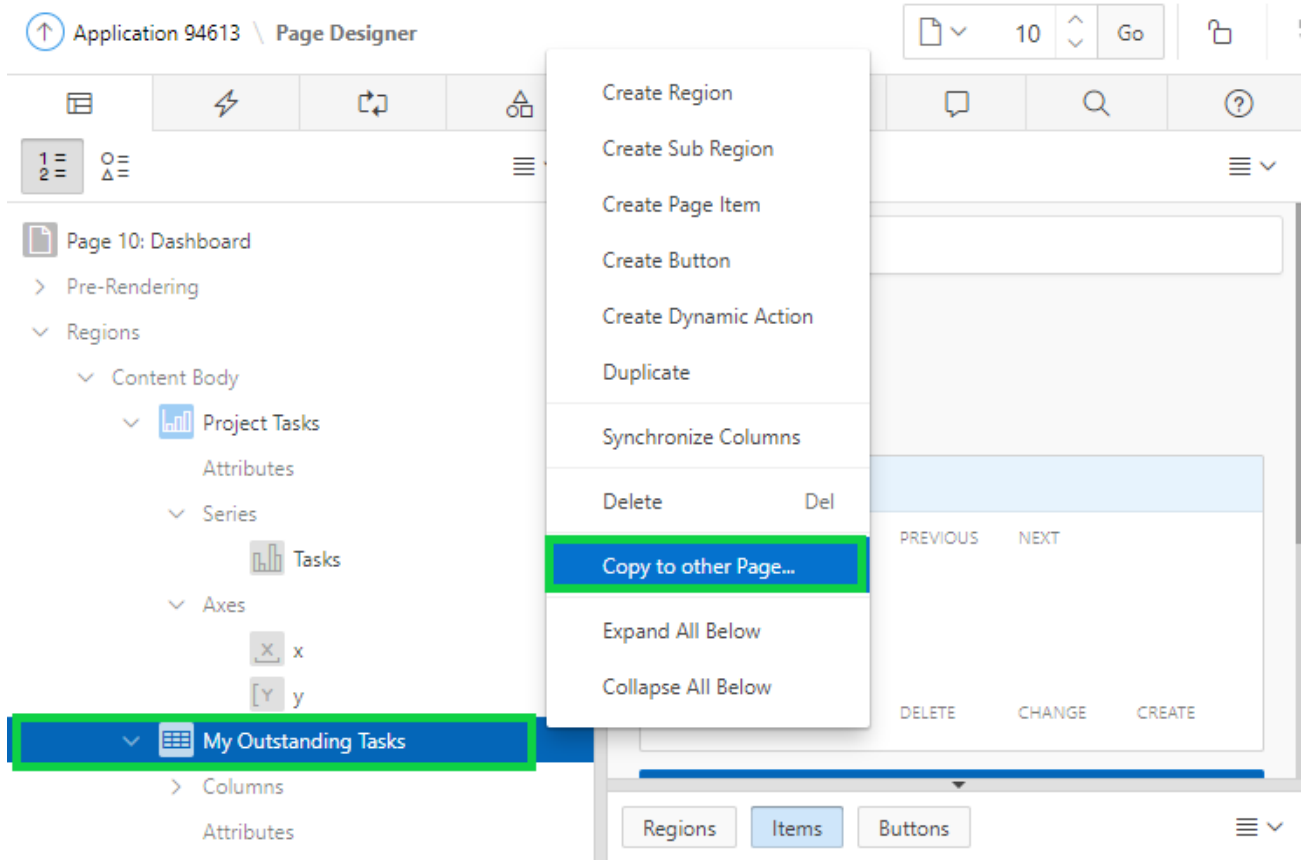
17. On the confirmation page, click **Finish**.

18. Navigate to application runtime environment and click **Dashboard**.

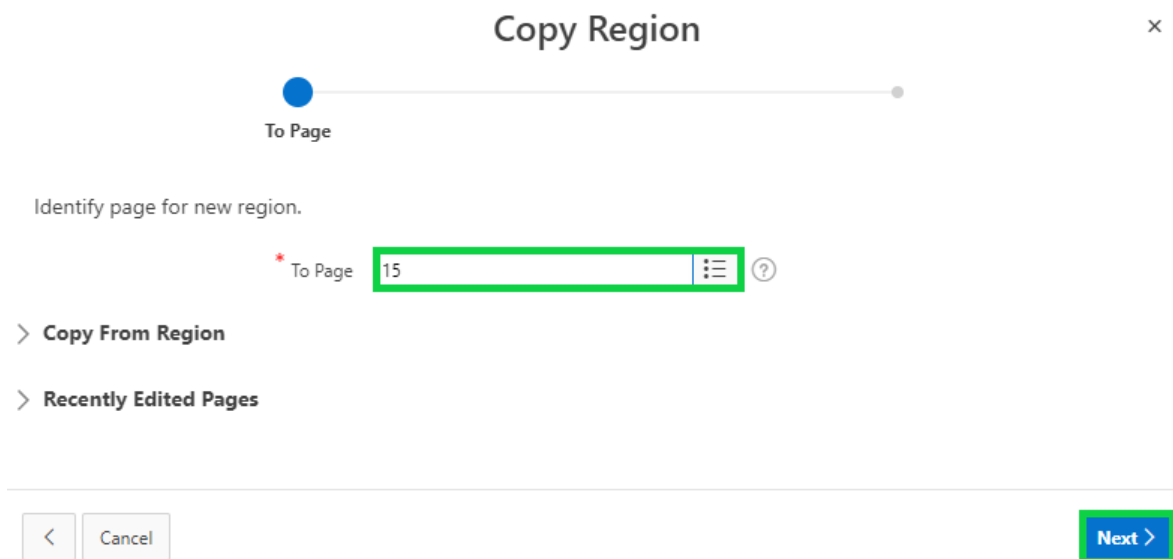


19. In the Developer Toolbar, click **Edit Page 10**.

20. Under Rendering, right-click **My Outstanding Tasks** classic report region and select **Copy to other Page...**



21. For To Page, select the page number of the blank page that you created in step 13 above. Click **Next**.



22. Make sure the Region Name is **My Outstanding Tasks** and click **Copy**.

Copy Region

✓

New Region

Copy From Page:

10. Dashboard

?

Copy To Page:

15. My Outstanding Tasks

?

Copy Region Items:

No

?

Copy Buttons:

No

?

Copy Validations:

No

?

Copy Processes:

No

?

Copy Sub Regions:

No

?

* Region Name

My Outstanding Tasks

?

* Sequence

20

?

> Advanced

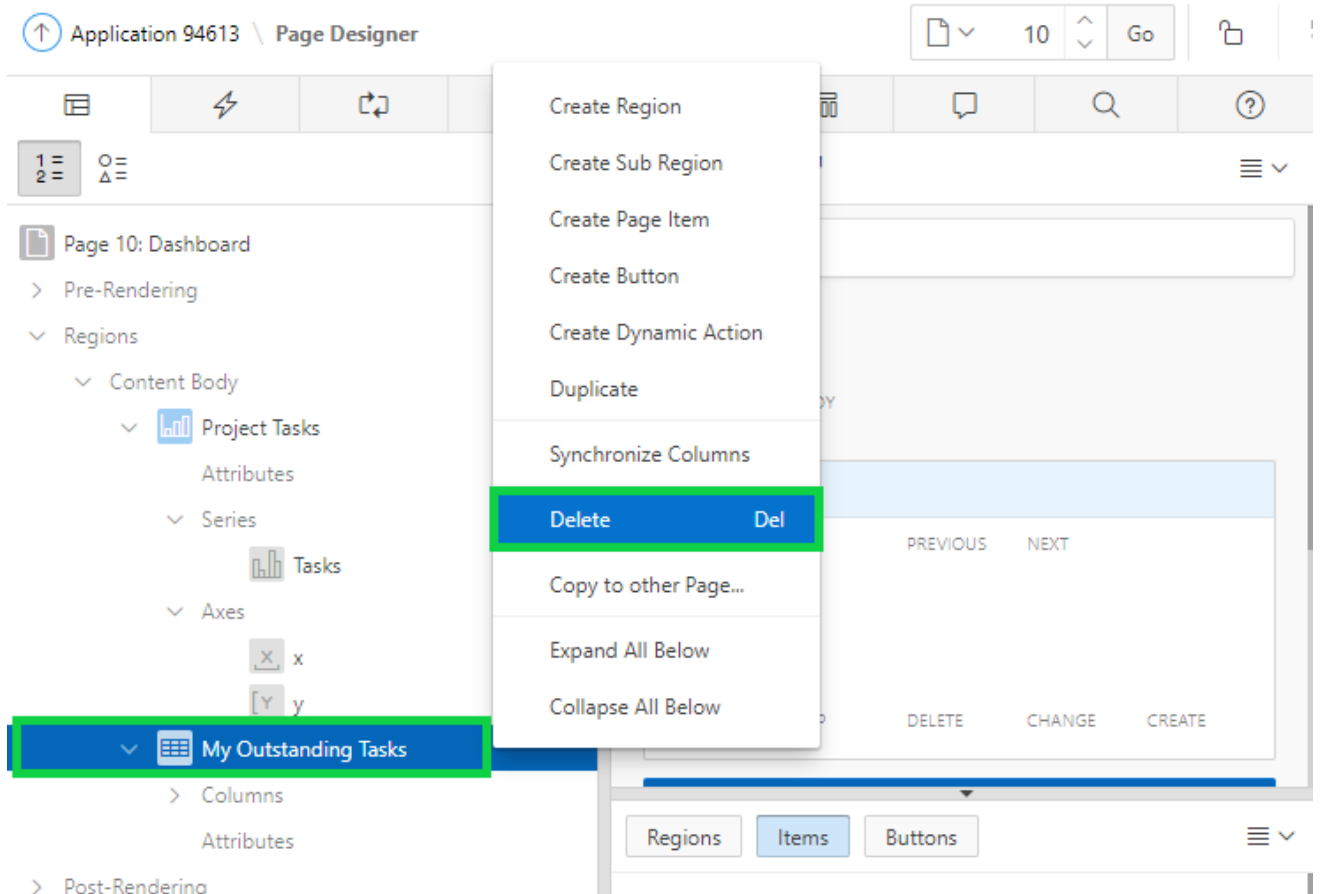
> Copy From Region

<

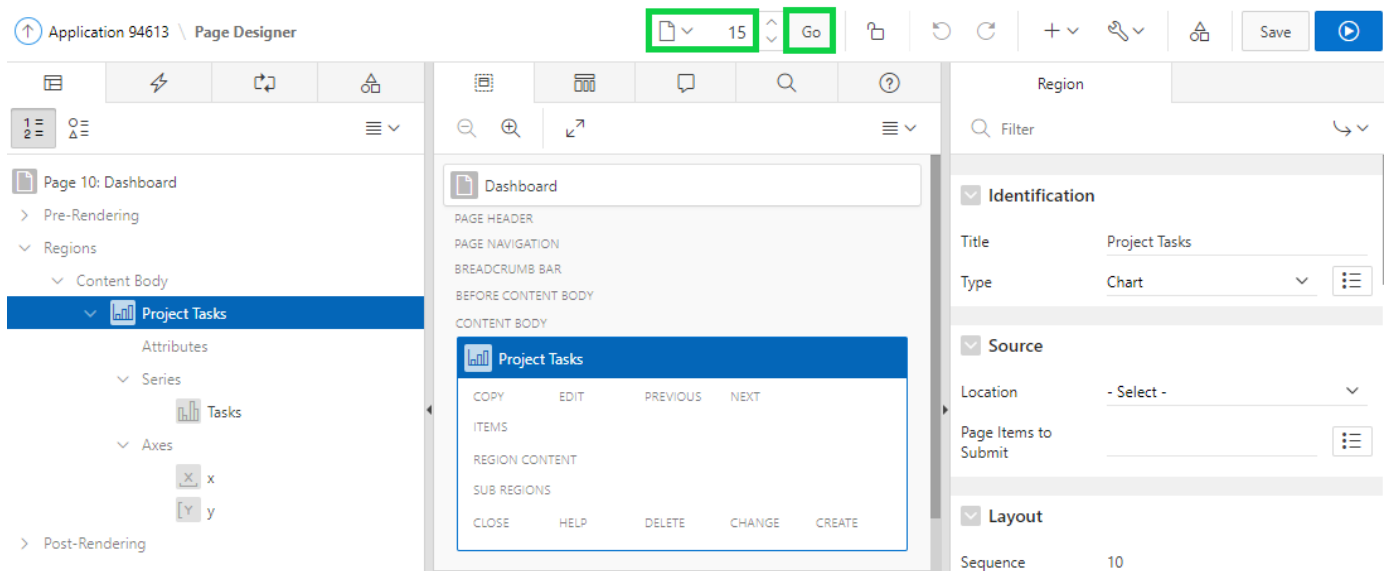
Cancel

Copy

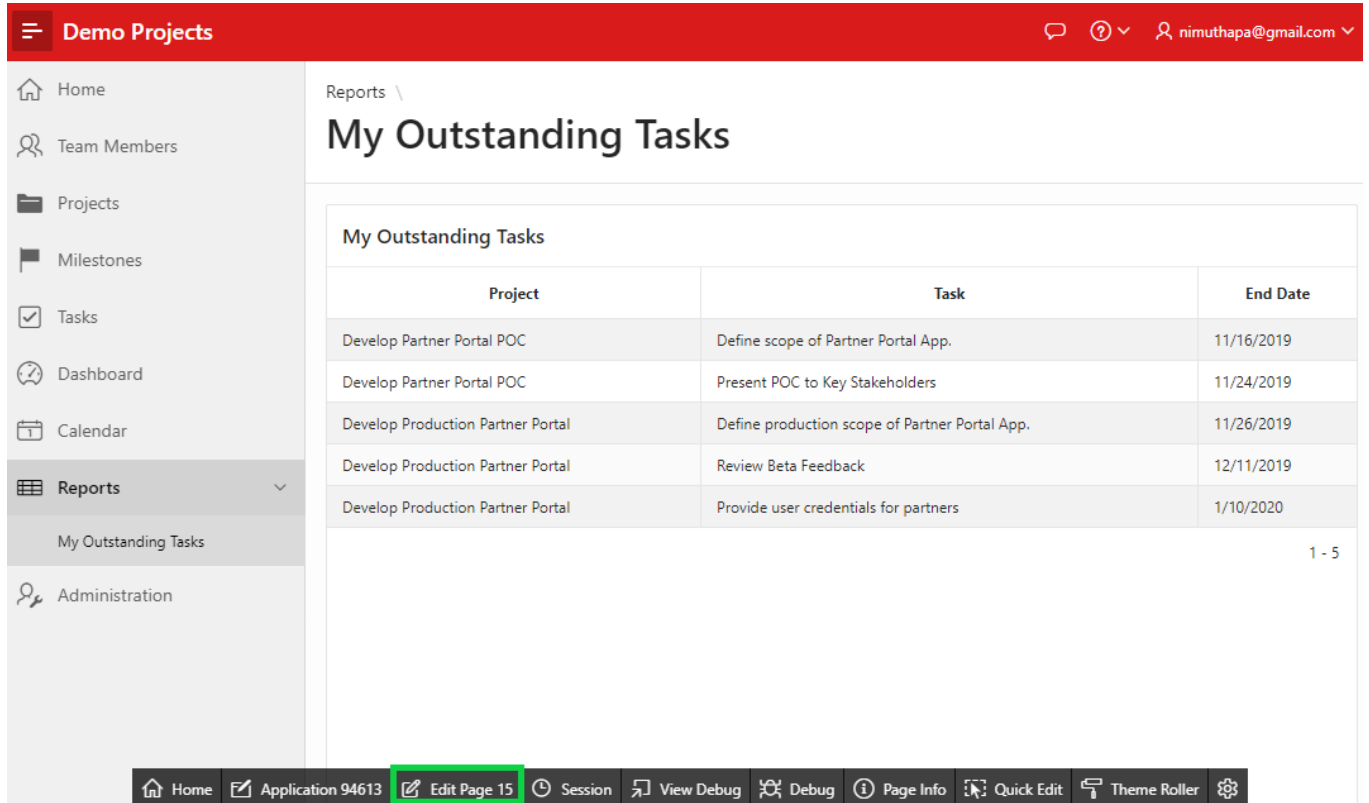
23. Under Rendering, right-click **My Outstanding Tasks** region and select **Delete**.
Click **Save**.



24. In the page designer, navigate to the page on to which you just copied the My Outstanding Tasks classic report region.



25. Click **Save and Run Page**.
26. You now see the My Outstanding Tasks classic report. In the Developer Toolbar, click **Edit Page <n>**.

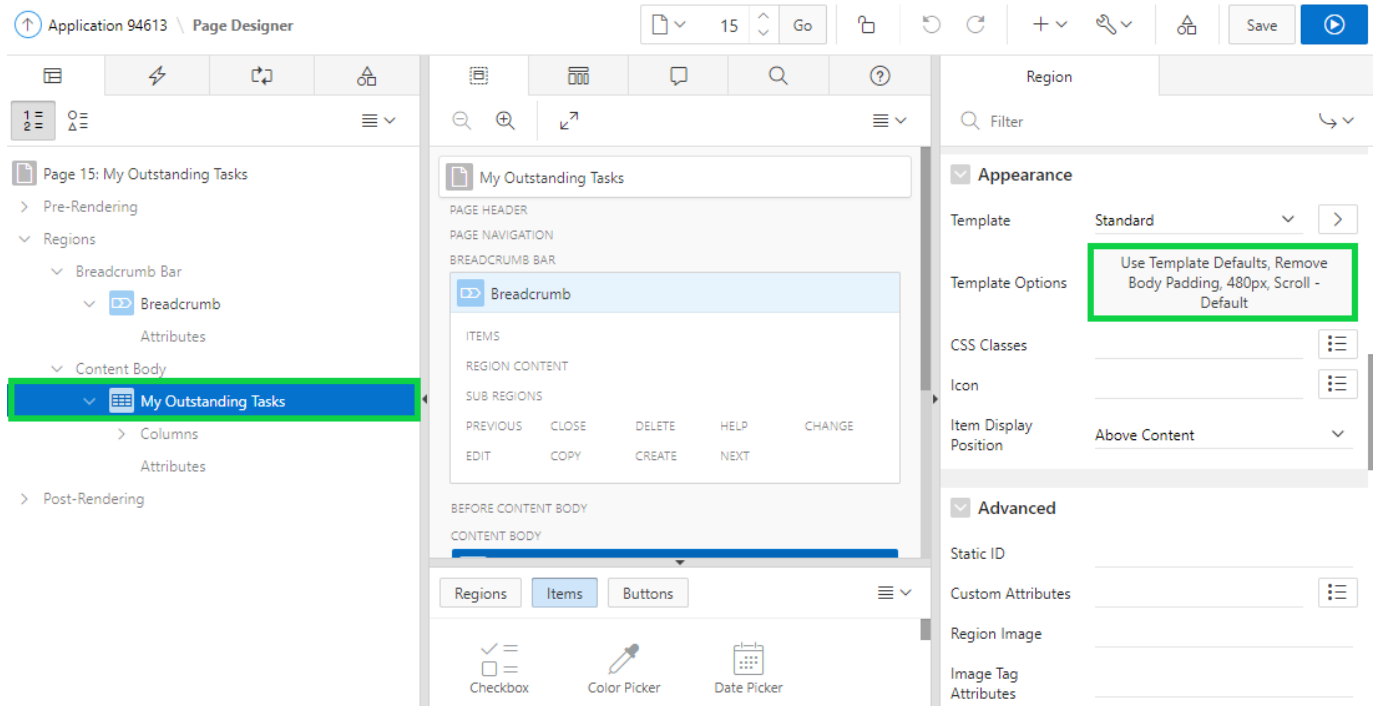


The screenshot displays the Oracle APEX interface for a report titled "My Outstanding Tasks". The left sidebar contains navigation links: Home, Team Members, Projects, Milestones, Tasks, Dashboard, Calendar, Reports (selected), My Outstanding Tasks (sub-selected), and Administration. The main content area shows the report title and a table of tasks. The developer toolbar at the bottom includes buttons for Home, Application 94613, Edit Page 15 (highlighted), Session, View Debug, Debug, Page Info, Quick Edit, Theme Roller, and a settings icon.

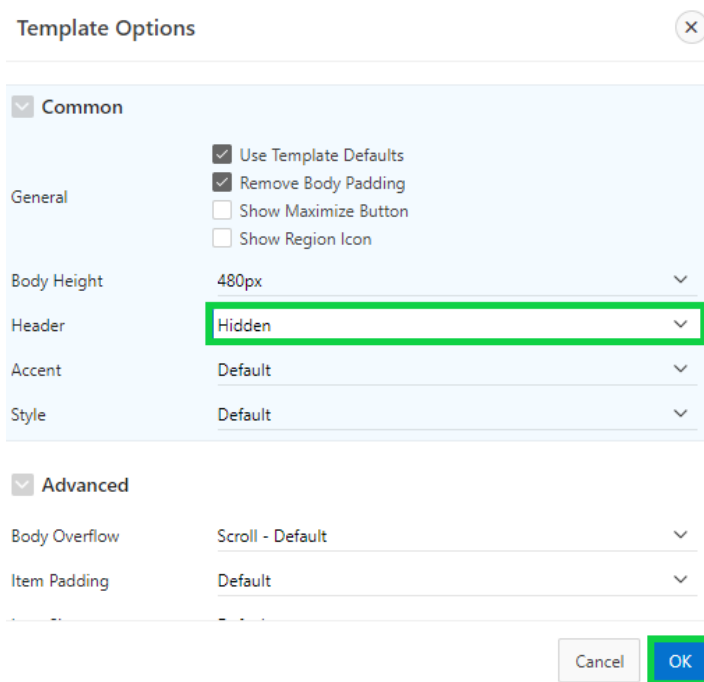
| Project | Task | End Date |
|-----------------------------------|--|------------|
| Develop Partner Portal POC | Define scope of Partner Portal App. | 11/16/2019 |
| Develop Partner Portal POC | Present POC to Key Stakeholders | 11/24/2019 |
| Develop Production Partner Portal | Define production scope of Partner Portal App. | 11/26/2019 |
| Develop Production Partner Portal | Review Beta Feedback | 12/11/2019 |
| Develop Production Partner Portal | Provide user credentials for partners | 1/10/2020 |

1 - 5

27. Under Rendering, select **My Outstanding Tasks** region.
In the property editor, under Appearance, click **Template Options**.





28. For Header, select **Hidden** and click **OK**.





29. Click **Save and Run Page**.


30. Now, you see the updated classic report region.


 Demo Projects


 Home


 Team Members


 Projects


 Milestones

 Tasks

 Dashboard

 Calendar

 Reports

 Administration

Reports \

My Outstanding Tasks

| Project | Task | End Date |
|-----------------------------------|--|------------|
| Develop Partner Portal POC | Define scope of Partner Portal App. | 11/16/2019 |
| Develop Partner Portal POC | Present POC to Key Stakeholders | 11/24/2019 |
| Develop Production Partner Portal | Define production scope of Partner Portal App. | 11/26/2019 |
| Develop Production Partner Portal | Review Beta Feedback | 12/11/2019 |
| Develop Production Partner Portal | Provide user credentials for partners | 1/10/2020 |

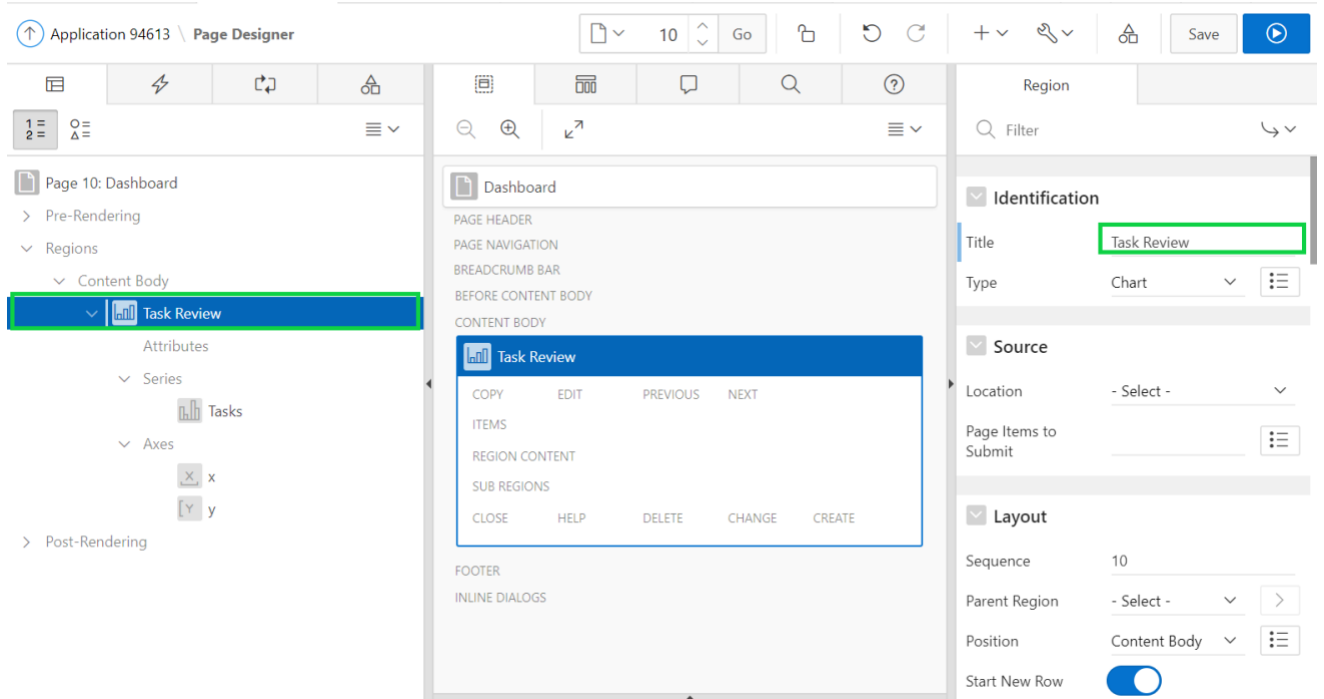
1 - 5

31. In the navigation menu, click **Dashboard**.

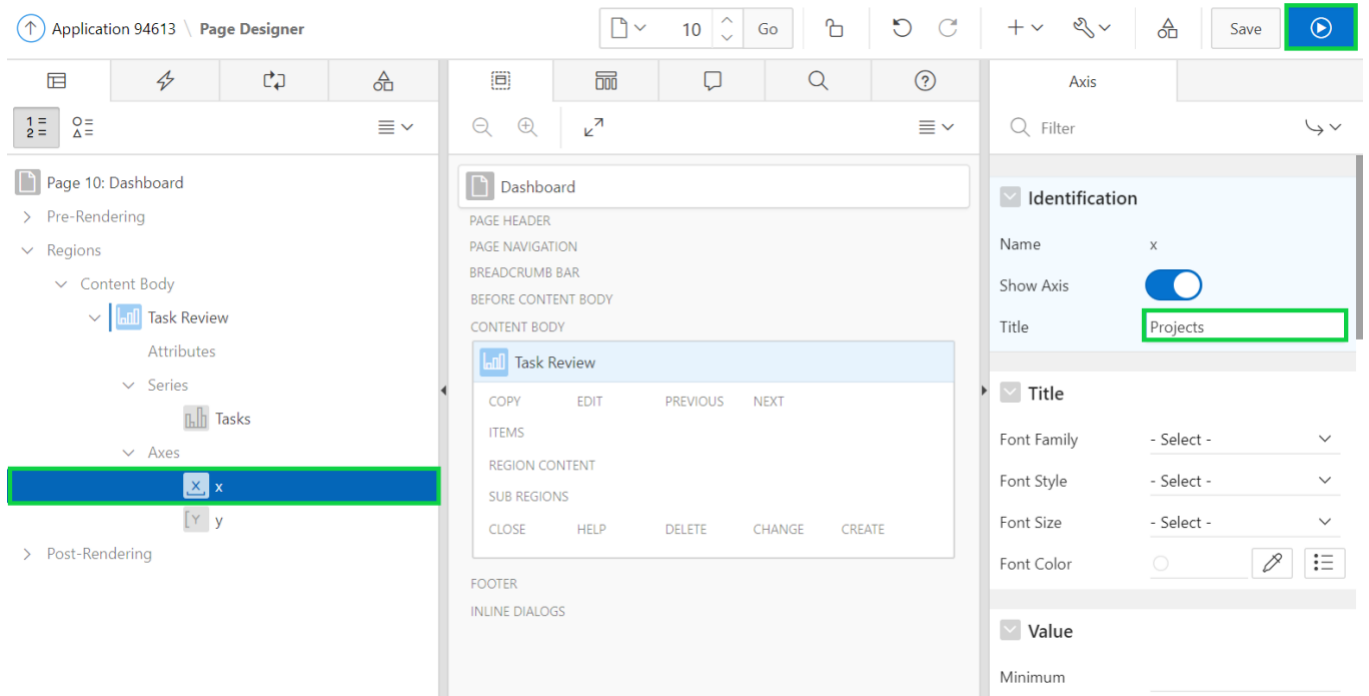
HOL 14-3: Updating the Project Tasks Chart

In this hands-on lab, you update the Project Tasks Chart in the Dashboard page.

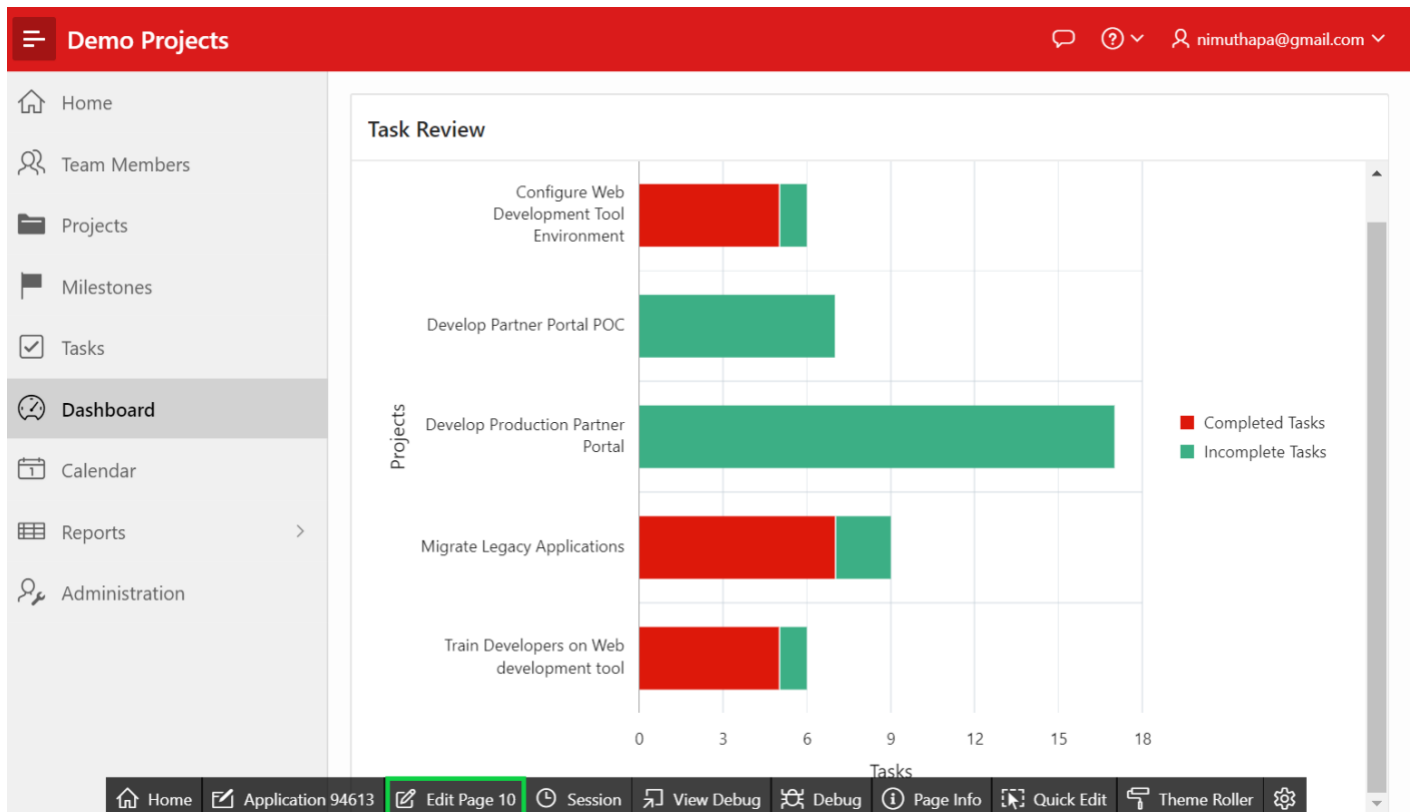
1. In the Developer Toolbar, click **Edit Page 10**.
2. Under Rendering, select the **Project Tasks** region.
In the property editor, under Identification, for Title, enter **Tasks Review**.



3. Under Rendering, expand **Axes** and select **x**.
In the property editor, under Identification, for Title, enter **Projects**.
Click **Save and Run Page**.



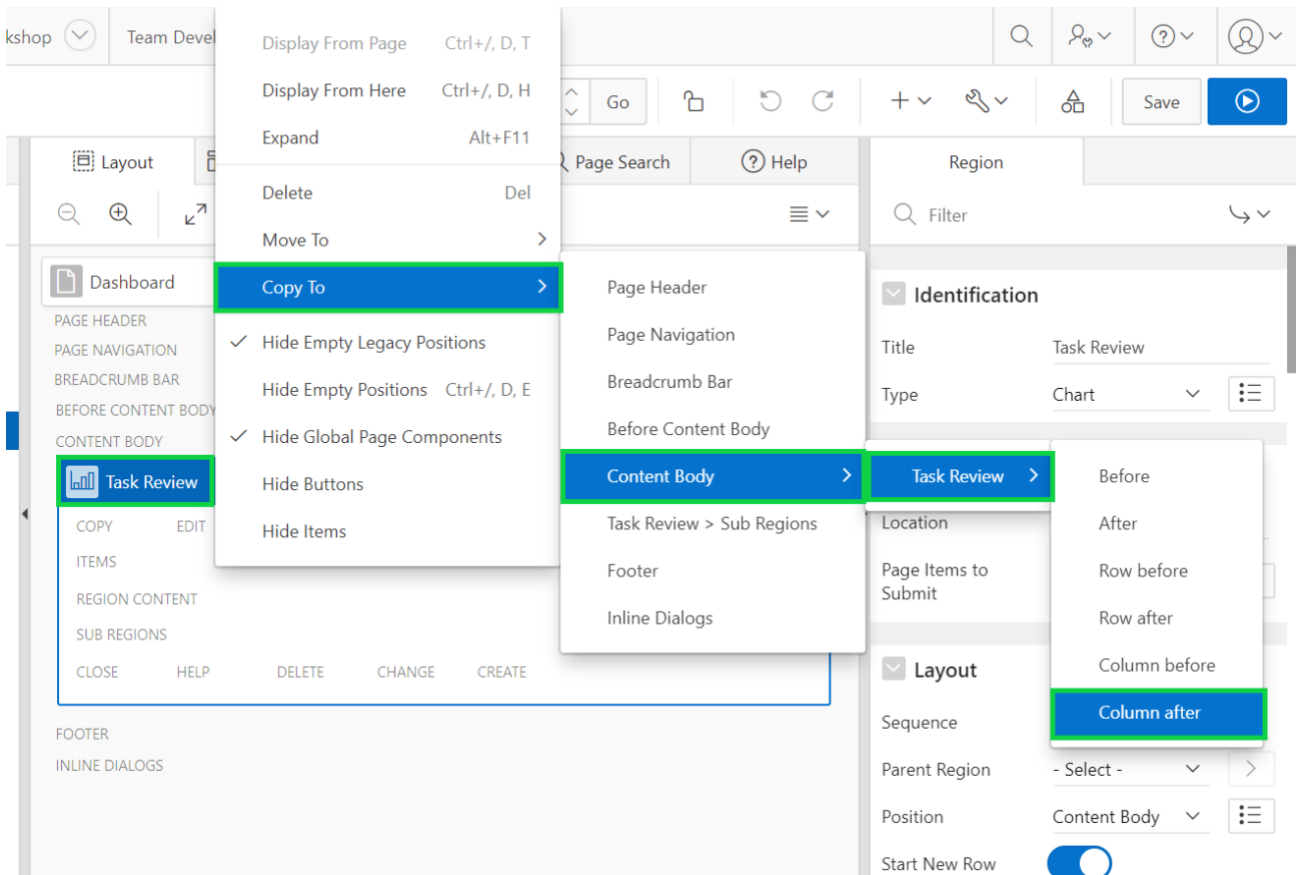
4. In the Developer Toolbar, click **Edit Page 10**.



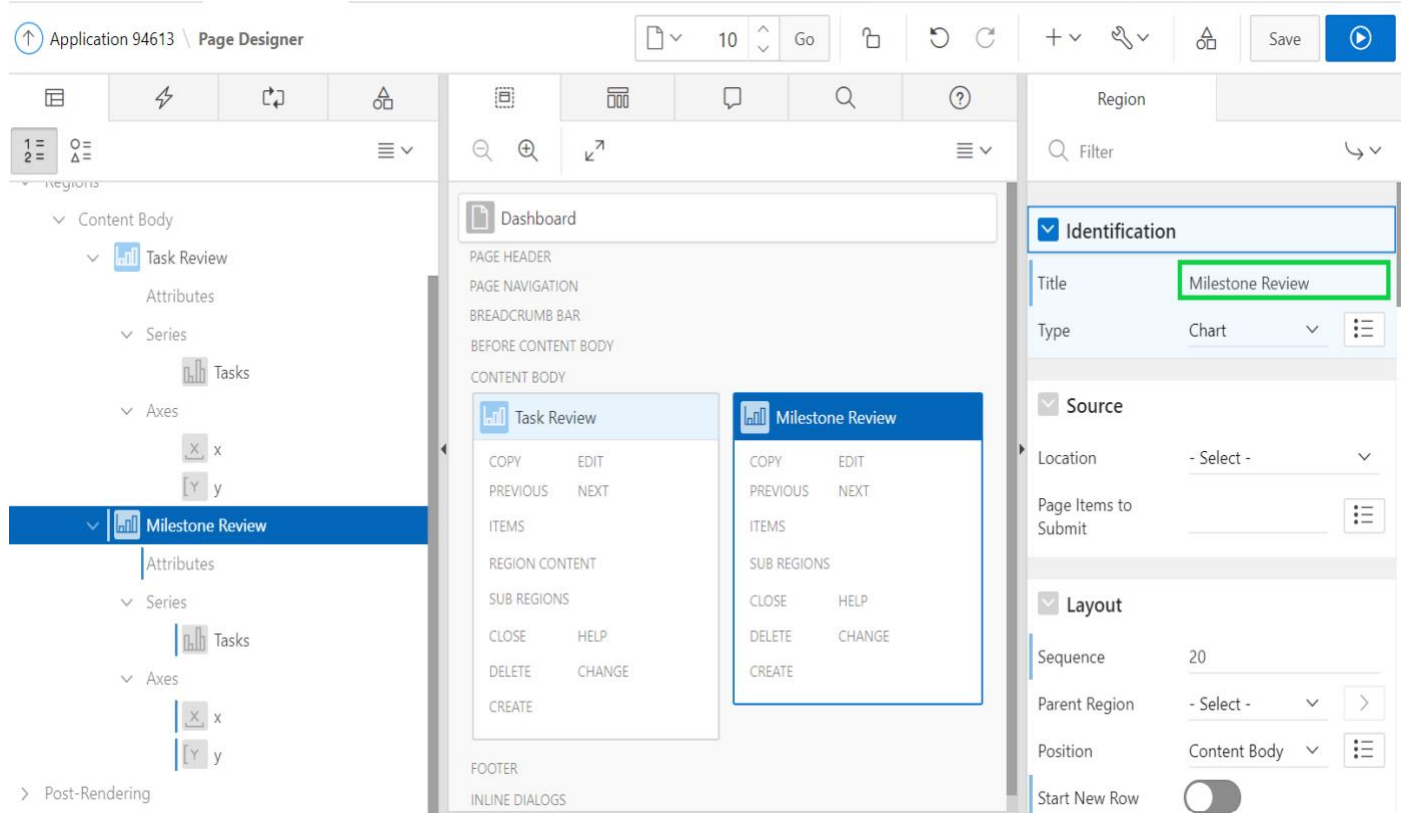
HOL 14-4: Adding the Project Milestones Chart

In this hands-on lab, you create a bar chart to show the past and future milestones. You add this chart into the Dashboard page.

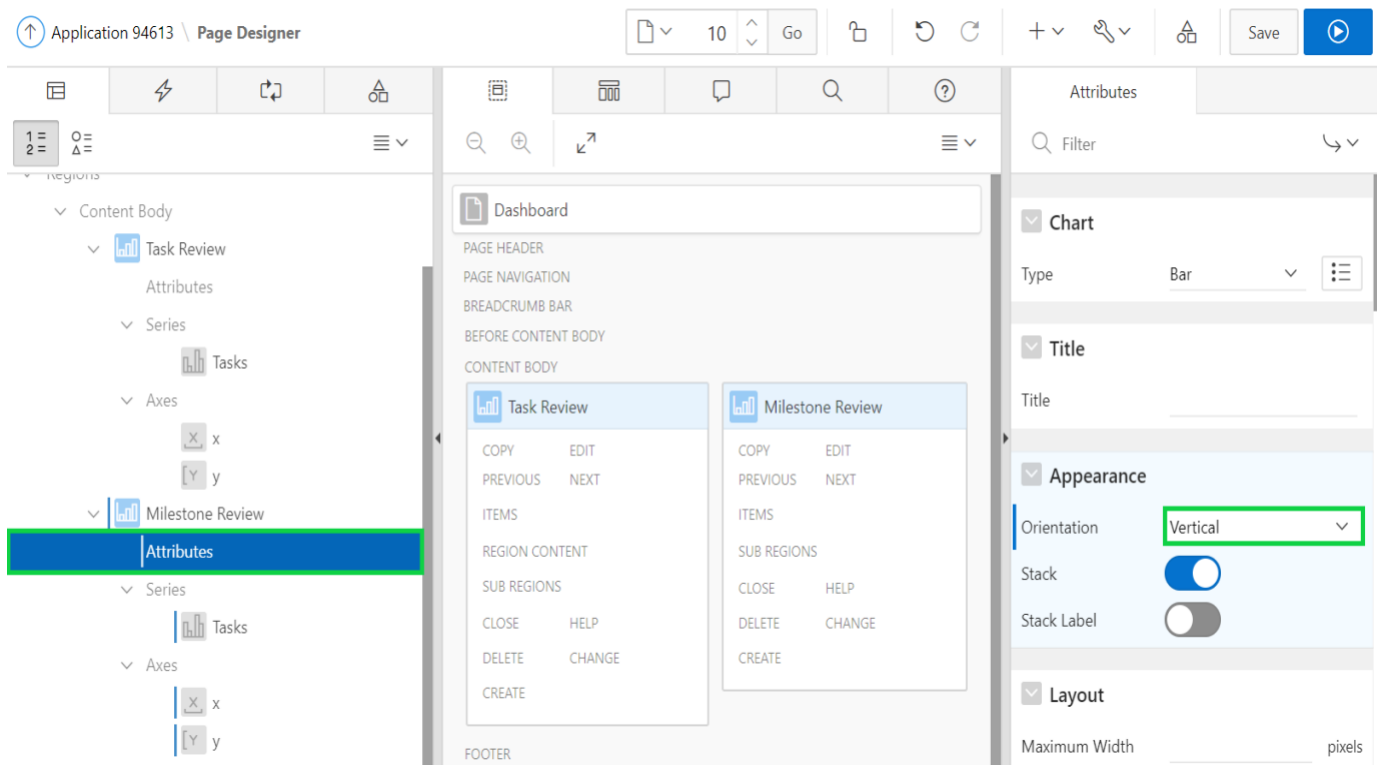
1. In the Page Designer, under **Layout**, right-click the **Tasks Review** region, and select **Copy To > Content Body > Tasks Review > Column After**.



2. The chart region is now copied. Under Rendering, select the **Tasks Review** region. In the property editor, under Identification, enter **Milestones Review** for Title.



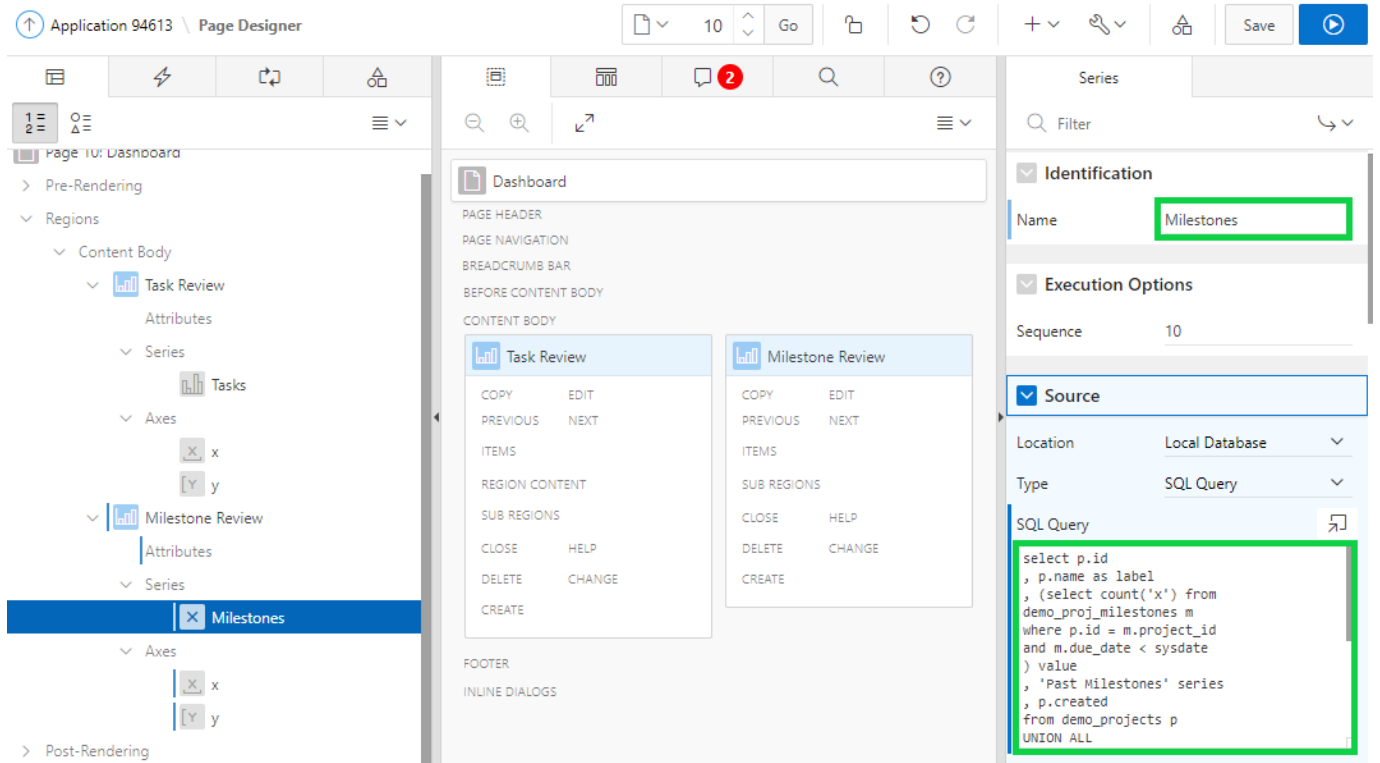
- Now, you need to modify the region source query and chart attributes. Under Rendering, expand Regions > Milestones Review and select **Attributes**. In the property editor, for Appearance > Orientation, select **Vertical**.



4. Under Rendering, expand Regions > Milestones Review > Series and select **Tasks**. In the property editor, under Identification, enter **Milestones** for Name.

For Source > SQL Query, copy and paste the following SQL:

```
select p.id
, p.name as label
, (select count('x') from demo_proj_milestones m
where p.id = m.project_id
and m.due_date < sysdate
) value
, 'Past Milestones' series
, p.created
from demo_projects p
UNION ALL
select p.id
, p.name as label
, (select count('x') from demo_proj_milestones m
where p.id = m.project_id
and m.due_date >= sysdate
) value
, 'Future Milestones' series
, p.created
from demo_projects p
order by 5
```



Note: If you get an error make sure to check, Property Editor, Column Mapping, for Series Names **SERIES** is selected, for Label **LABEL** is selected, and for Value **VALUE** is selected.

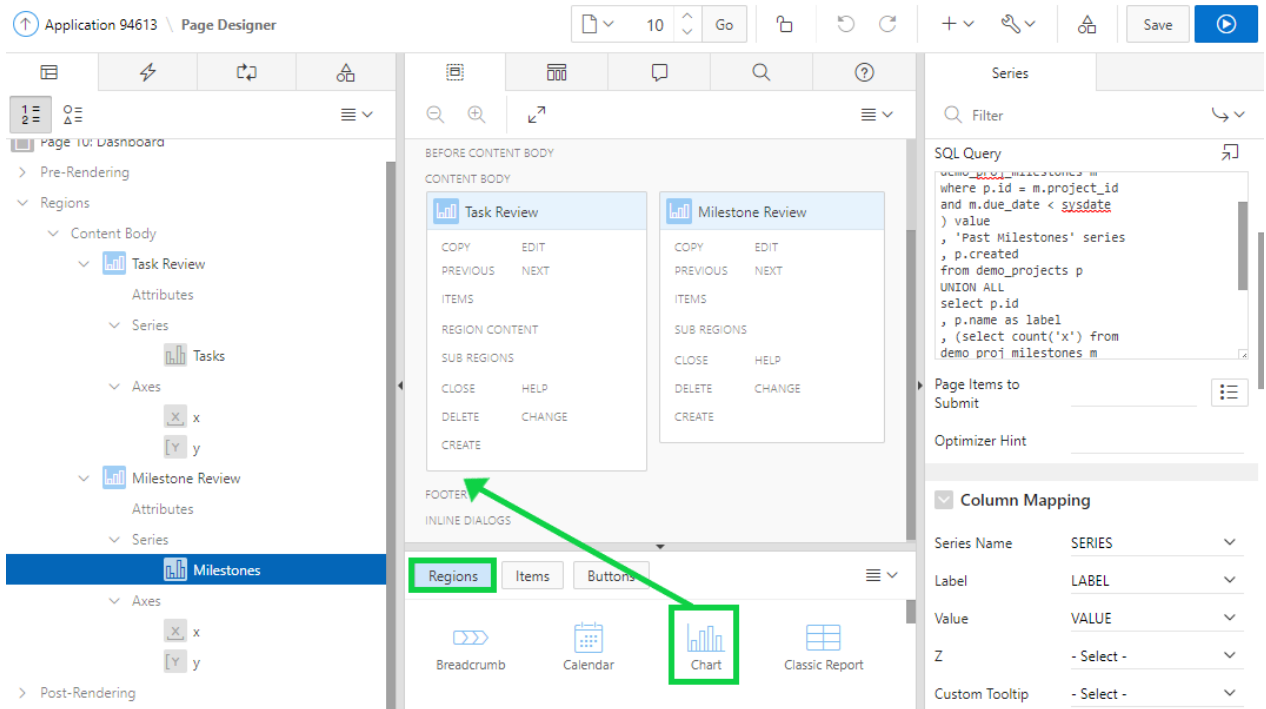
5. Click **Save and Run Page**.
6. The chart is displayed.
In the Developer Toolbar, click **Edit Page 10**.



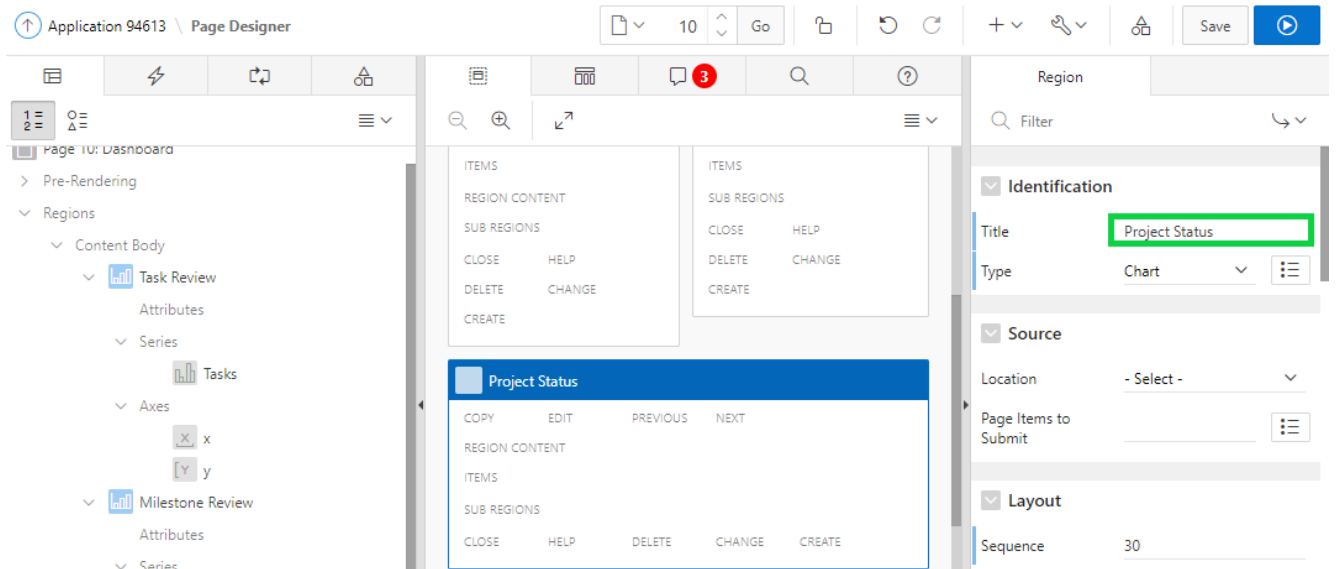
HOL 14-5: Adding the Project Status Chart

In this hands-on lab, you create a pie chart to review the project completion status. You add this chart in to the Dashboard page.

1. In the Page Designer, under Layout > Gallery, click **Regions**.
Select **Chart** and then drag and drop to be placed underneath the Tasks Review Region.

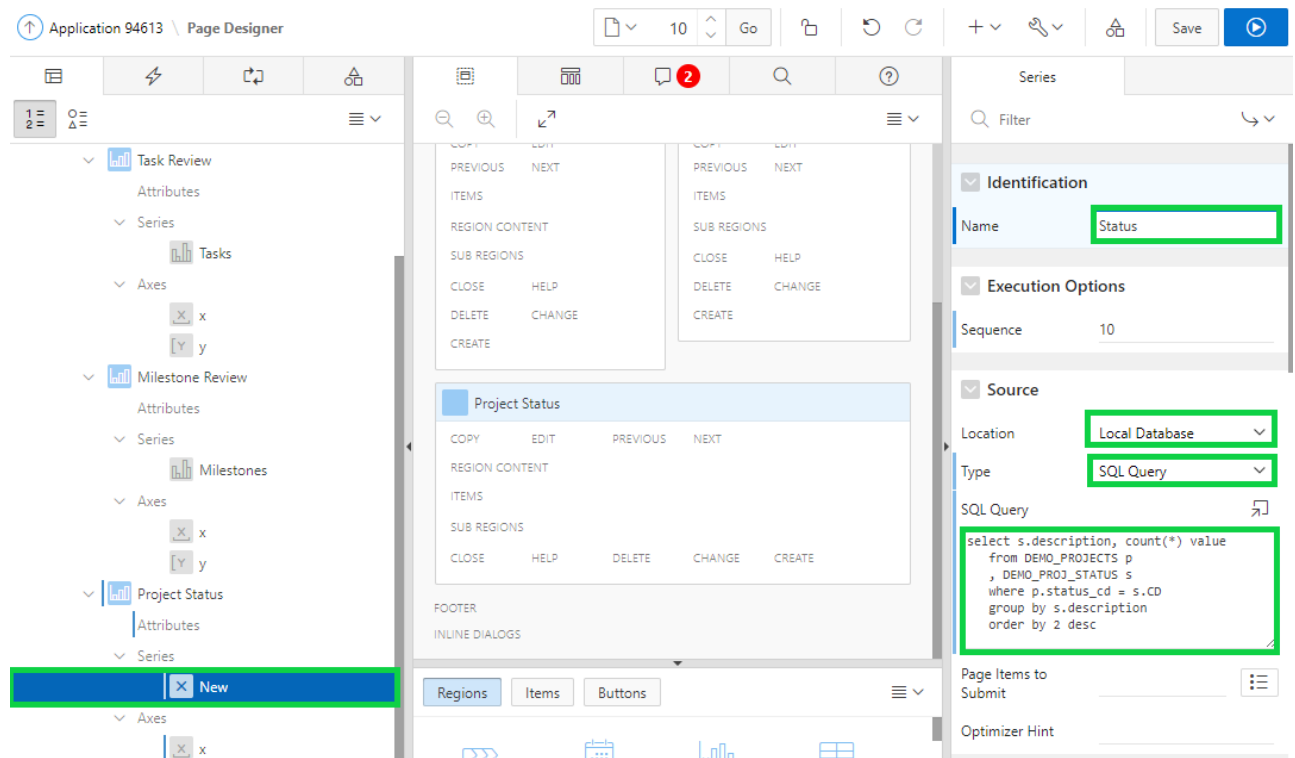


2. In the property editor, under Identification enter the region title as **Project Status**.



- Under Rendering, expand Series and select **New**.
In the property editor, under Identification, enter **Status** for Name.
Under Source, make sure Local Database is selected for Location and select **SQL Query** for Type.
For Source > SQL Query, copy and paste the following SQL:

```
select s.description, count(*) value
  from DEMO_PROJECTS p
    , DEMO_PROJ_STATUS s
 where p.status_cd = s.cd
 group by s.description
 order by 2 desc
```



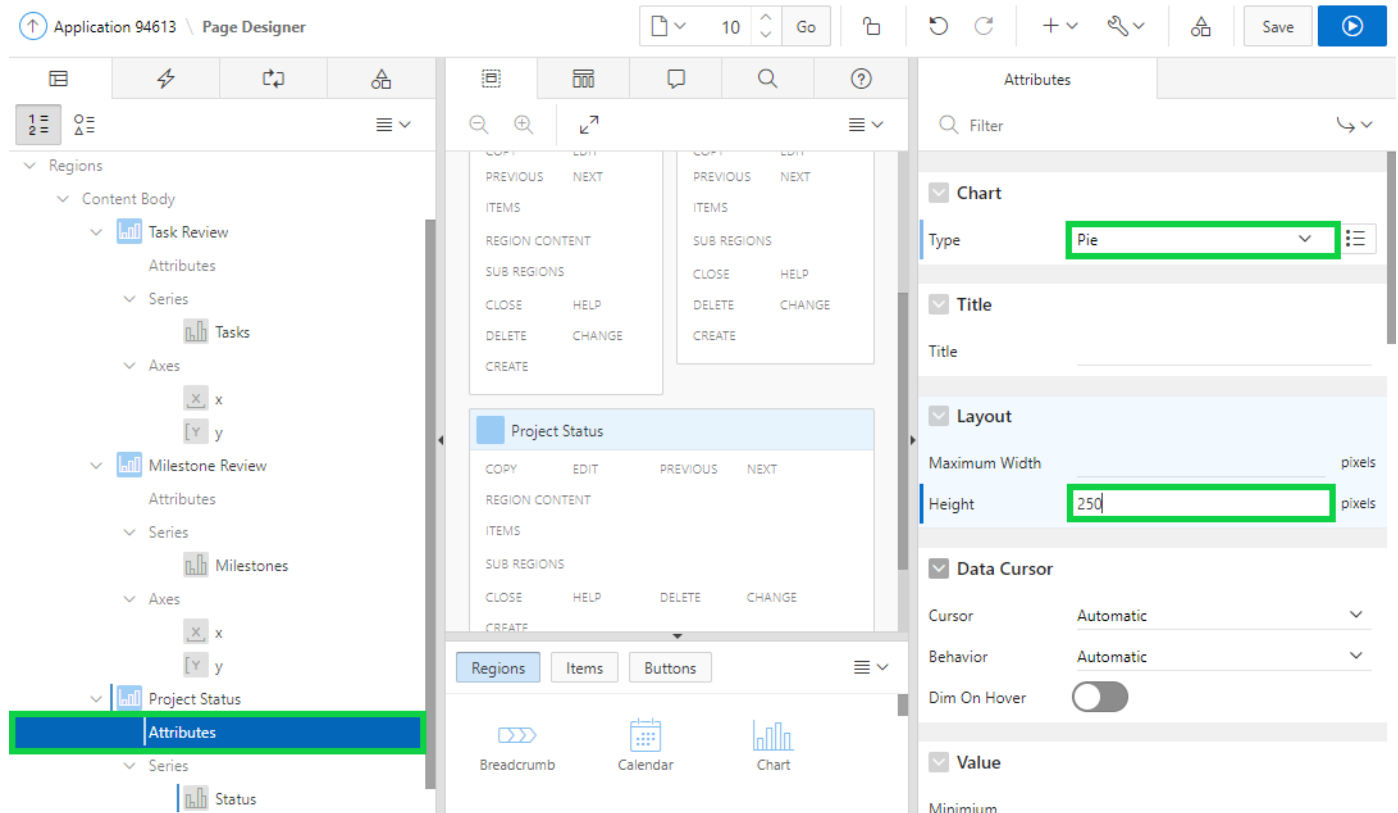
- In the property editor, under Column Mapping, select **DESCRIPTION** for Label and **VALUE** for Value.

The screenshot shows the 'Series' configuration panel in Oracle APEX. At the top, there is a 'Series' title and a search filter. Below this is the 'Column Mapping' section, which is expanded. It contains a table with the following rows:

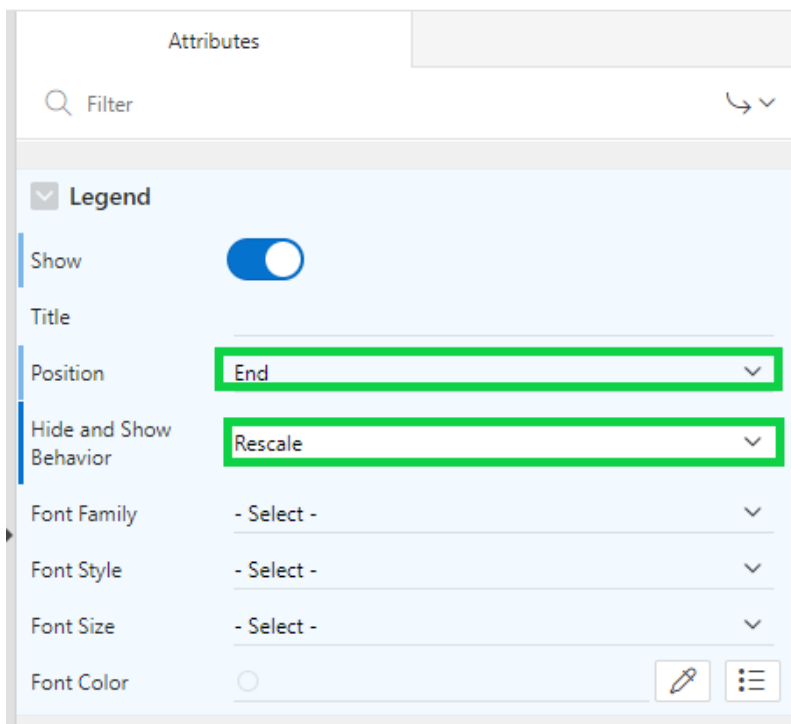
| Property | Value |
|----------------|-------------|
| Series Name | - Select - |
| Label | DESCRIPTION |
| Value | VALUE |
| Z | - Select - |
| Custom Tooltip | - Select - |
| Legend Tooltip | - Select - |
| Label Tooltip | - Select - |
| Custom Column | - Select - |

The 'Label' and 'Value' rows are highlighted with green boxes, indicating the selected column mappings.

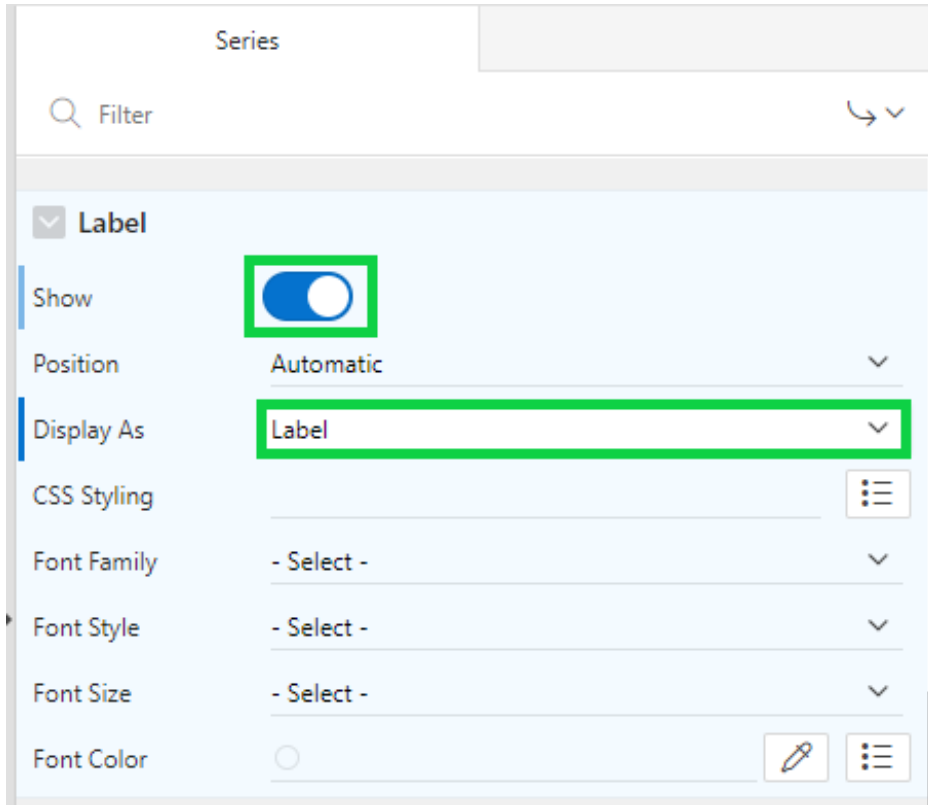
5. Under Rendering > Project Status, select **Attributes**.
In the property editor, for Chart > Type, select **Pie**.
For Layout > Height, enter **250**.



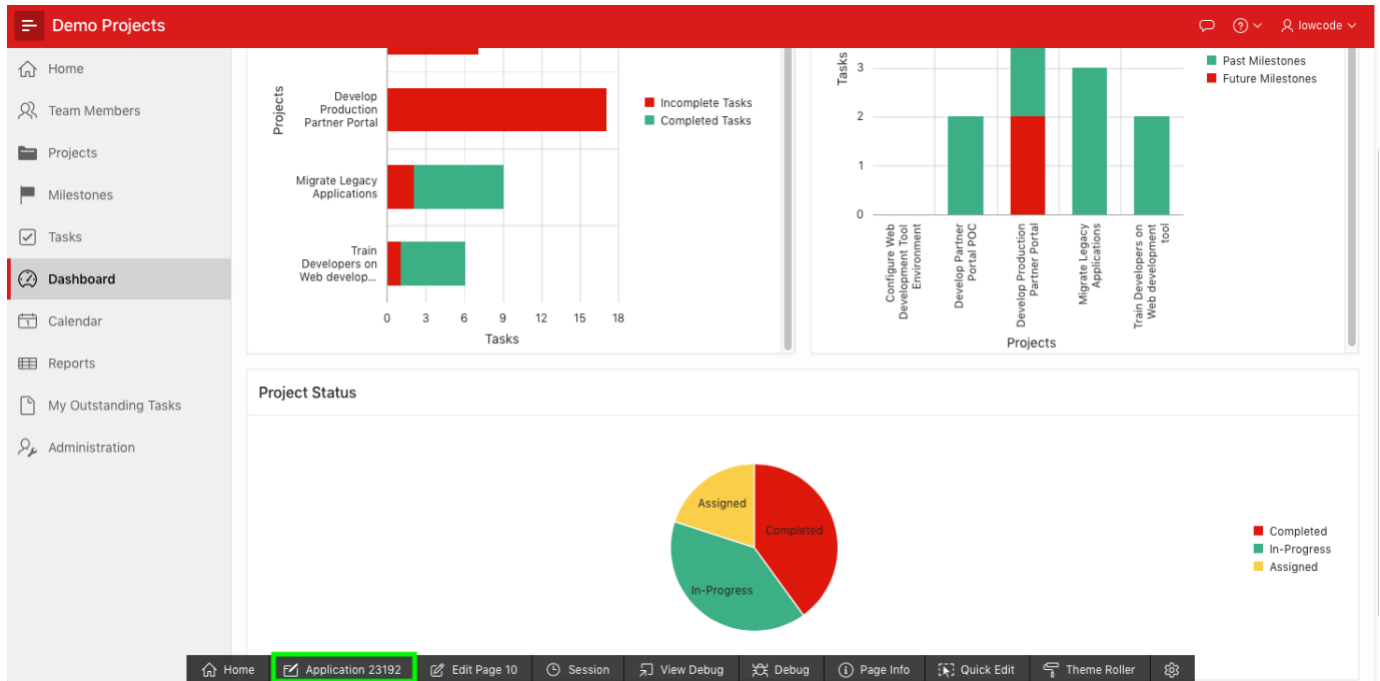
6. Under Legend:
 - Select **End** for Position.
 - Select **Rescale** for Hide and Show Behavior.



7. Under Rendering, expand Project Status > Series and select **Status**.
8. In the property editor, for Label > Show, click to **Enable** the feature. For Label > Display As, select **Label**.



9. Click **Save and Run Page**.
10. The Project Status chart is now displayed in the Dashboard page. In the Developer Toolbar, click **Application < n >**.

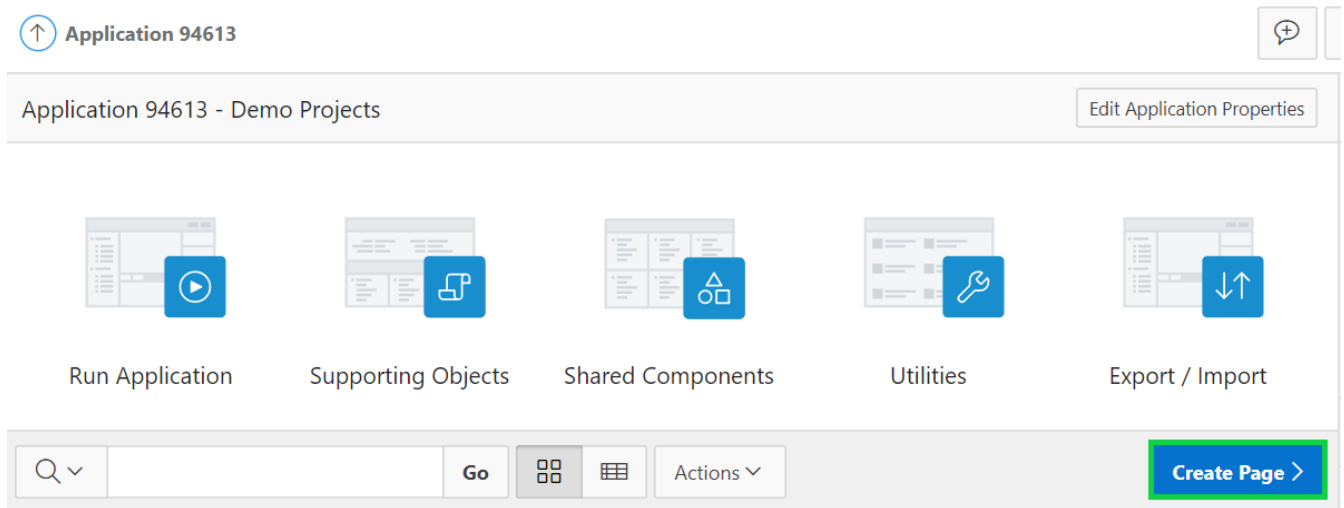


HOL 14-6: Adding the Project Tree

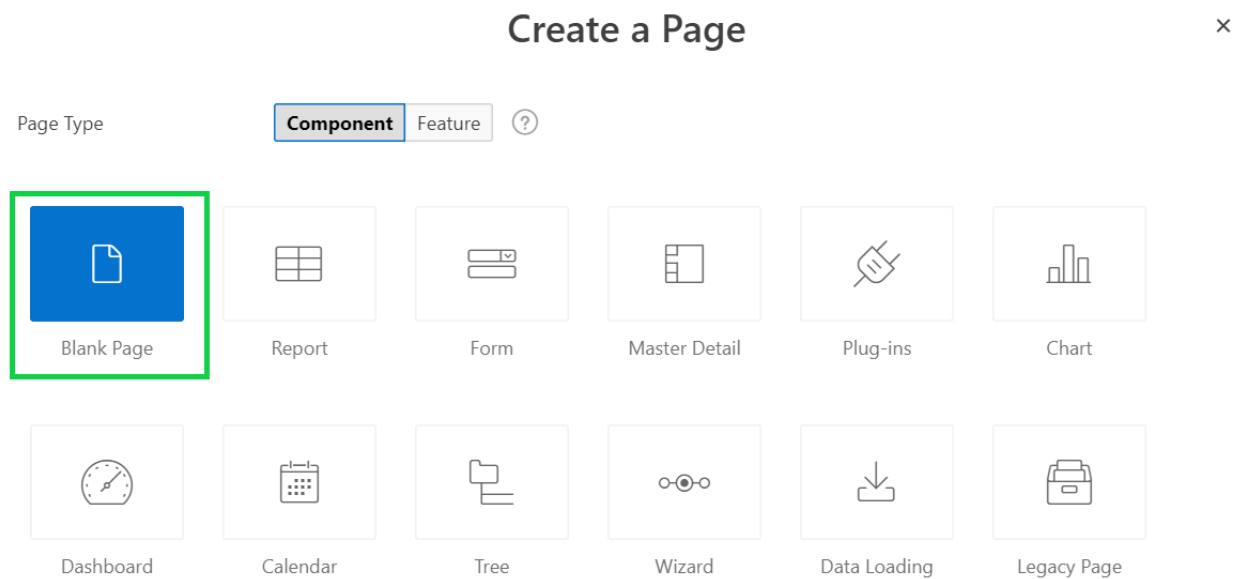
In this hands-on lab, you create the Project Tree. You also create a blank page and then add the Tree region.

Note: You can create a Tree page by using the Create Page wizard.

1. First, create a blank page in the Demo Projects application. In the application home page, click **Create Page**.



2. Select **Blank Page**.



3. Enter **Project Tree** for Name.
Select **Breadcrumb** for Breadcrumb and **Reports** for Parent Entry.
Click **Next**.

Create a Blank Page ×

Page Attributes

*

Page Number

16

?

*

Name

Project Tree

?

*

Page Mode

Normal

Modal Dialog

Non-Modal Dialog

?

Page Group

- Select Page Group -

?

Breadcrumb

Breadcrumb

?

Parent Entry

Reports (Page 14)

?

Entry Name

Project Tree

?

> Optional Static Content Regions

<

Cancel

Next >

4. For Navigation Preference, select **Create a new navigation menu entry**.
Select **Reports** for Parent Navigation Menu Entry and click **Next**.

Create a Blank Page

✓

●

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

Milestones

Tasks

Dashboard

Calendar

Reports

... (My Outstanding tasks)

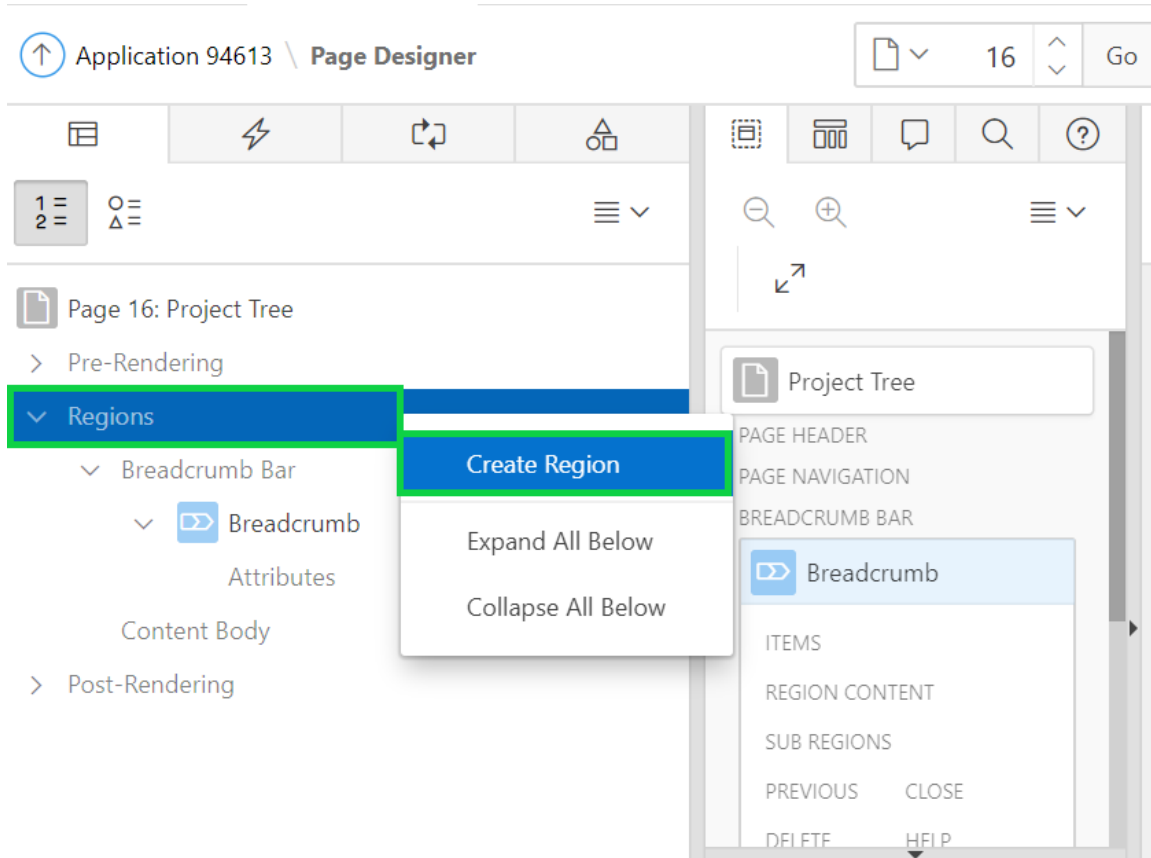
Administration

?

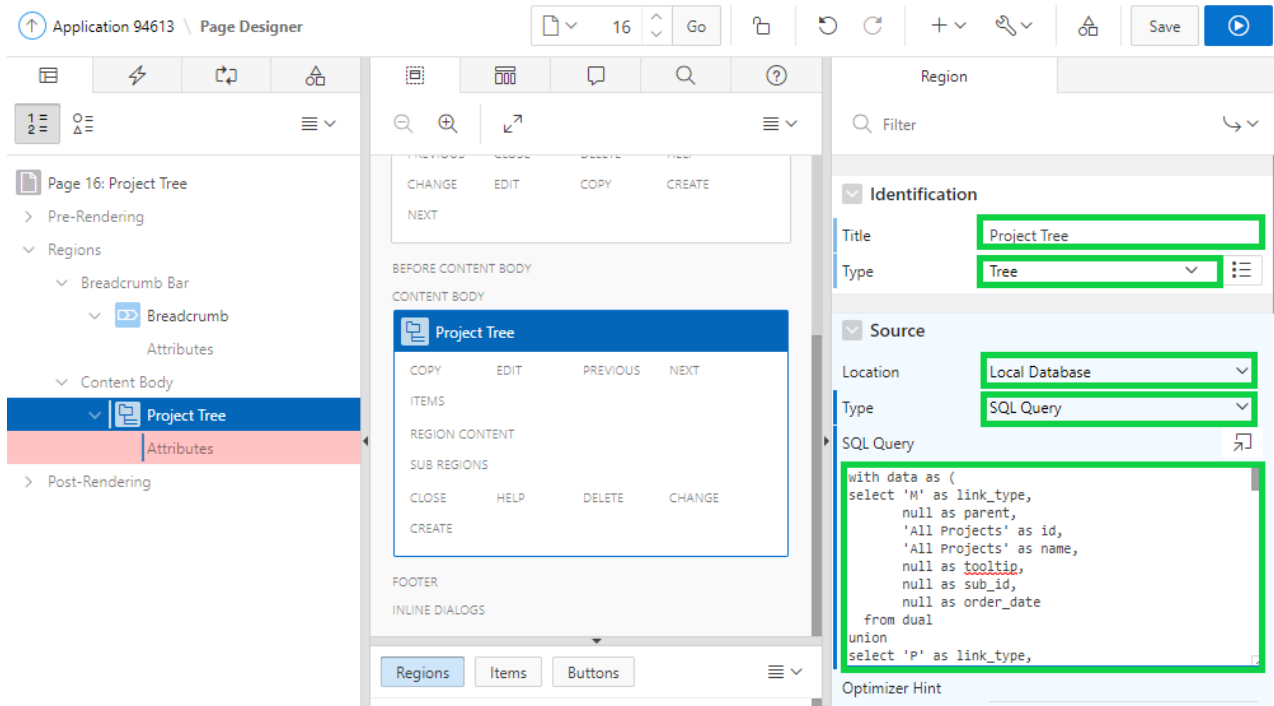
< Cancel

Next >

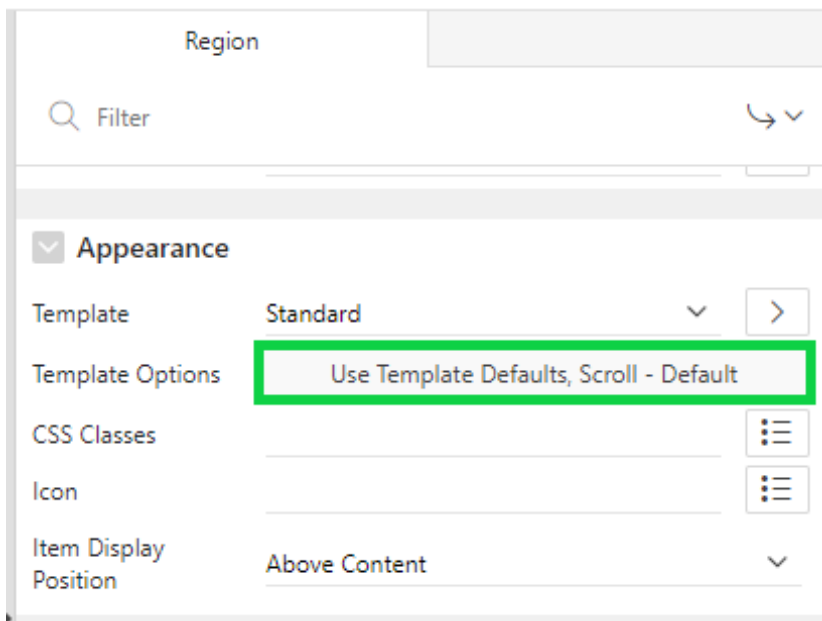
5. On the Confirm page, click **Finish**.
6. Now you create a Tree region.
In the page designer, under Rendering, right-click **Regions** and select **Create Region**.



7. In the property editor, for Identification > Title, enter **Project Tree**.
 For Identification > Type, select **Tree**.
 Under Source, make sure **Local Database** for Location is selected and select **SQL Query** for Type.
 The apex-course-labs.zip file includes Project_Tree.sql file. On your local folder, navigate to the location where you unzipped the zip file and open **Project_Tree.sql**.
 Copy the SQL code from this file and then paste it in to **Source > SQL Query** in the page designer.



8. In the page designer, navigate to Appearance and then click the **Template Options** button.



9. In the Template Options dialog:
- General: Select the **Remove Body Padding** check box.
 - Header: Select **Hidden but accessible**
 - Style: Select **Remove UI Decoration**

Click **OK**.

Template Options

☒ **Common**

☒ Use Template Defaults

☒ Remove Body Padding

☐ Show Maximize Button

☐ Show Region Icon

General

Body Height: Auto - Default

Header: Hidden but accessible

Accent: Default

Style: Remove UI Decoration

☒ **Advanced**

Body Overflow: Scroll - Default

Item Padding: Default

Item Size: Default

Item Width: Default

Cancel OK

10. In the Rendering tree, under Content Body > Project Tree, select **Attributes**.

In the property editor, navigate to Settings and select / enter the following:

- Node Label Column: **TITLE**
- Node Value Column: **VALUE**
- Hierarchy: **Not Computed**
- Node Status Column: **STATUS**
- Hierarchy Level Column: **LEVEL**
- Tooltip: **Database Column**
- Tooltip Column: **TOOLTIP**

Then, click **Save and Run Page**.

The screenshot shows the Oracle APEX Page Designer interface for 'Application 94613'. The 'Page Designer' tab is active, and the 'Project Tree' region is selected in the 'Content Body' region. The 'Attributes' panel on the right is open, showing the 'Settings' section. The following settings are highlighted with green boxes:

- Node Label Column: TITLE
- Node Value Column: VALUE
- Hierarchy: Not Computed
- Node Status Column: STATUS
- Hierarchy Level Column: LEVEL
- Tooltip: Database Column
- Tooltip Column: TOOLTIP
- Activate Node Link with: Single Click
- Link: No Link Defined
- Link Column: - Select -
- Icon CSS Class Column: - Select -
- Default Icon CSS Class: icon-tree-folder

The 'Regions' tab at the bottom shows the 'Project Tree' region is selected, and the 'Calendar' region is also visible.

11. The project tree is now displayed.

The screenshot shows the Oracle APEX Reports page for 'Demo Projects'. The 'Project Tree' report is displayed, showing a hierarchical list of tasks and projects. The 'Reports' section is active, and the 'Project Tree' report is selected. The report content is as follows:

- All Projects
 - Configure Web Development Tool Environment
 - Identify Server Requirements
 - Configure Web Listeners
 - Install Web development tool
 - Configure Web development tool Instance Administration Settings
 - Assign Workspace Administrators
 - Define Workspaces
 - Train Developers on Web development tool
 - Train the Trainers
 - All Developers Trained
 - Migrate Legacy Applications
 - Move Data Structures
 - Redevelop HR Applications
 - Redevelop Project Tracking Applications
 - Develop Partner Portal POC
 - Define Requirements
 - Build Proof-of-Concept
 - Develop Production Partner Portal
 - Define Production App Scope
 - Build Phase 1 of Production Partner Portal App
 - Perform Beta testing with select Partners

The bottom status bar shows the application is 'Application 23192' and the page is 'Page 14'.

12. In the Developer Toolbar, click **Application < n >**.



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