



Oracle Application Express: Developing Database Web Applications

Hands-On-Labs Guide

Unit 3: Creating a Database Application

This exercise includes two hands-on-labs.

HOL 3-1 Creating a Database Application from Scratch: In this hands-on-lab, you will create a database Web application, Demo Projects. You will extend and improve this application later.

HOL 3-2 Creating a Database Application from a Spreadsheet: In this hands-on lab, you will use a spreadsheet to create a database Web application, Budget App. You do not extend this application but will use in a later exercise.

HOL 3-1: Creating a Database Application from Scratch

In this lab, you create the initial application using the Create Application wizard to define multiple pages. Now that you have created the underlying tables, you are ready to create a desktop application. You add reports and forms for the tables you created.

Generally, when developing an application, you will not know all of the pages required at the beginning. Therefore, you will only generate a select number of pages initially, and then use the wizard to add additional pages as required. However, for this exercise you will generate most of the pages required for the application up front.

1. Using the Create Application Wizard, create the **Demo Projects** application. Navigate to **App Builder** and then click **Create**.

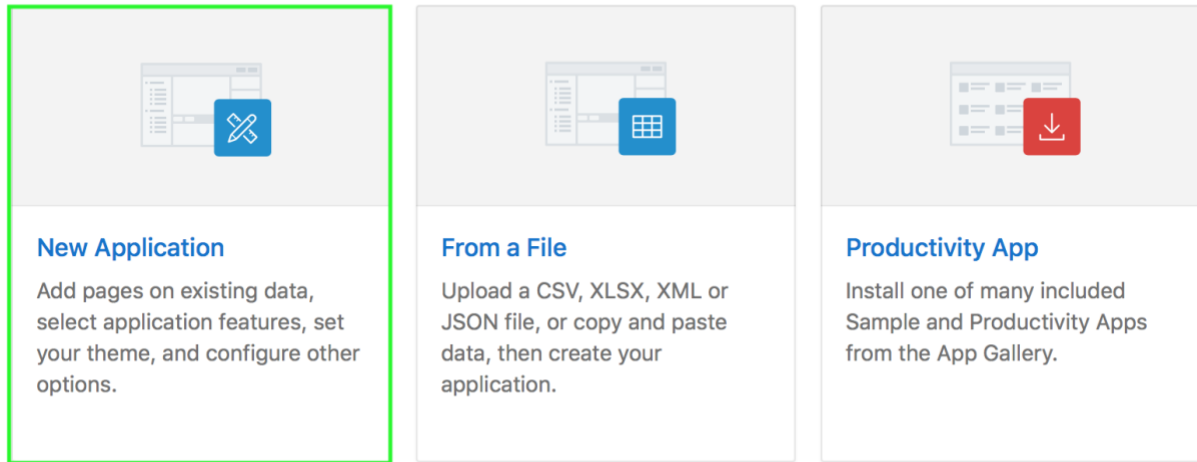
Application	Name	Pages	Type	Updated By	Updated	Run
21637	Sample Reporting	39	Productivity or Sample Application	lowcode	25 hours ago	

1 - 1

[Learn more about App Builder](#) [Get Started](#)

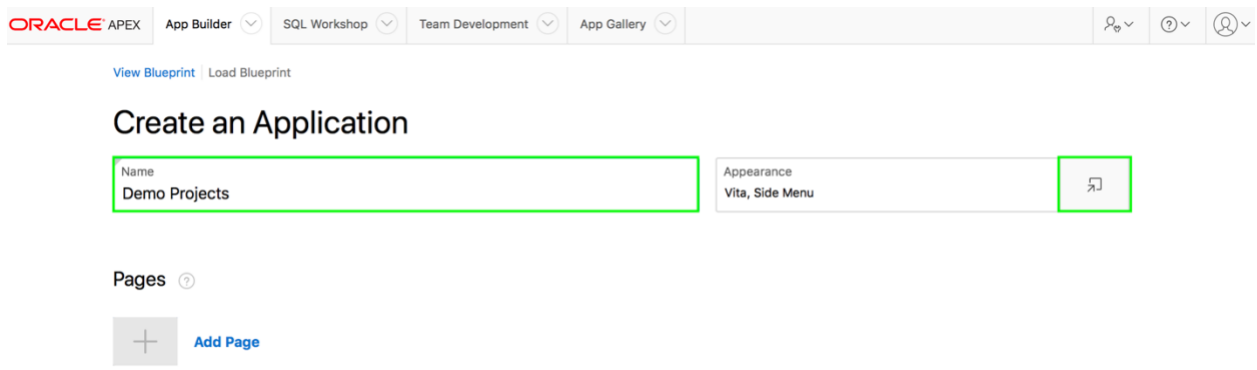
2. You want to create a new application. Click **New Application**.

Create an Application



[Worksheet](#) · [Quick SQL](#) · [Copy Application](#) · [Help](#)


3. For Name, enter **Demo Projects**. For Appearance, click the **Set Appearance** icon.



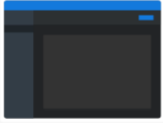
4. In the Appearance dialog, perform the following steps:
 - a) For Theme Style, select **Vita – Red**.
 - b) For Application Icon, click **Choose New Icon**. Click any colored circle at the top and choose an application icon. Then click **Set Application Icon**.
 - c) Click **Save Changes**.

Appearance ×


Theme Style




Vita




Vita - Dark



Vita - Red




Vita - Slate




Vista

Navigation




Side Menu



Top Menu

Application Icon



?

5. Next, add Report and Form page types for the following tables:

- **DEMO_PROJ_TEAM_MEMBERS**
- **DEMO_PROJECTS**
- **DEMO_PROJ_MILESTONES**
- **DEMO_PROJ_TASKS**

Click **Add Page**.

ORACLE APEX
App Builder
SQL Workshop
Team Development
App Gallery
⌵

[View Blueprint](#)
[Load Blueprint](#)


Create an Application

Name

Demo Projects

Appearance

Vita - Red, Side Menu

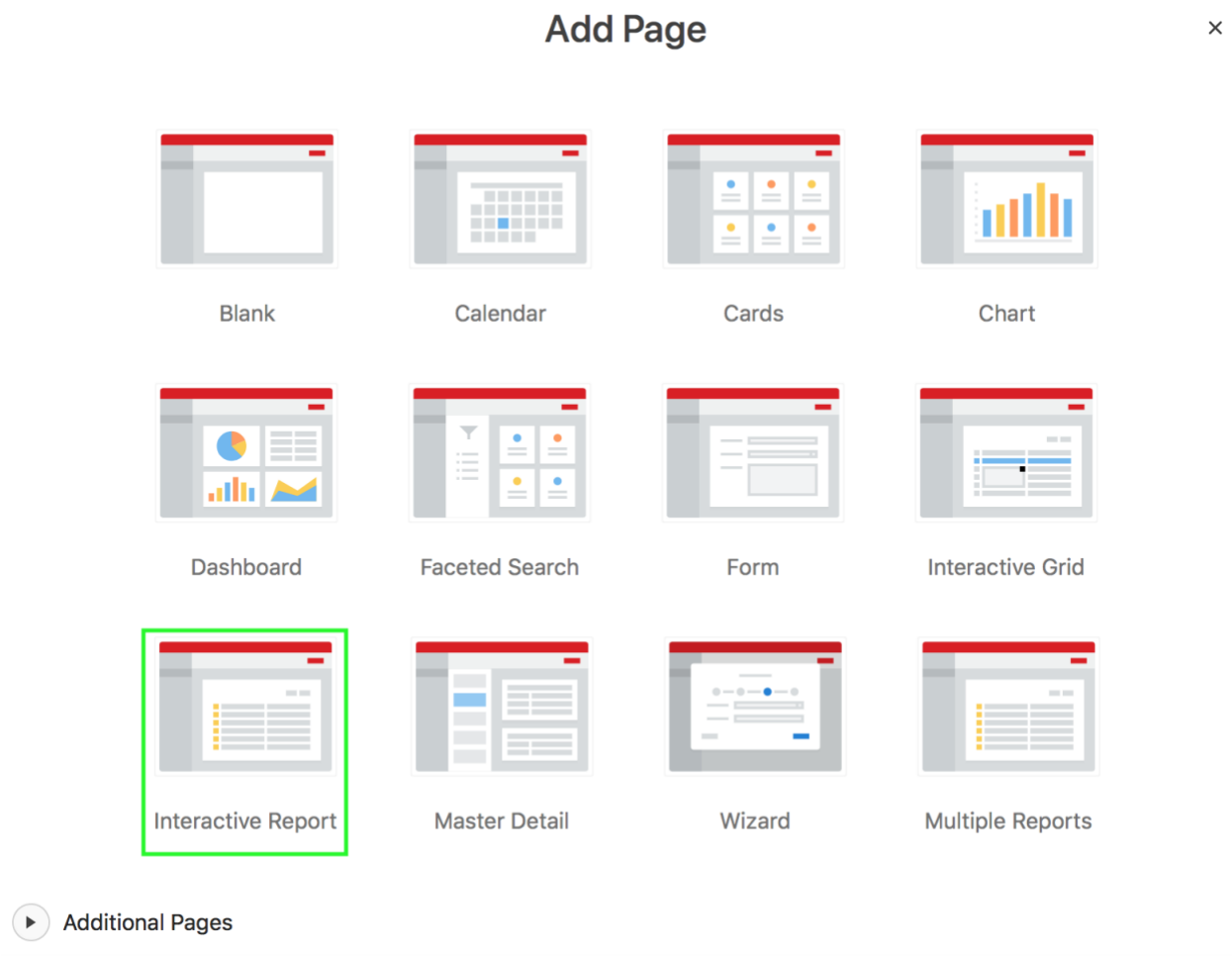


Pages ?

+

Add Page

6. In the Add Page dialog, click **Interactive Report**.



7. In the Add Report Page dialog, select / enter the following and then, click **Add Page**.
 - Page Name: **DEMO_PROJ_TEAM_MEMBERS**.
 - Table or View: **DEMO_PROJ_TEAM_MEMBERS**.
 - **Include Form** checkbox

Add Report Page

×

Page Name
DEMO_PROJ_TEAM_MEMBERS


 Set Icon


Table or View

SQL Query


Interactive Report



Classic Report

Table or View
DEMO_PROJ_TEAM_MEMBERS



☒ **Include Form**

 Advanced

Add Page

8. Add Report and Form page type for the DEMO_PROJECTS table.
Click **Add Page**.

[View Blueprint](#) | [Load Blueprint](#)

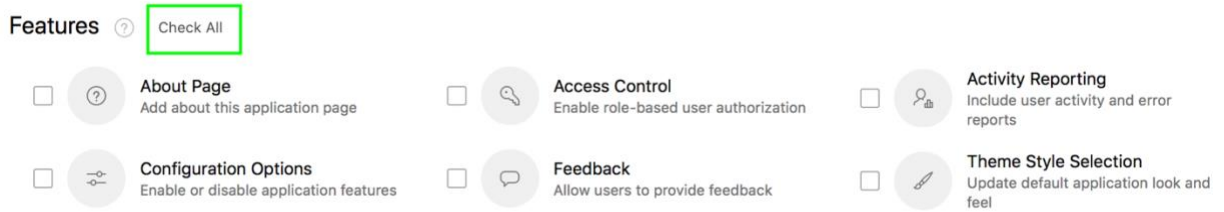
Create an Application

Name Demo Projects	Appearance Vita - Red, Side Menu	
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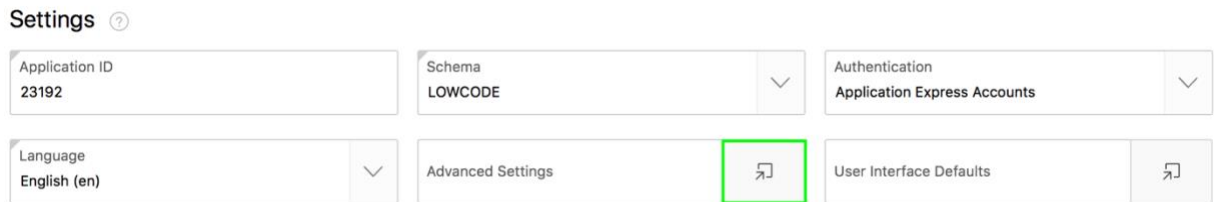
Pages

	Home	Blank	Edit
	DEMO_PROJ_TEAM_MEMBERS	Interactive Report with Form (demo_proj_team_members)	Edit

9. In the Add Page dialog, click **Interactive Report**.
10. In the Add Report Page dialog, select / enter the following and then, click **Add Page**.
 - Page Name: **DEMO_PROJECTS**.
 - Table or View: **DEMO_PROJECTS**
 - **Include Form** checkbox
11. Add Report and Form page type for the DEMO_PROJ_MILESTONES table.
Click **Add Page**.
12. In the Add Page dialog, click **Interactive Report**.
13. In the Add Report Page dialog, select / enter the following and then, click **Add Page**.
 - Page Name: **DEMO_PROJ_MILESTONES**
 - Table or View: **DEMO_PROJ_MILESTONES**
 - **Include Form** checkbox
14. Add Report and Form page type for the DEMO_PROJ_TASKS table.
Click **Add Page**.
15. In the Add Page dialog, click **Interactive Report**.
16. In the Add Report Page dialog, select / enter the following and then, click **Add Page**.
 - Page Name: **DEMO_PROJ_TASKS**
 - Table or View: **DEMO_PROJ_TASKS**
 - **Include Form** checkbox
17. Click **Check All** next to Features.



18. Under Settings, select **Advanced Settings**.



19. Enter / select the following in advanced settings and then click **Save Changes**.

- Short Description - **Maintain project details.**
- Description - **This application is used to maintain project details for the team. Projects include milestones, where you can define due dates. Tasks can be defined against a milestone or directly against the project.**
- Add "Built with APEX" to Footer: Yes

×

Advanced Settings

User Interface Attributes

Copy attributes (such as labels, list of values, format masks and more) from other apps within your workspace and apply them to this application.

Apply User Interface Defaults ☐ ?

Copy from Existing Apps ☐ ?

Table Prefixes ?

Description

Short Description ?

Description

This application is used to maintain project details for the team. Projects include milestones, where you can define due dates. Tasks can be defined against a milestone or directly against the project

 ?

Settings

Add "Built with APEX" to Footer ☒ ?

?
Cancel
Save Changes

20. Click **Create Application**. Notice the application creation progress.

21. The Demo Projects application is now created. Click **Run Application**.

ORACLE APEX

App Builder ▼


SQL Workshop ▼

Team Development ▼


App Gallery ▼

↑ Application 23192
?


Application 23192 - Demo Projects
Edit Application Properties




Run Application




Supporting Objects



Shared Components

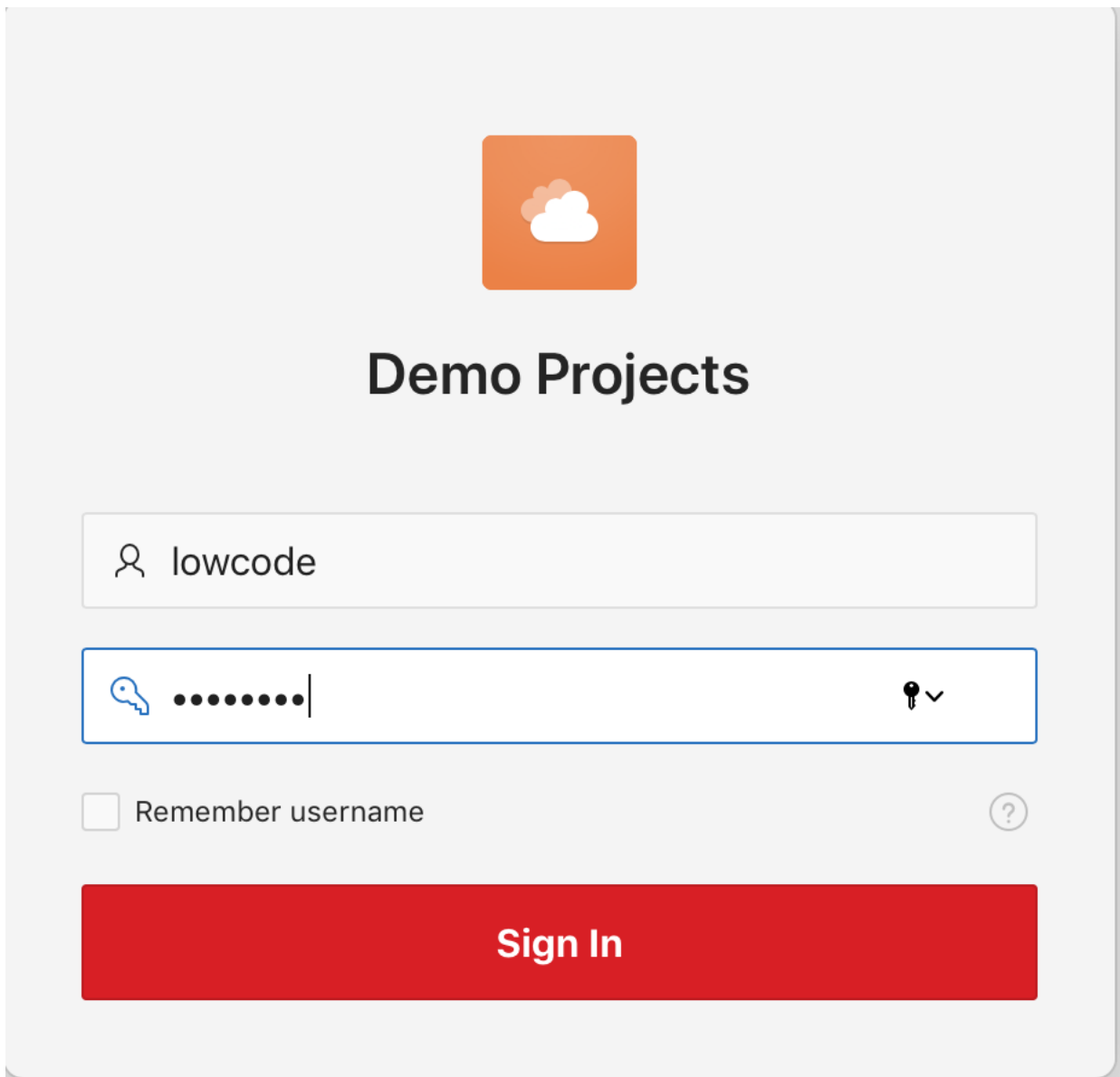



Utilities




Export / Import



22. Log in using your Workspace **username** and **password**. Click **Sign In**.






Demo Projects

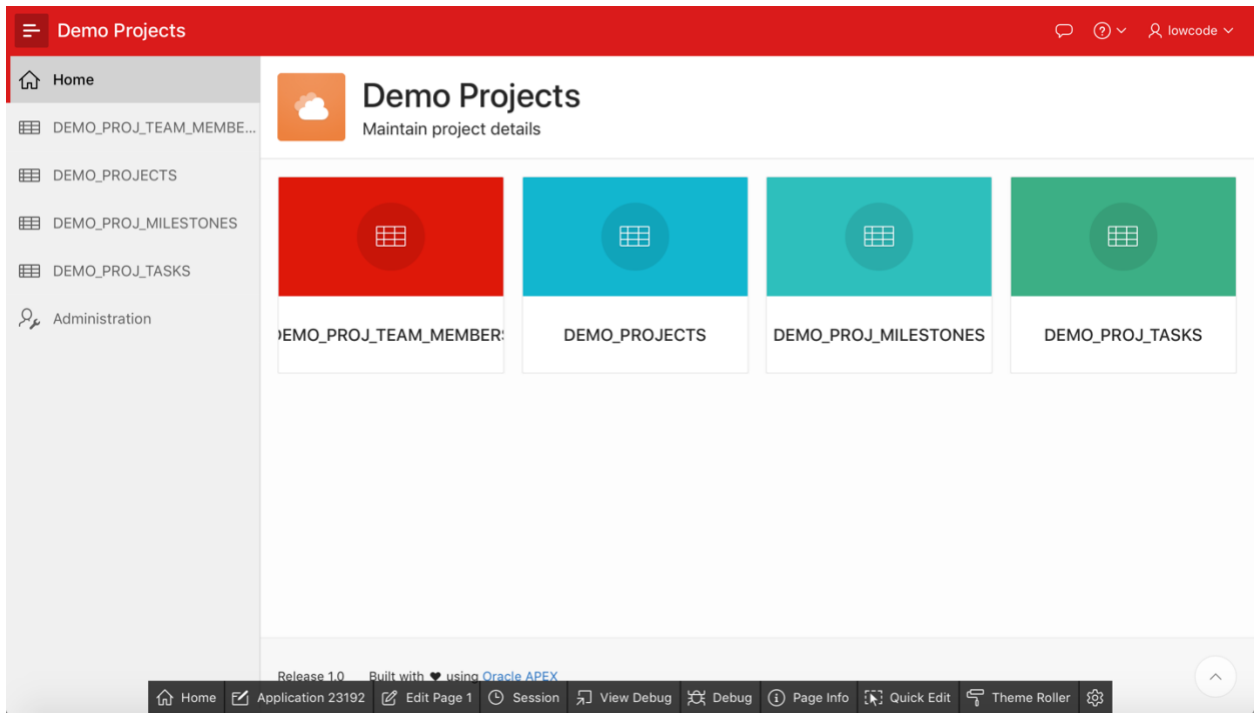
 lowcode

☐ Remember username 

Sign In

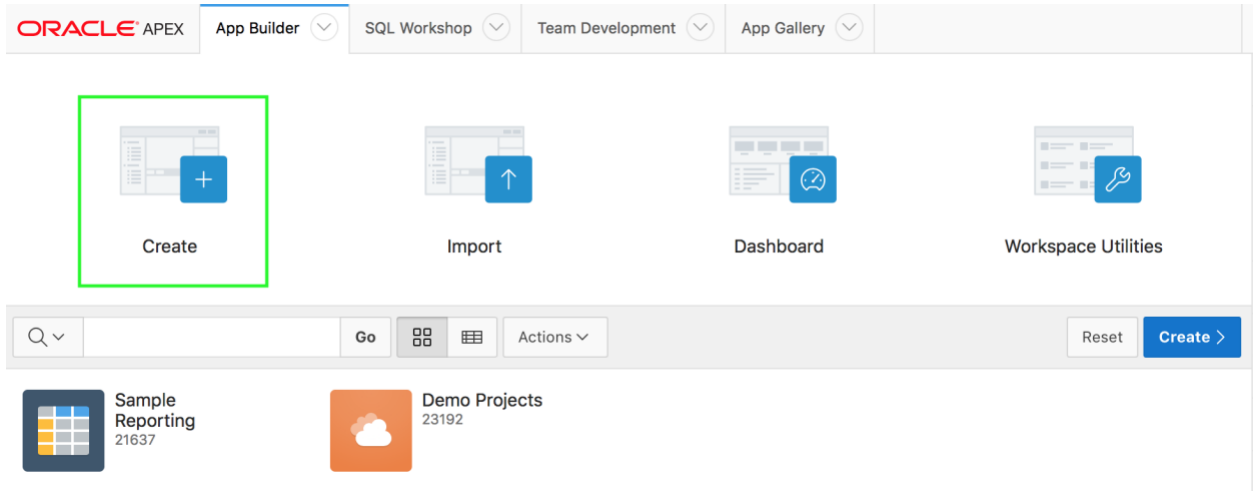
23. Your screen should look like the following:



HOL 3-2: Creating a Database Application from a Spreadsheet

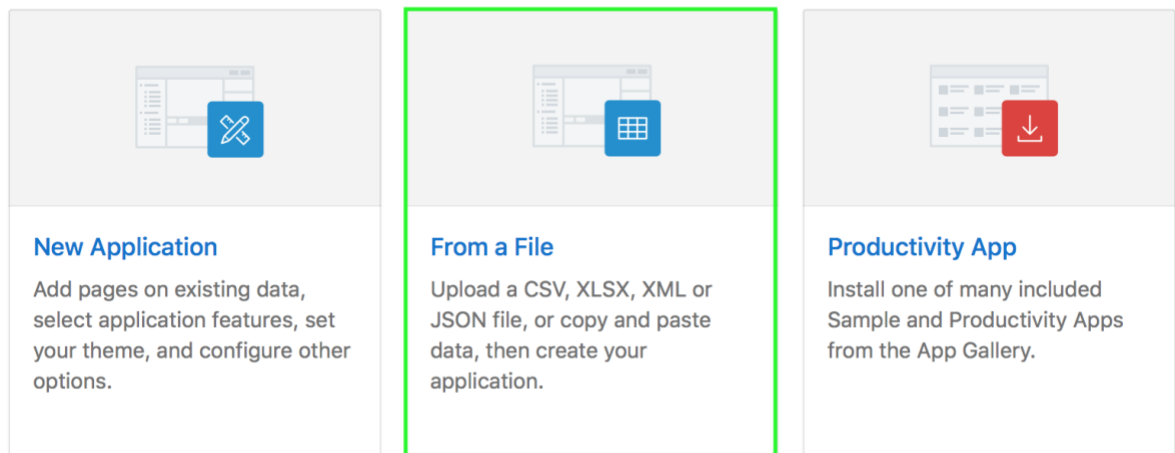
In this lab, you use a spreadsheet to create a database application.

1. Navigate to **App Builder** and click **Create**.



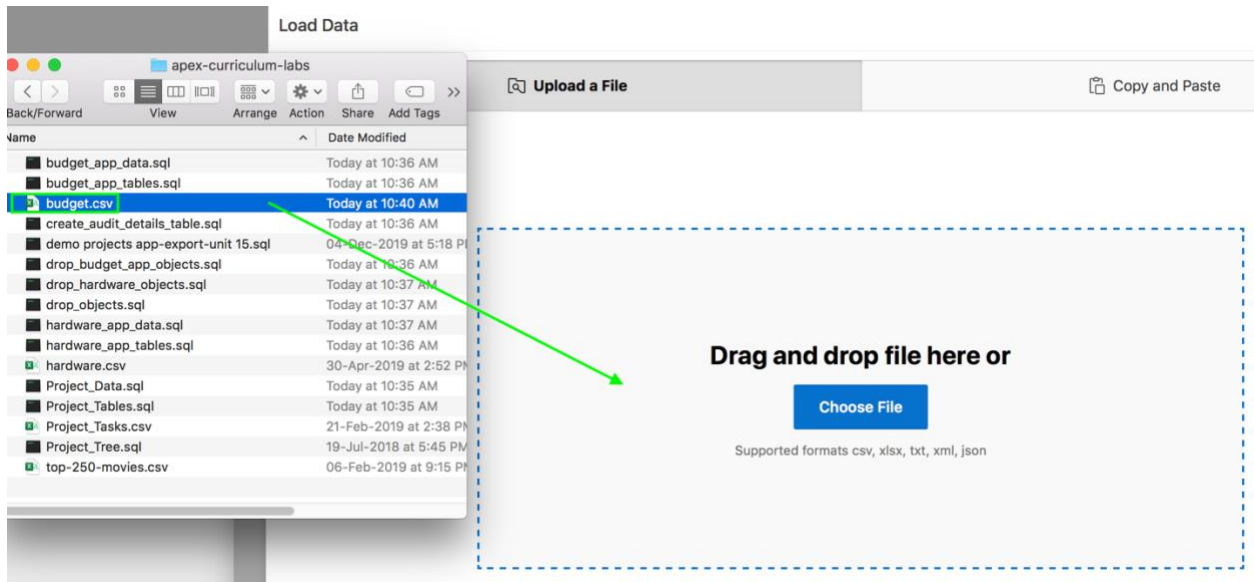
2. Select **From a File**.

Create an Application



[Worksheet](#) · [Quick SQL](#) · [Copy Application](#) · [Help](#)

3. Navigate to your working directory. Drag **budget.csv** and drop it in to the Load Data dialog.



4. Enter **Project_Budget** for Table Name.
Click in the **Error Table Name** field. Notice that the error table name is automatically populated.

5. Click **Configure**.
You now see **Columns to Load**. Verify the data types for each of the columns. For example, make sure that **START_DATE** and **END_DATE** columns have **DATE** Data Type.
You do not have any changes to save. Click **X** to close the Configure dialog.

Configure ✕

Rows to Sample ? 1000 5000 All Rows Treat as Null ?


Preview		Columns to Load			
<input checked="" type="checkbox"/>	Column Name	Data Type	Format Mask	Group Separator	Decimal Character
<input checked="" type="checkbox"/>	PROJECT	VARCHAR2(50)			
<input checked="" type="checkbox"/>	TASK_NAME	VARCHAR2(255)			
<input checked="" type="checkbox"/>	START_DATE	DATE	MM"/"DD"/"RR		
<input checked="" type="checkbox"/>	END_DATE	DATE	MM"/"DD"/"RR		
<input checked="" type="checkbox"/>	STATUS	VARCHAR2(50)			
<input checked="" type="checkbox"/>	ASSIGNED_TO	VARCHAR2(50)			
<input checked="" type="checkbox"/>	COST	NUMBER			.
<input checked="" type="checkbox"/>	BUDGET	NUMBER			.

1 - 8

Close Dialog Column types are based on a sample of the first 74 rows.
Showing 8 columns and a maximum of 100 rows. Save Changes

6. Now, click **Load Data**.

Load Data ✕


 **budget.csv**

Where do you want to load this data?

Load To **New Table** Existing Table

* Table Owner ?

* Table Name ?

Please select the columns to load. Configure 

* Error Table Name ?

Primary Keys **Identity Column** ?

☒ Use Column Data Types ?

Settings

Column Headers ? ☒ First line contains headers

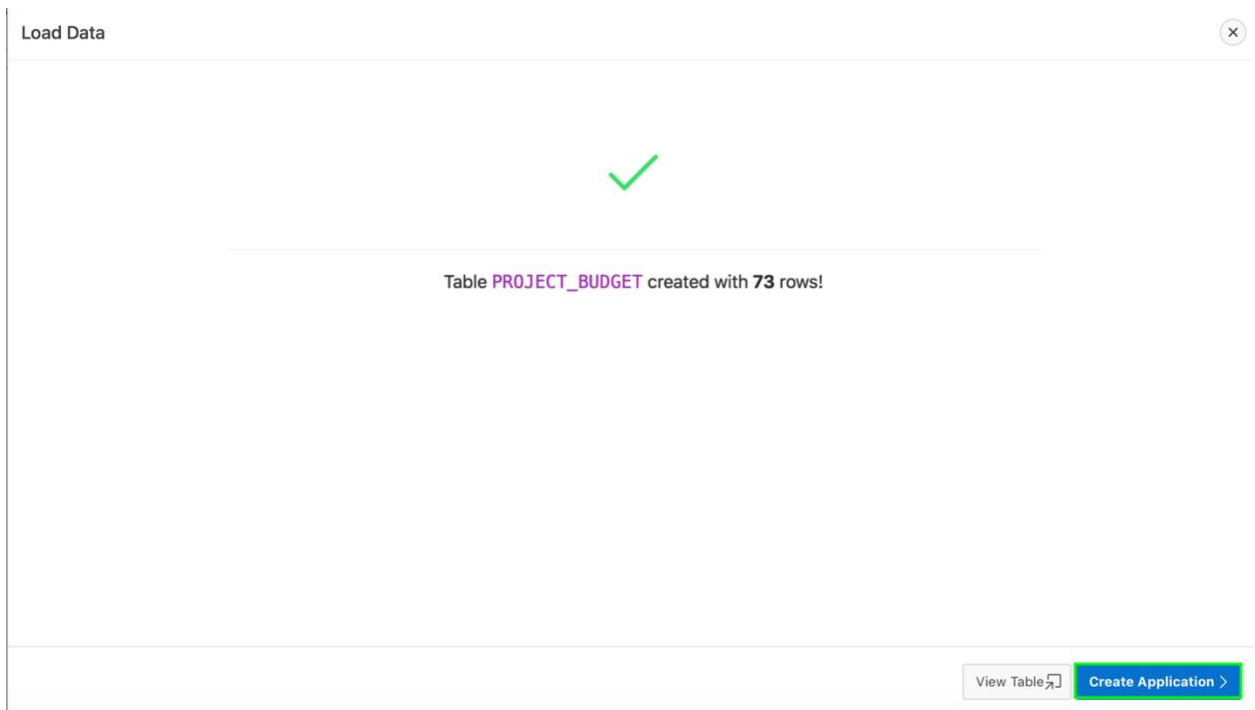
Column Delimiter ? ; | # tab

Enclosed By ? None " '

File Encoding ?

< Cancel Load Data

7. The PROJECT_BUDGET table is created with 73 rows. Now, click **Create Application**.



8. For Name, enter **Budget App**.
Notice that the Home, Dashboard, Faceted Search, Interactive Report with Form, and Calendar pages are created by default.

Create an Application

Name
Budget App

Appearance
Vita, Side Menu

Pages ?

+ Add Page

	Home	Blank	Edit
	Dashboard	Dashboard	Edit
	Project Budget Search	Faceted Search (project_budget)	Edit
	Project Budget Report	Interactive Report with Form (project_budget)	Edit
	Calendar	Calendar (project_budget; project ...)	Edit

9. For Features, click **Check All**.

Features ?

Check All

☒
About Page
Add about this application page

☒
Access Control
Enable role-based user authorization

☒
Activity Reporting
Include user activity and error reports

☒
Configuration Options
Enable or disable application features

☒
Feedback
Allow users to provide feedback

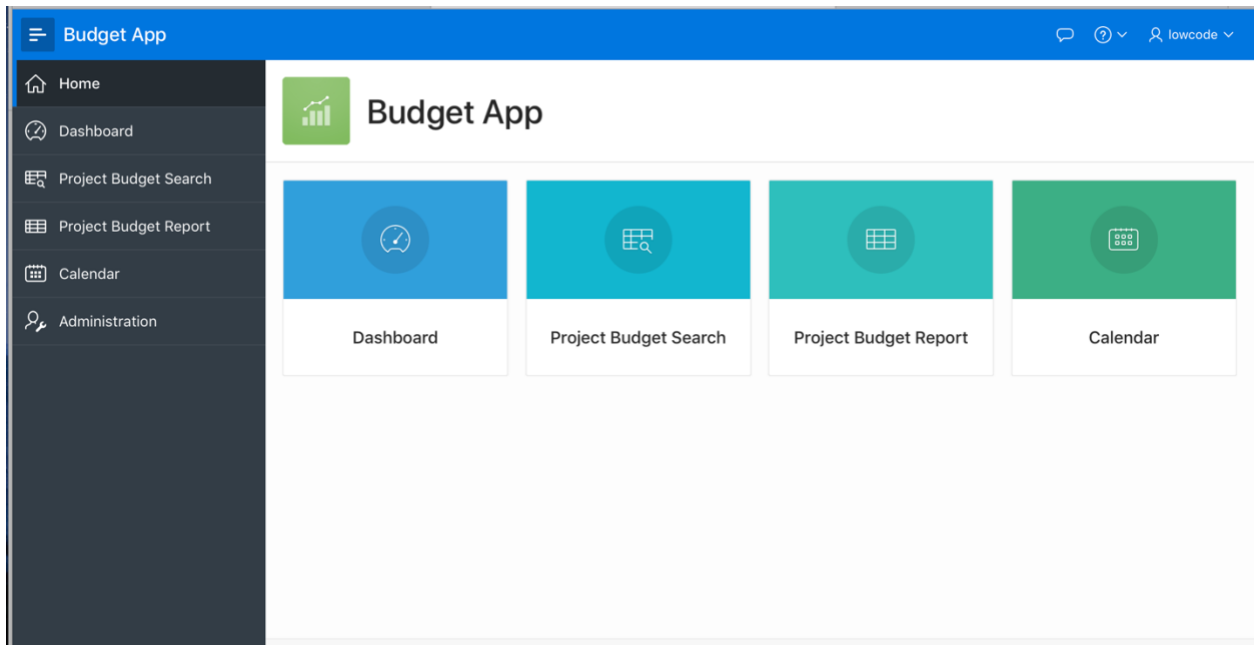
☒
Theme Style Selection
Update default application look and feel

10. Now, click **Create Application**.

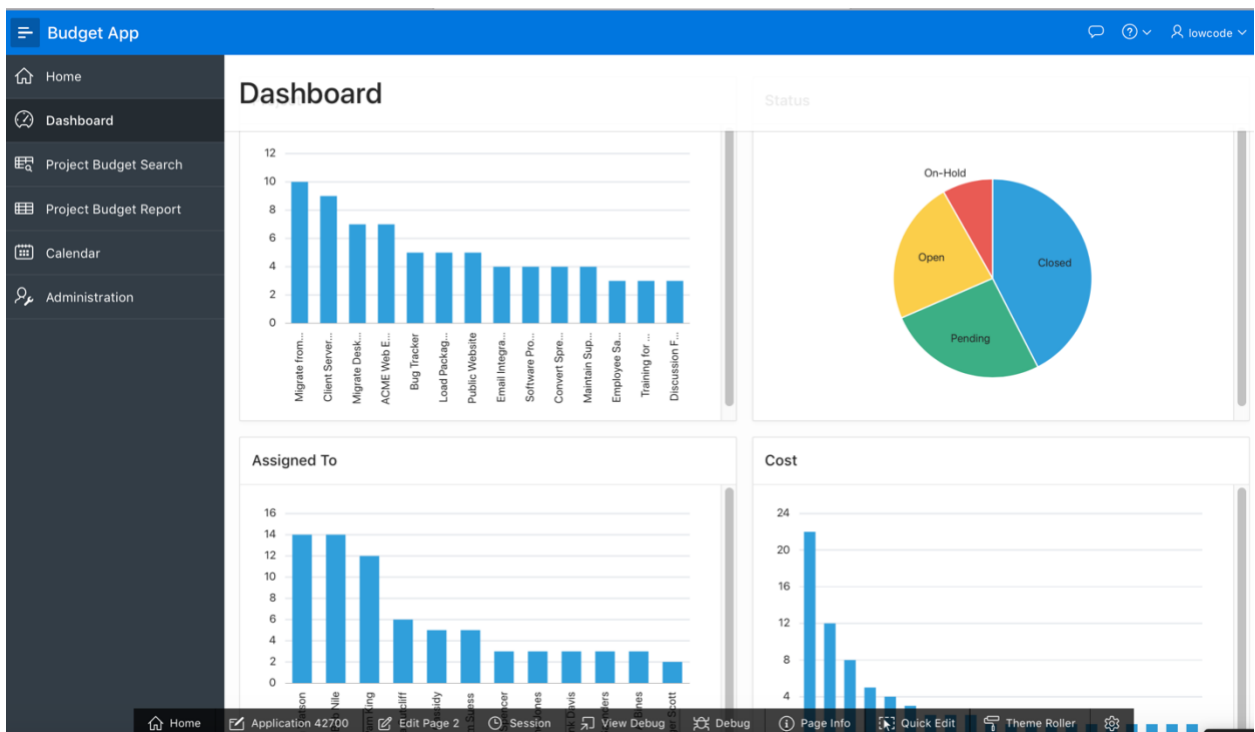
11. Click **Run Application**.

12. Enter your Workspace **Username** and **Password**. Click **Sign In**.

13. Your application should look like the screenshot below:



14. Review the Budget App application that you just created. Check out all the pages that were created by default. For example, the Dashboard page looks like the screenshot below:





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