



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**.

ORACLE APEX App Builder SQL Workshop Team Development App Gallery

Create Import Dashboard Workspace Utilities

Search Go Actions Reset Create >

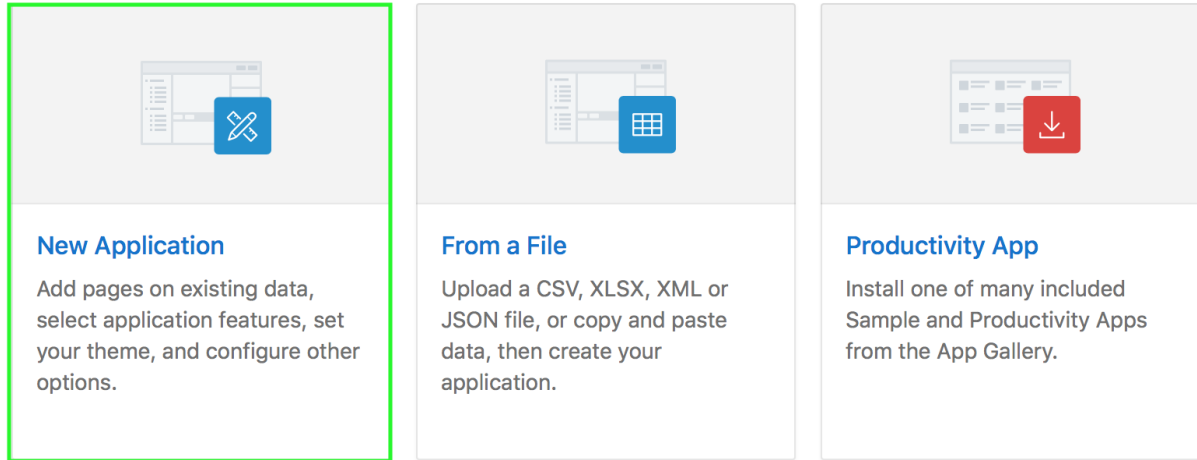
Application	Name	Pages	Type	Updated By	Updated	Run
21637	Sample Reporting	39	Productivity or Sample Application	lowcode	25 hours ago	

1 - 1

Learn more about App Builder

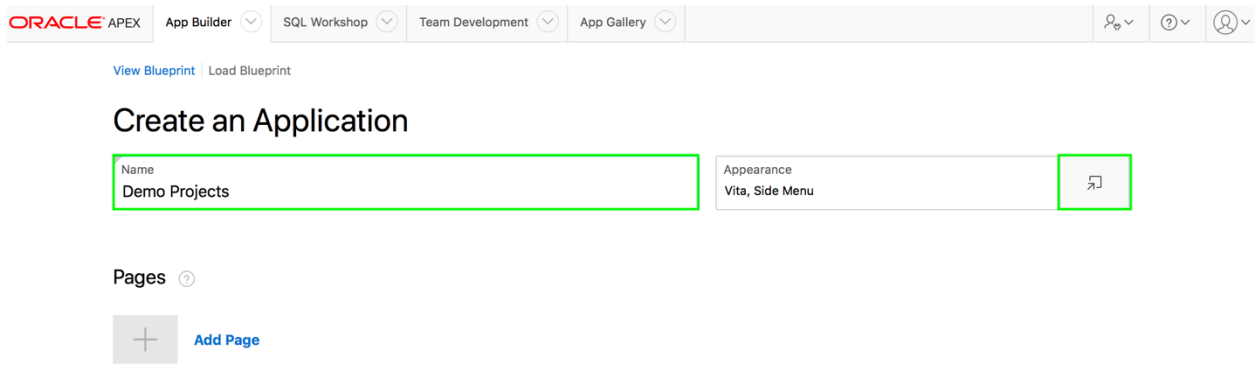
2. You want to create a new application. Click **New Application**.

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:
- For Theme Style, select **Vita**
 - Click **Save Changes**.
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**.

Add Page

Blank Calendar Cards Chart

Dashboard Faceted Search Form Interactive Grid

Interactive Report Master Detail Wizard Multiple Reports

▶ Additional Pages

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

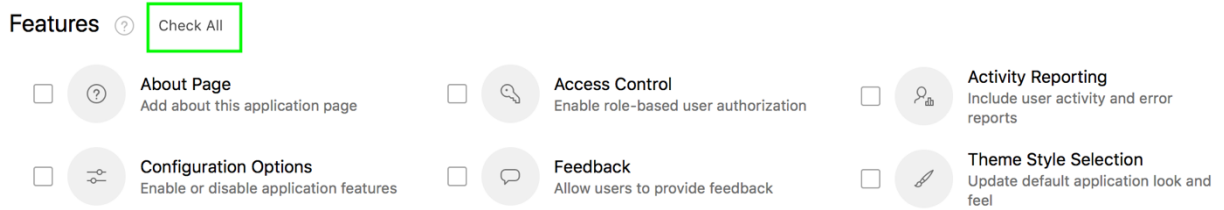
Name Demo Projects	Appearance Vita - Red, Side Menu	
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Pages

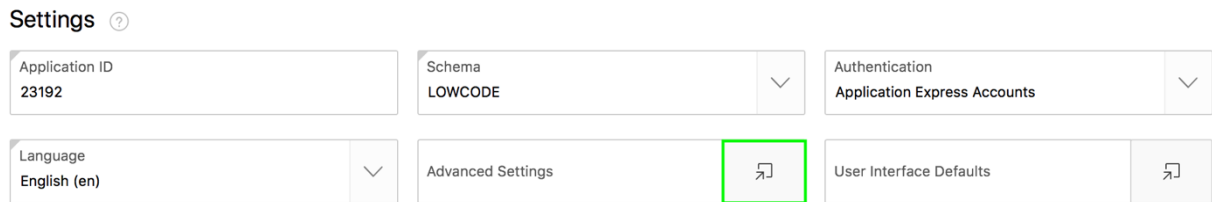
	Add Page
--	--------------------------

	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

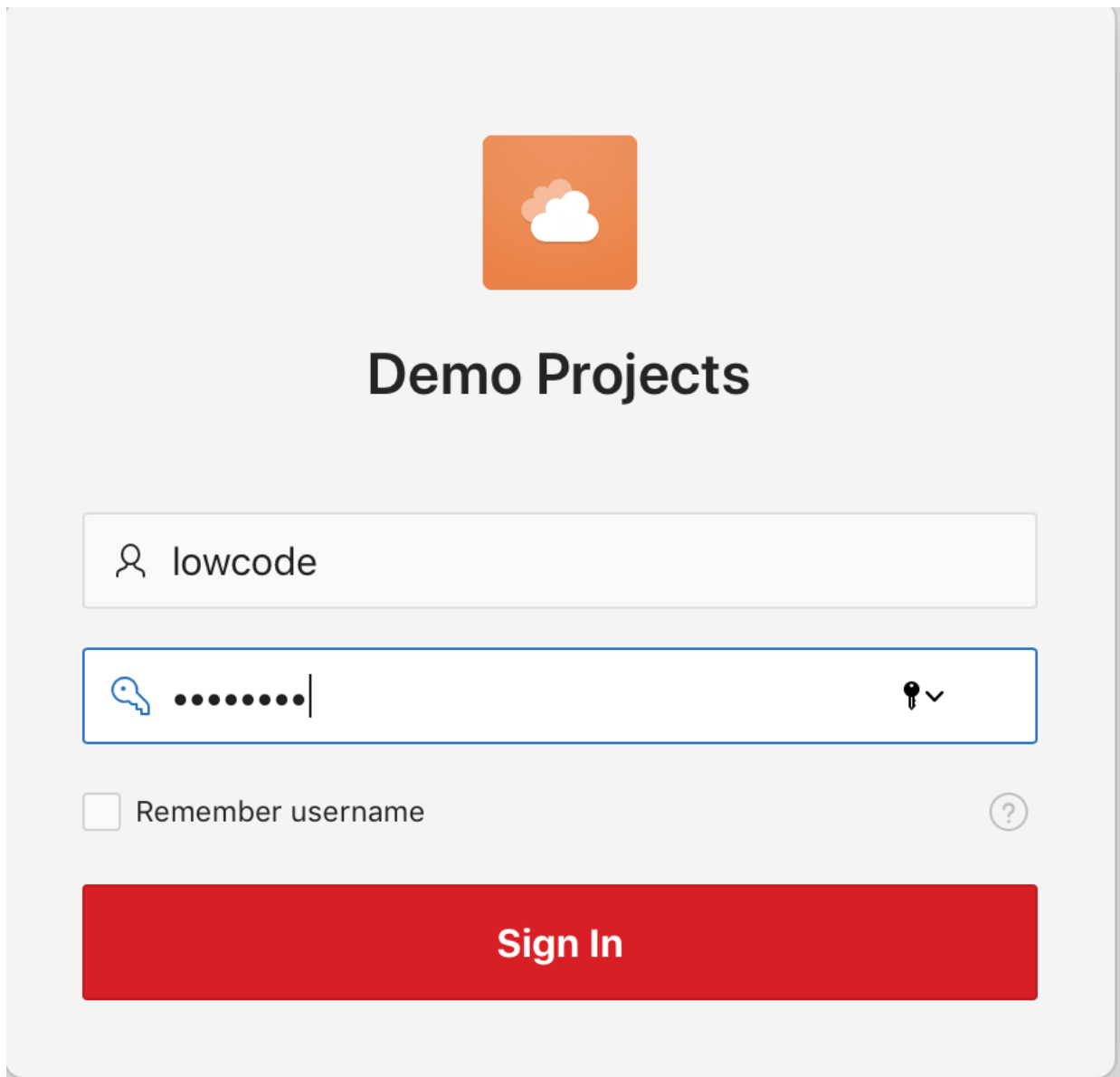


Utilities



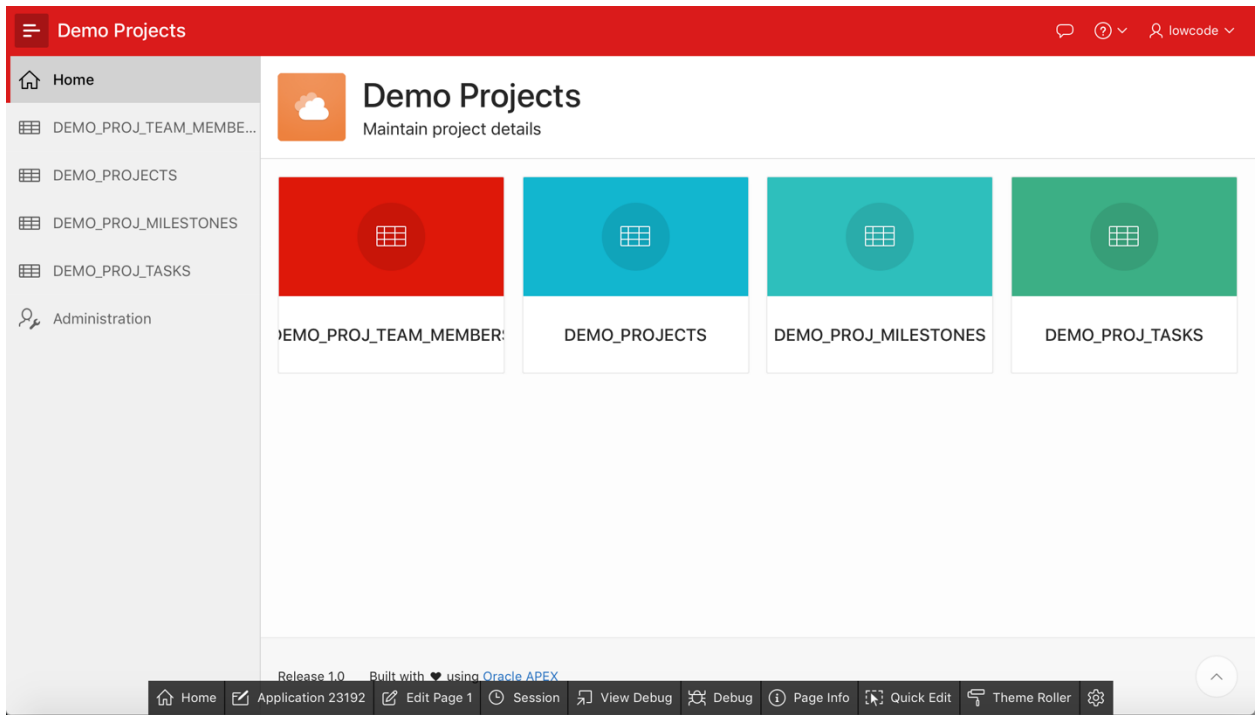
Export / Import

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



The screenshot shows a login interface for 'Demo Projects'. At the top center is an orange square icon with a white cloud. Below it, the text 'Demo Projects' is displayed in a large, bold, black font. Underneath the title is a search bar containing a magnifying glass icon and the text 'lowcode'. Below the search bar is a password field with a key icon on the left, a series of dots for the password, and a key icon with a checkmark on the right. Below the password field is a checkbox labeled 'Remember username' and a circular help icon with a question mark. At the bottom is a large red button with the text 'Sign In' in white.

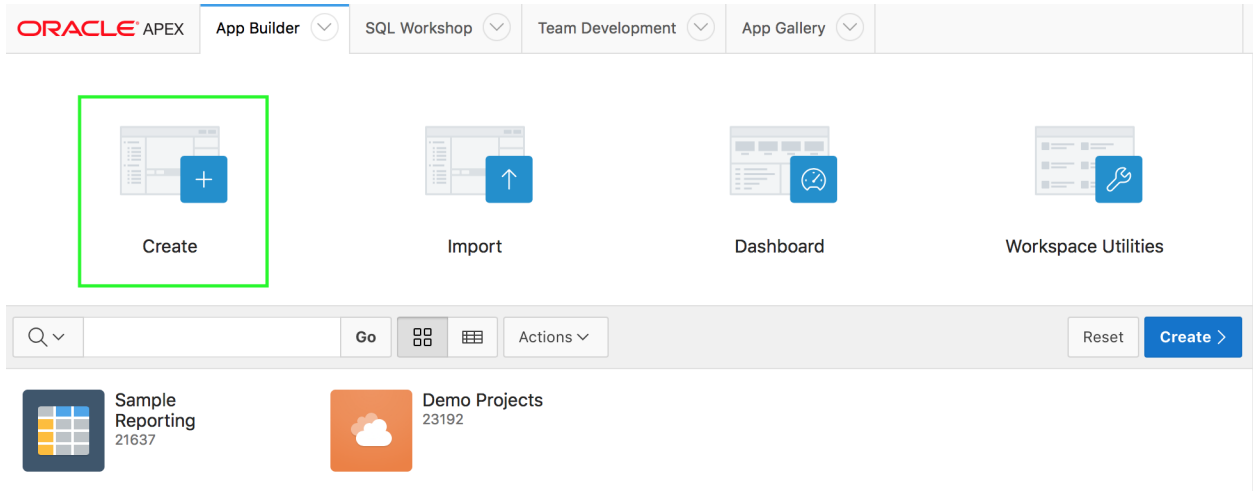
23. Your screen should look like the following:



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

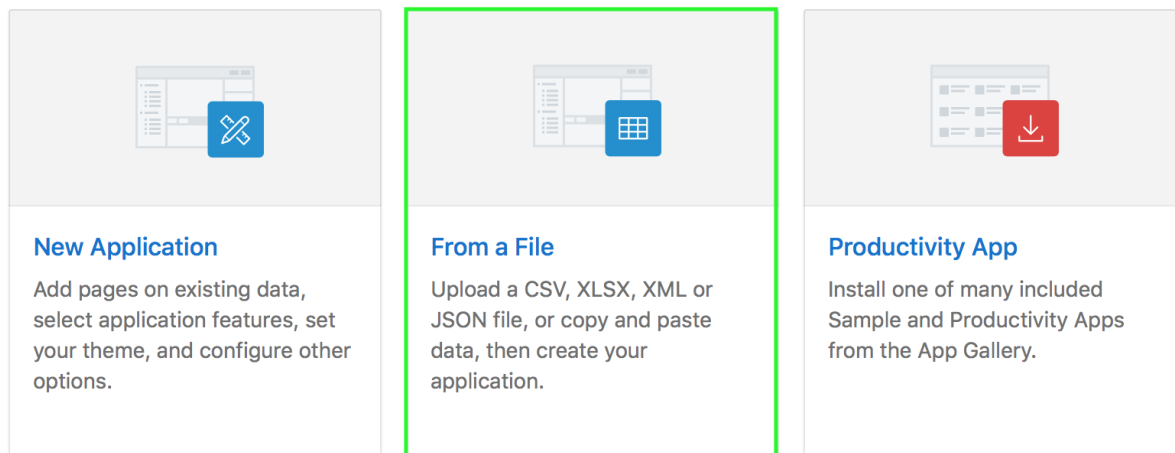
In this lab, you use a spreadsheet to create a database application.

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



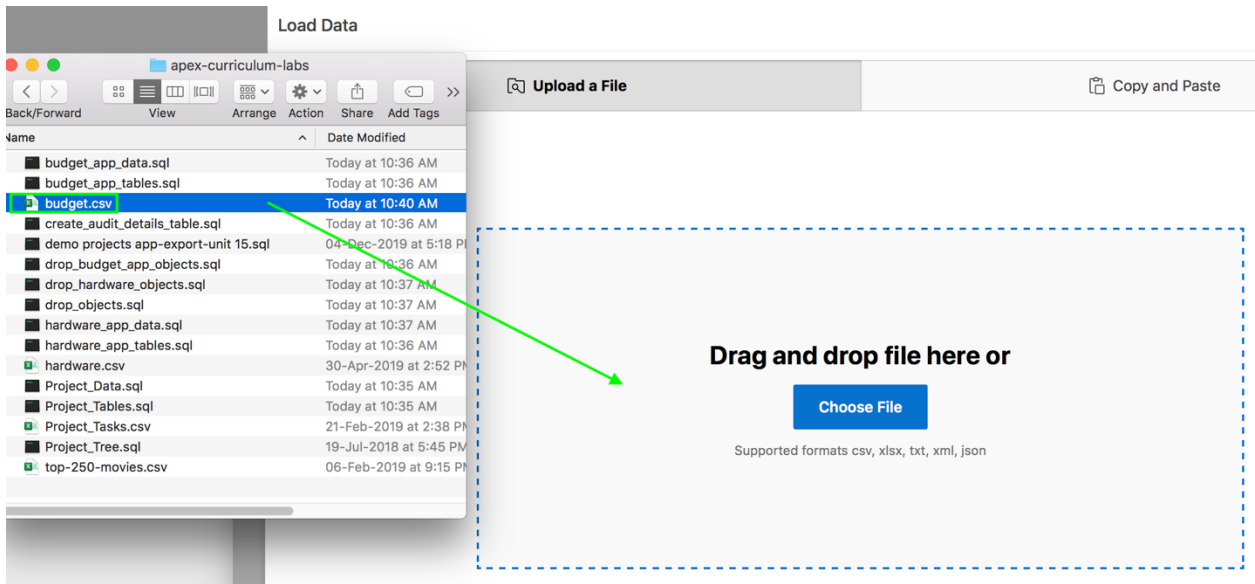
2. Select **From a File**.

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

20010005000All Rows

Treat as Null

	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			.

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 TableExisting Table

Table Owner

LOWCODE

Table Name

PROJECT_BUDGET

Error Table Name

PROJECT_BUDGET_ERR\$

Primary Keys

SYS_GUIDIdentity Column

Use Column Data Types

Please select the columns to load.

Configure

Settings

Column Headers

First line contains headers

Column Delimiter

,

Enclosed By

None"

File Encoding

Unicode UTF-8

Cancel

Load Data

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

Load Data
×





Table **PROJECT_BUDGET** created with **73** rows!

View Table 
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



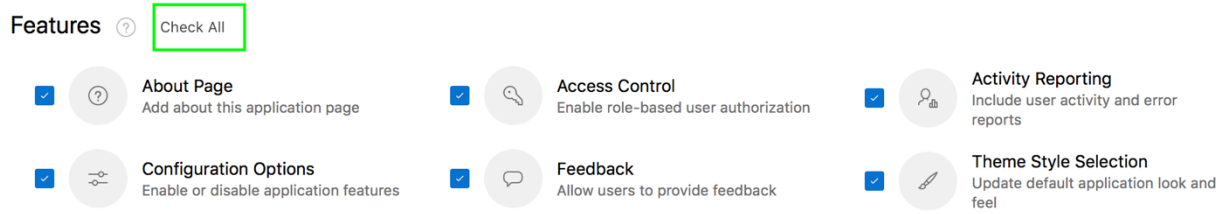
Calendar

Calendar (project_budget; project ...)

Edit



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

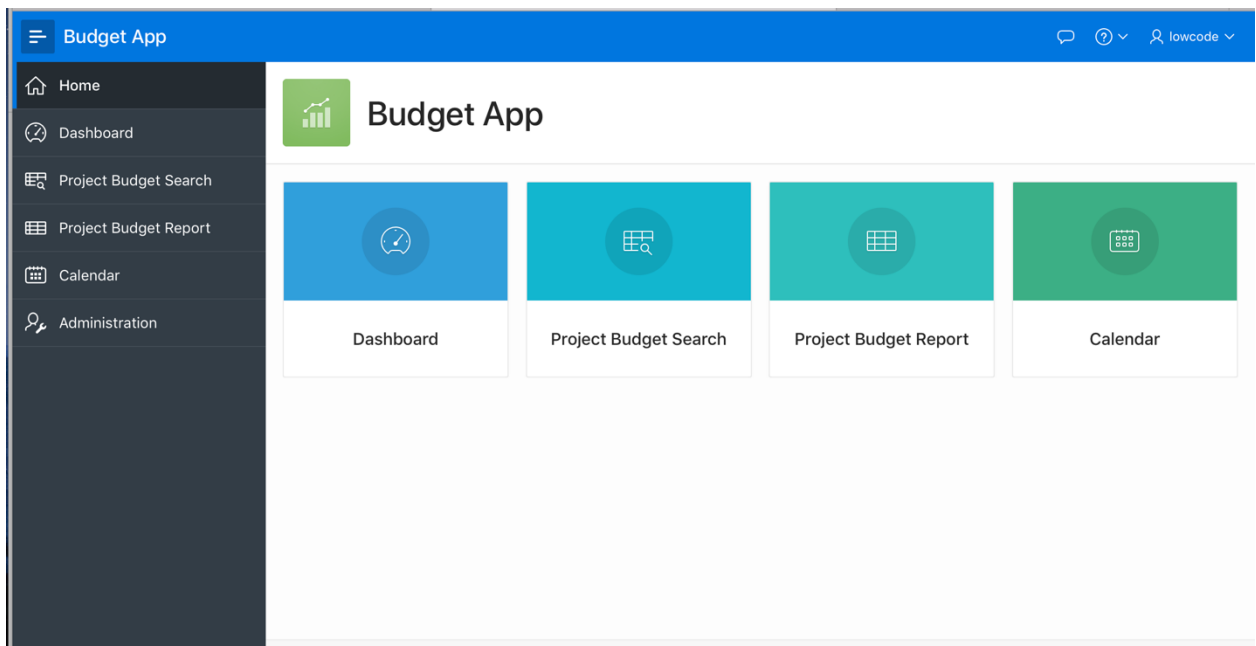


10. Now, click **Create Application**.

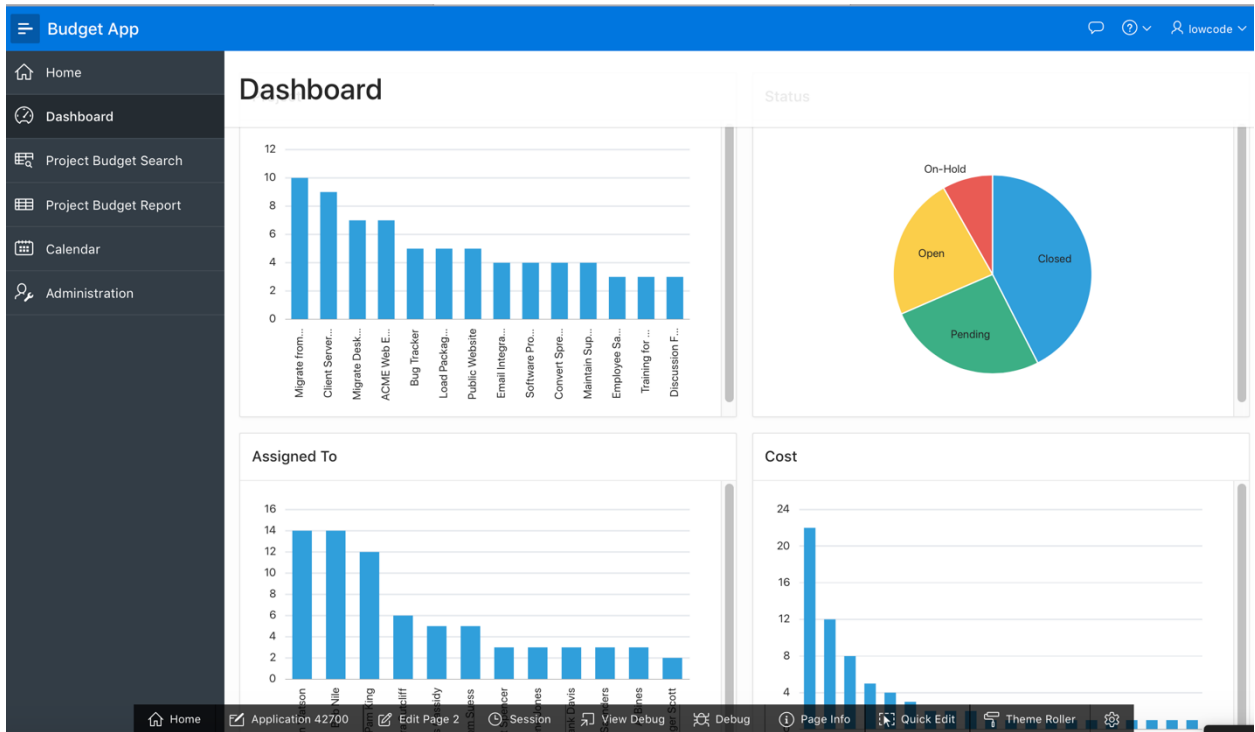
11. Click **Run Application**.

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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