

**ORACLE®**

# Oracle APEX Beginner Hands-On Lab

April, 2019 (v19.1 OTN)

Step Up to  
Modern Cloud  
Development

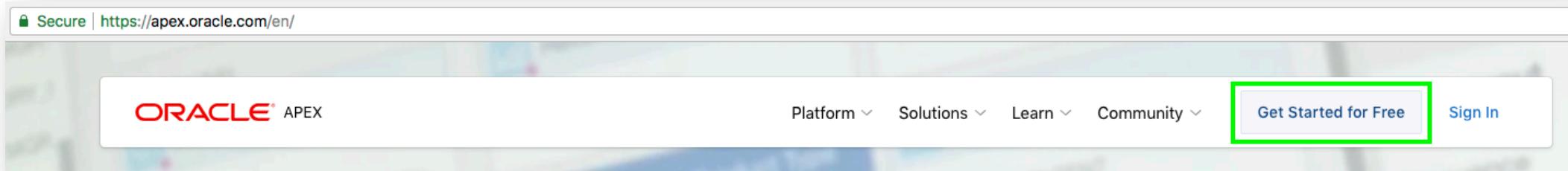


# Getting Started

# Obtaining a Workspace

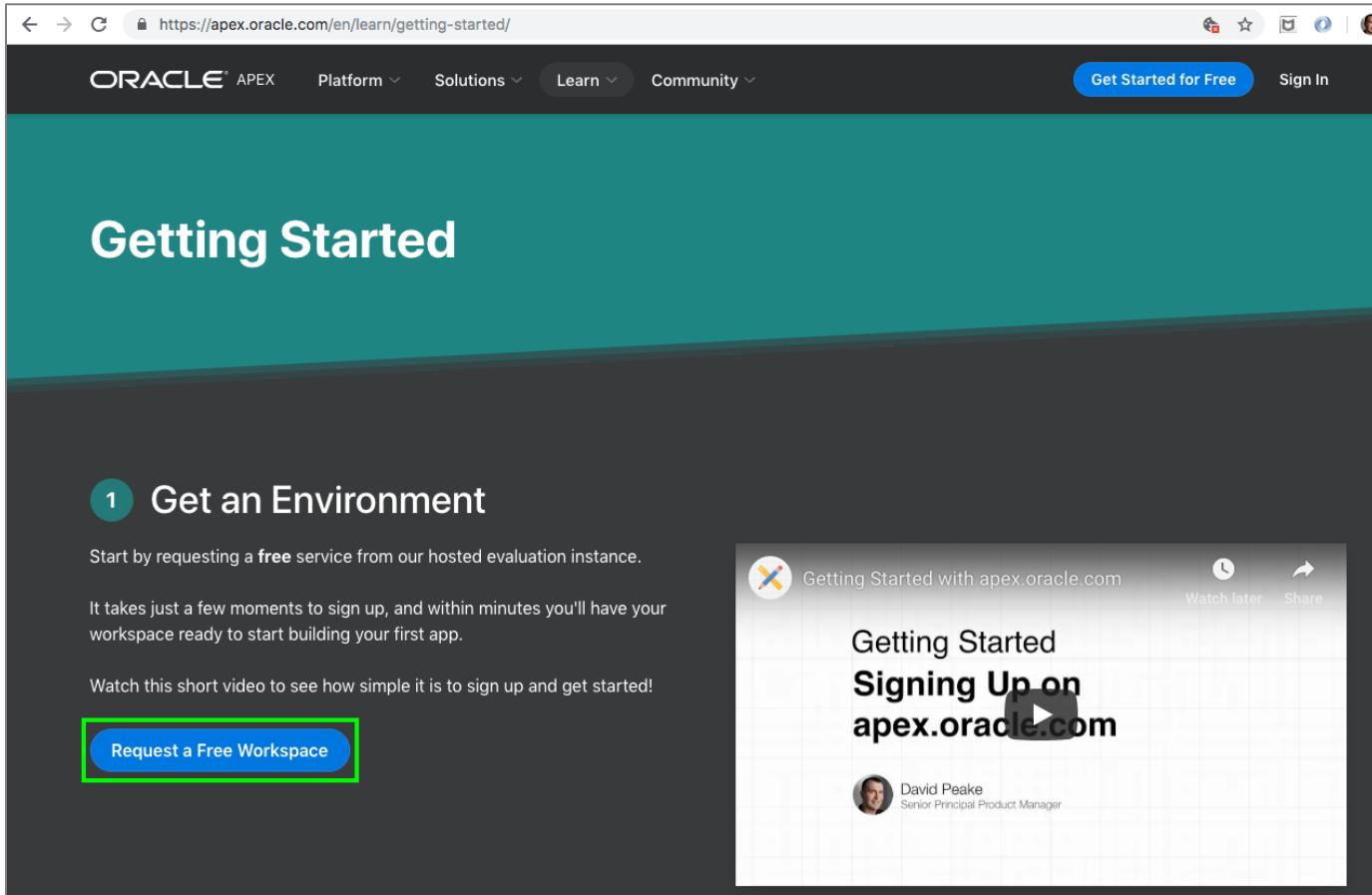
# Step 1a

- Go to <https://apex.oracle.com>
- Click **Get Started for Free**



# Step 1b

- Click Request a Free Workspace



The screenshot shows the Oracle APEX "Getting Started" page at <https://apex.oracle.com/en/learn/getting-started/>. The page has a teal header with the Oracle APEX logo and navigation links for Platform, Solutions, Learn (which is currently selected), and Community. A prominent blue button labeled "Get Started for Free" is visible. The main content area features a large teal section with the heading "Getting Started". Below it, a numbered step "1 Get an Environment" is shown. A callout box highlights the "Request a Free Workspace" button, which is enclosed in a green rectangular border. To the right of the main content, there is a video player window titled "Getting Started with apex.oracle.com" showing a video about signing up. The video thumbnail features a person's face and the text "Getting Started Signing Up on apex.oracle.com".

## Step 2

- What Type of Workspace - Click **Application Development**
- Enter your Identification details – First Name, Last Name, Email, Workspace  
*{Note: For workspace enter a unique name, such as first initial and last name}*
- Enter Schema details – Schema Name  
*{Note: For schema name enter the same name as you entered for workspace}*
- Complete the wizard

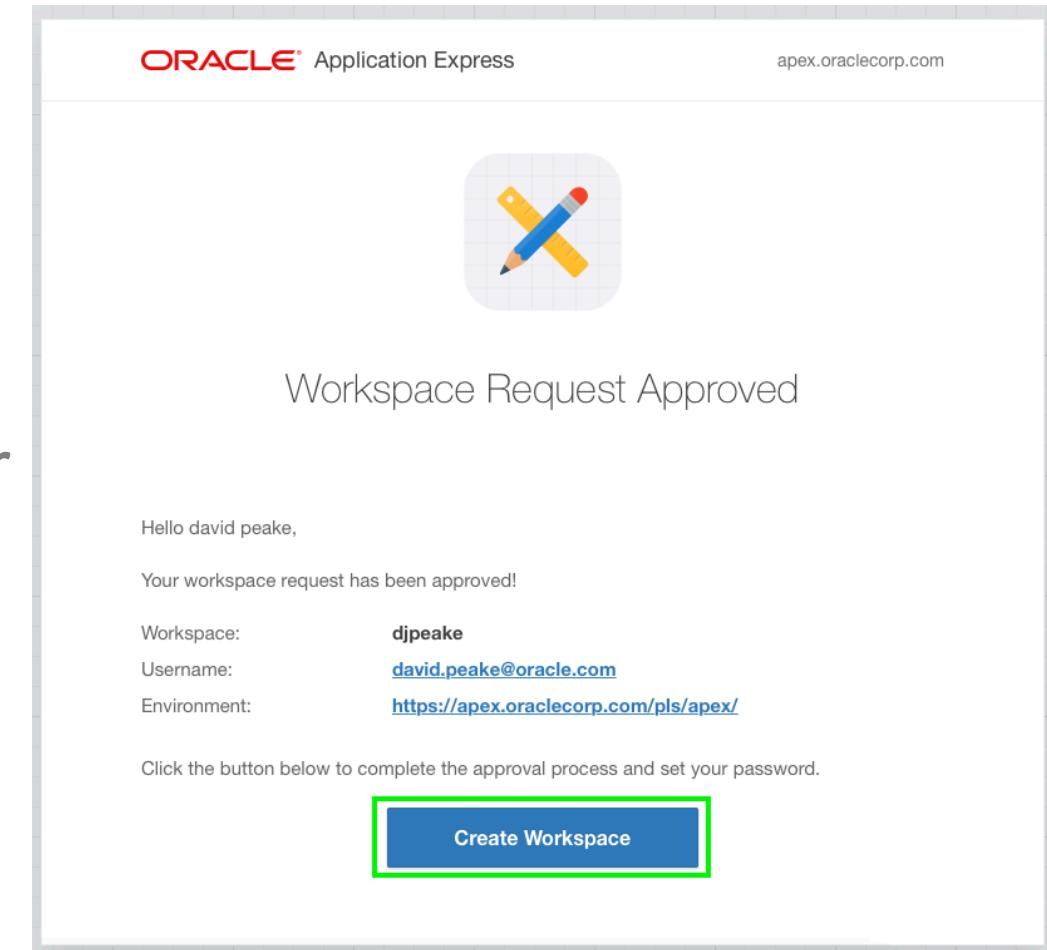
# Step 3

- Check your email

You should get an email from oracle-application-express\_ww@oracle.com within a few minutes

*{Note: If you don't get an email go back to Step 1 and make sure to enter your email correctly}*

- Click **Create Workspace**
- Click **Continue to Log In Screen**
- Reset your password

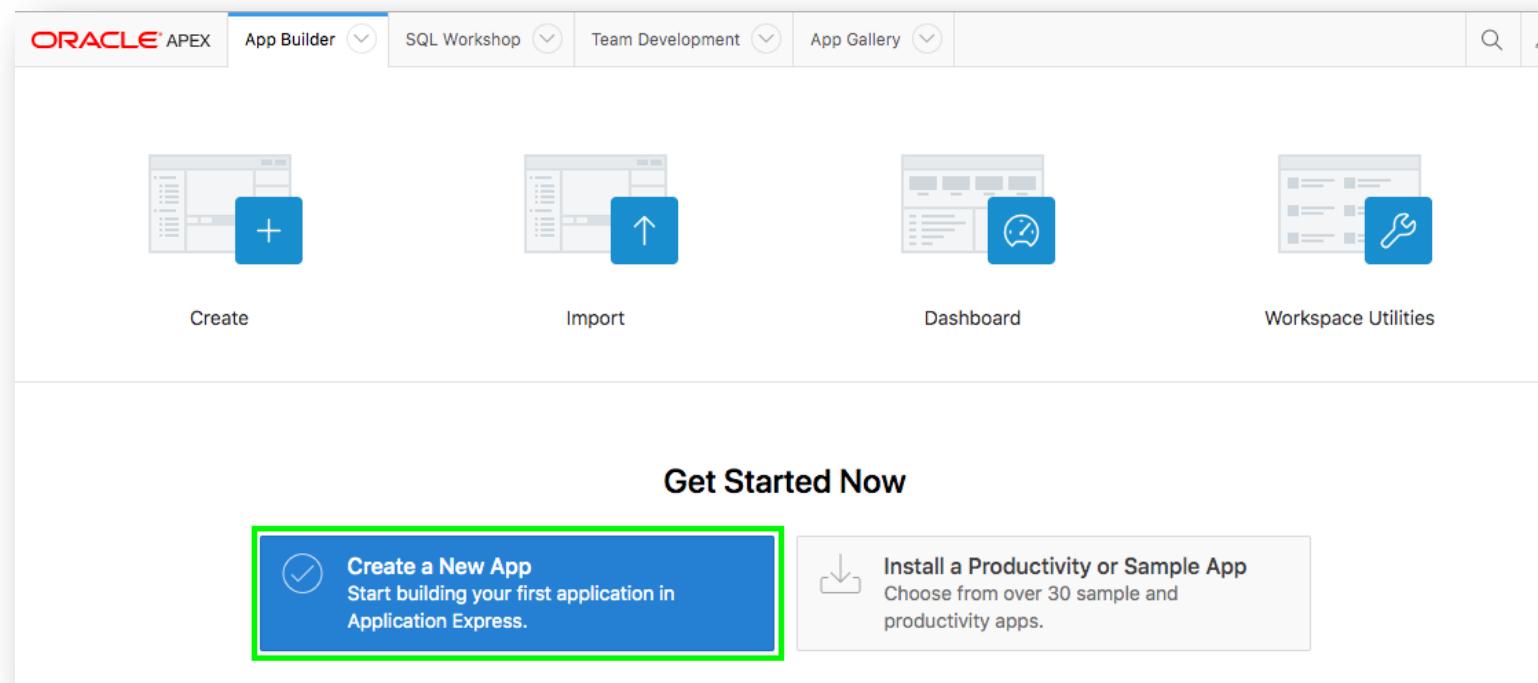


Building your first app

# Creating an App from a Spreadsheet

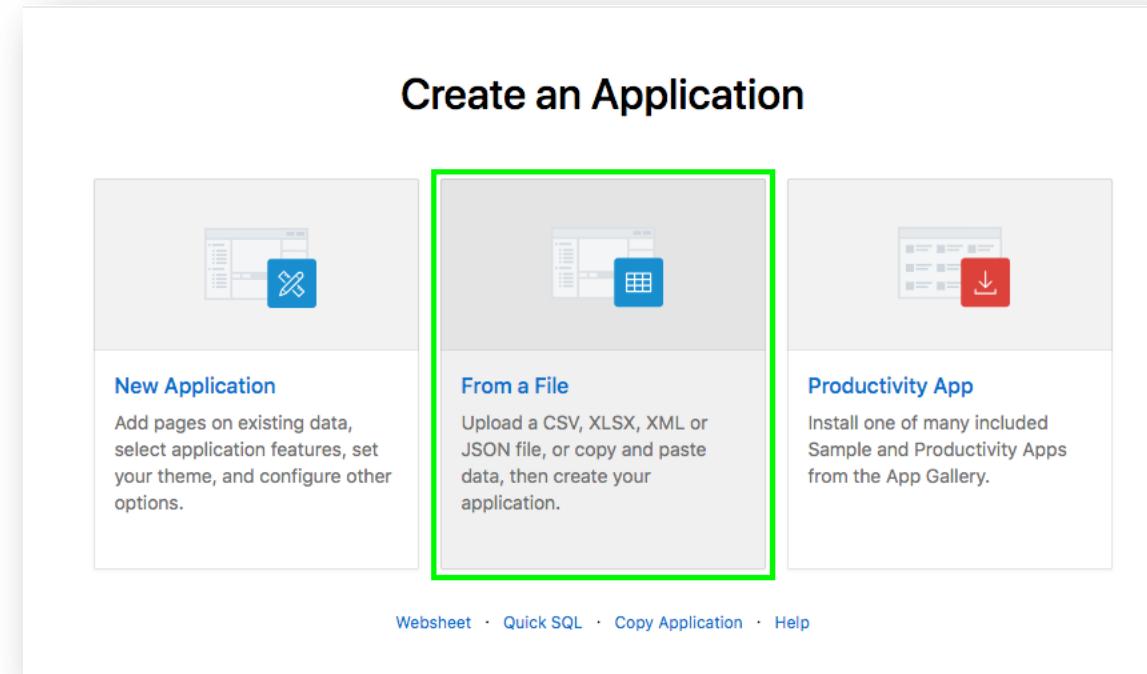
# Step 1 – Logging In

- Log into your workspace on <https://apex.oracle.com>
- Click App Builder
- Click Create a New App



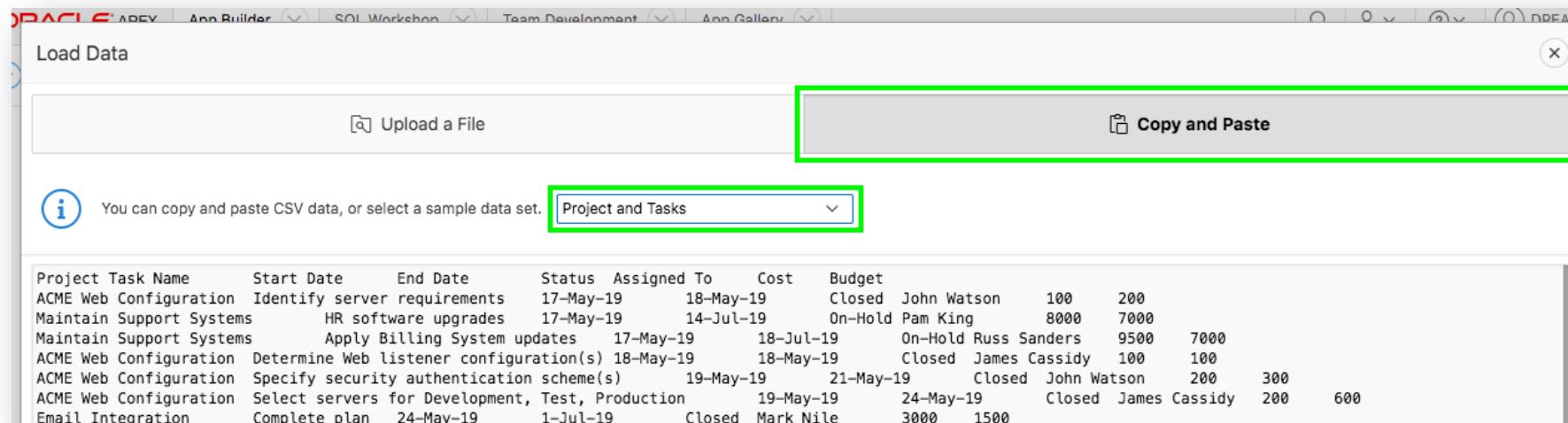
## Step 2 – Selecting App Type

- Click From a File



# Step 3 – Loading Sample Data

- Click Copy and Paste
- For Sample Data Set select Project and Tasks



- Click Next

# Step 4 – Naming the Table

- Enter Table Name {SPREADSHEET}
- Click Load Data

Load Data

Pasted Data

Settings

Column Headers  First line contains headers   Column Delimiter  ,  ;  |  #  tab   Enclosed By  None  "  '   File Encoding Unicode UTF-8

Preview

i Parsed first 74 rows to sample the column types. The preview below only displays the first 8 columns and 5 rows. To view the full preview, configure data load settings, and set which columns to load, please click **Configure** button.

| 1 | Project                  | Task Name                               | Start Date | End Date  | Status  | Assigned To   | Cost | Budget |
|---|--------------------------|---|------------|-----------|---------|---------------|------|--------|
| 2 | ACME Web Configuration   | Identify server requirements            | 17-May-19  | 18-May-19 | Closed  | John Watson   | 100  | 200    |
| 3 | Maintain Support Systems | HR software upgrades                    | 17-May-19  | 14-Jul-19 | On-Hold | Pam King      | 8000 | 7000   |
| 4 | Maintain Support Systems | Apply Billing System updates            | 17-May-19  | 18-Jul-19 | On-Hold | Russ Sanders  | 9500 | 7000   |
| 5 | ACME Web Configuration   | Determine Web listener configuration(s) | 18-May-19  | 18-May-19 | Closed  | James Cassidy | 100  | 100    |

Load to Table

\* Table Owner  ?

\* Table Name  ?

\* Error Table Name  ?

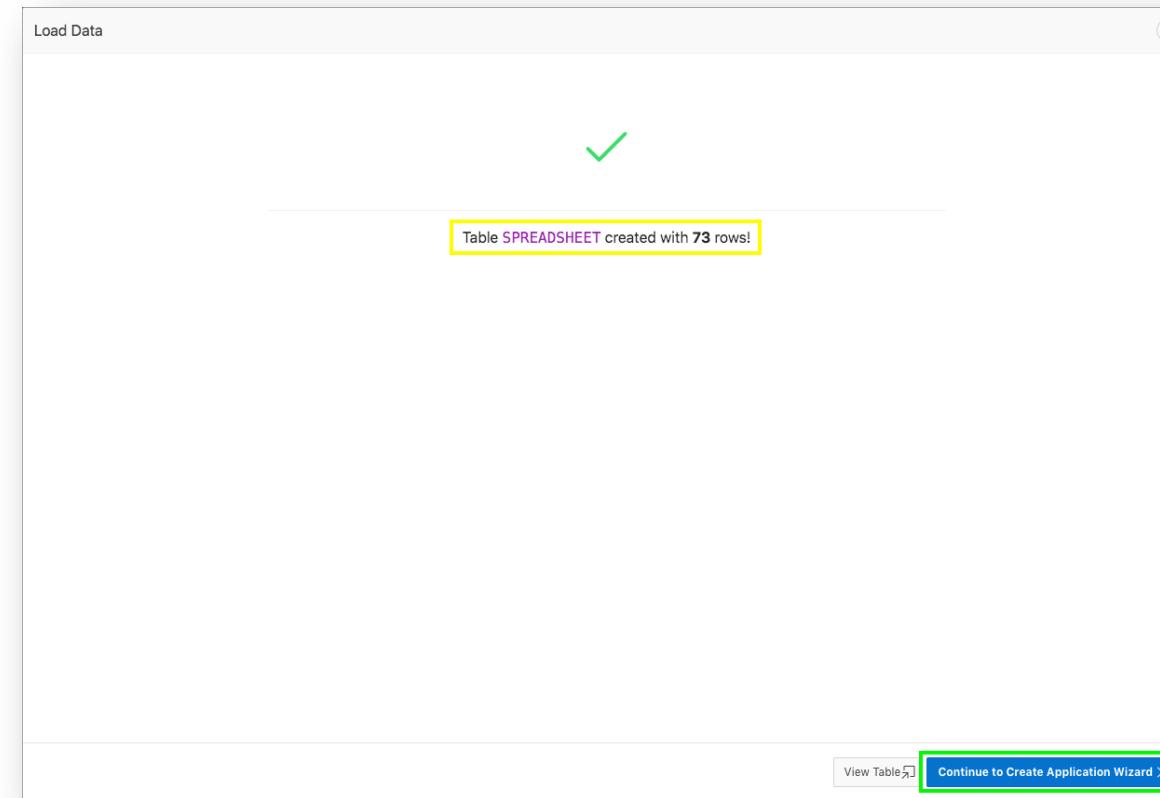
Primary Keys   Identity Column ?

Use Column Data Types ?

< Cancel Load Data

## Step 5 – Verifying Records Loaded

- Check that 73 rows are loaded
- Click **Continue to Create Application Wizard**



# Step 6 – Naming the App

- Enter Name  
**{App from a Spreadsheet}**
- Next to Features,  
click Check All

Create an Application

Name: App from a Spreadsheet

Appearance: Vita, Side Menu

Pages:

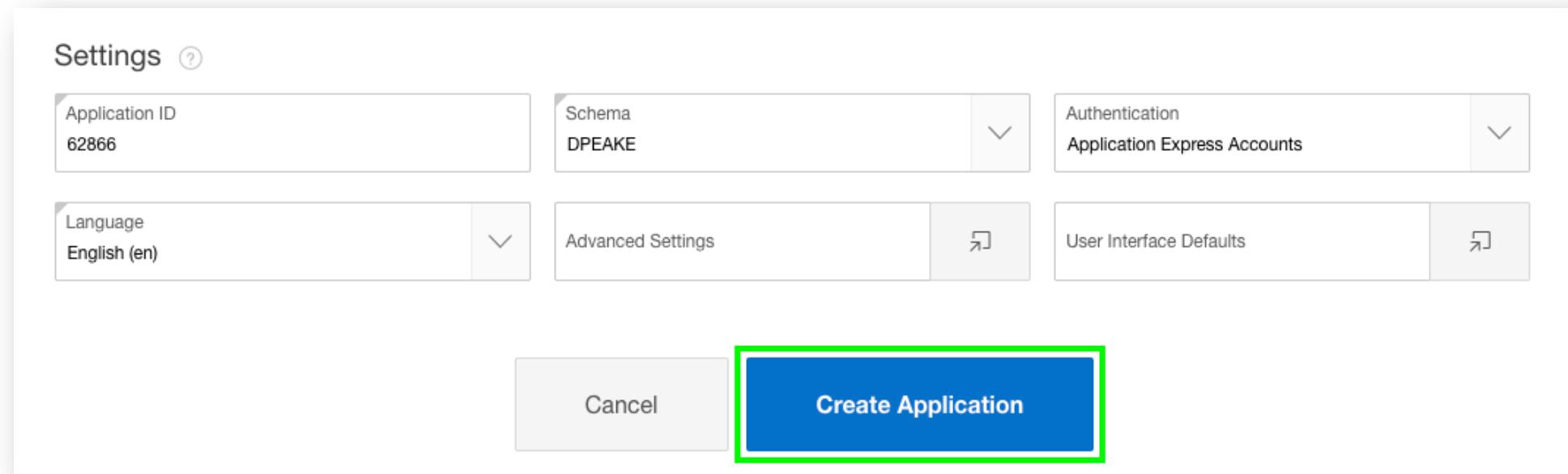
- + Add Page
- Home: Blank
- Spreadsheet: Interactive Report with Form (spreadsheet)
- Dashboard: Dashboard

Features:

- About Page: Add about this application page
- Configuration Options: Enable or disable application features
- Access Control: Enable role-based user authorization
- Feedback: Allow users to provide feedback
- Activity Reporting: Include user activity and error reports
- Theme Style Selection: Update default application look and feel

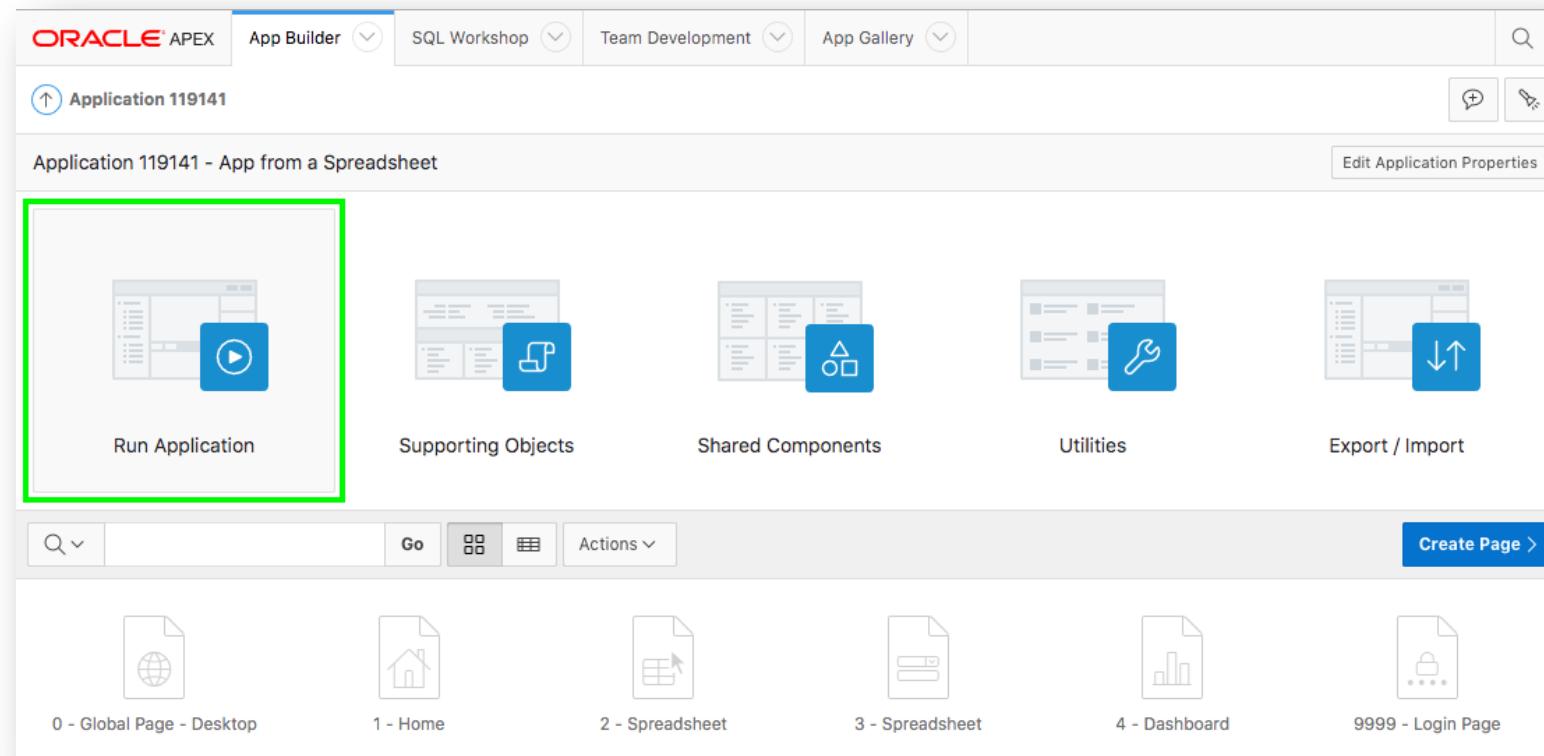
# Step 7 – Create Application

- Click Create Application



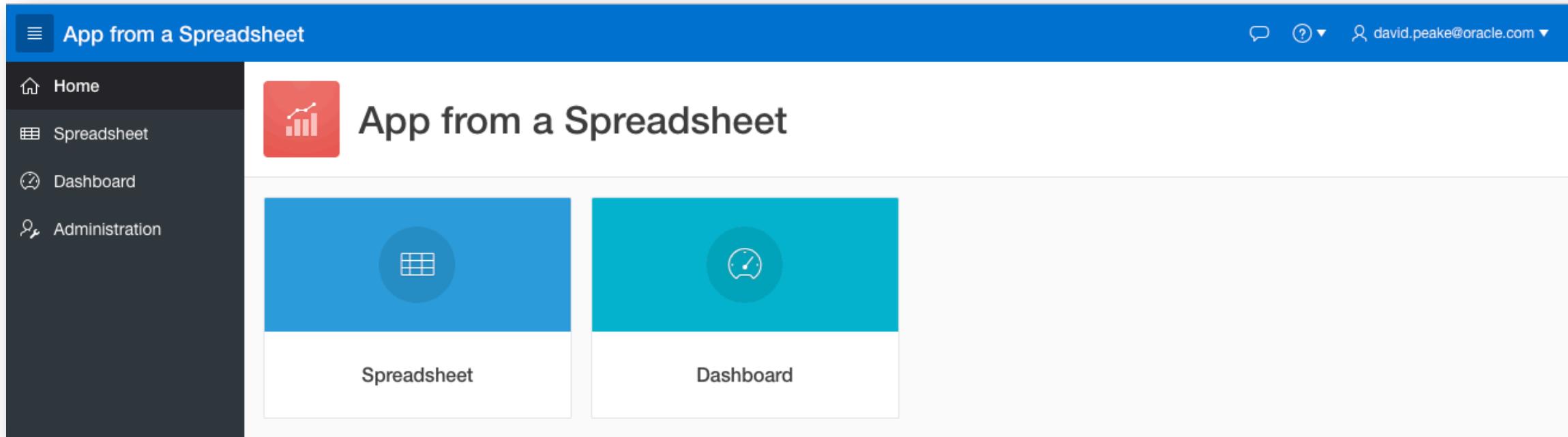
# Step 8 – App in Page Designer

- Your new application will be displayed in Page Designer
- Click Run Application



# Step 9 – Runtime App

- Enter your user credentials
- Play around with your new application



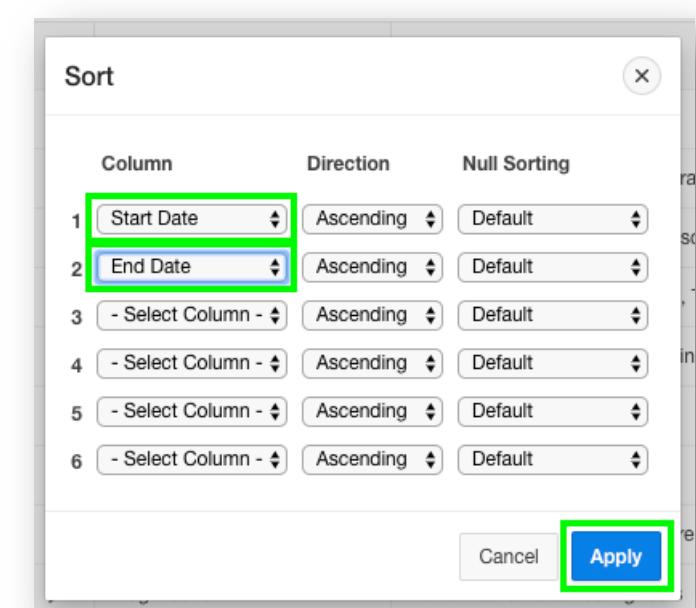
# Using the Runtime Environment

## Improving the App

# Step 1 – Sort the Interactive Report

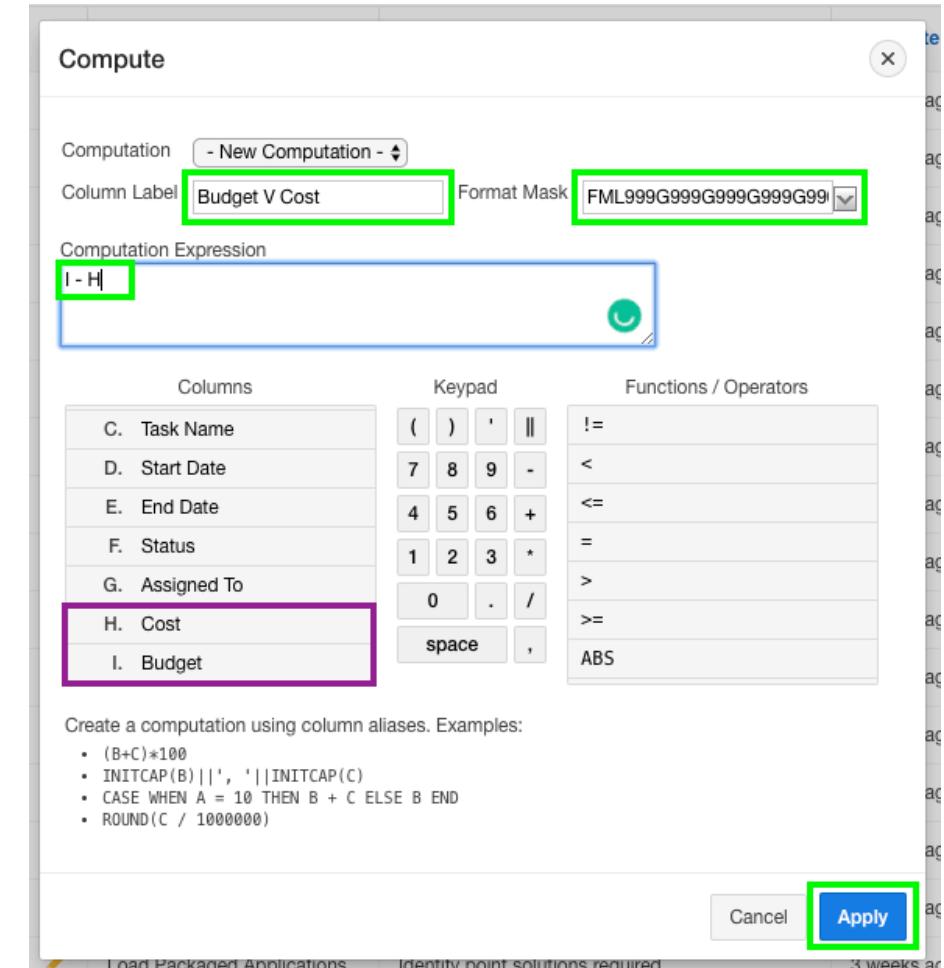
- Click Spreadsheet
- Click Actions, select Data, select Sort
- For 1, select Start Date; For 2, select End Date; click Apply

The screenshot shows the Oracle Application Express interface. The top navigation bar has a blue header with the text "App from a Spreadsheet". Below it is a dark sidebar with menu items: Home, Spreadsheet (which is highlighted with a green box), Dashboard, and Administration. The main content area is titled "Spreadsheet". At the top of the content area is a search bar with a magnifying glass icon and a dropdown arrow, followed by a "Go" button and an "Actions" button (also highlighted with a green box). Below the search bar is a table with columns: Project, Task Name, Columns, Start Date, and End Date. The first row contains the text "ACME Web Configuration" under Project and "Identify server requ" under Task Name. The second row contains "ACME Web Configuration" under Project and "Determine Web list" under Task Name. A context menu is open over the second row, with "Data" and "Sort" options highlighted with a green box.



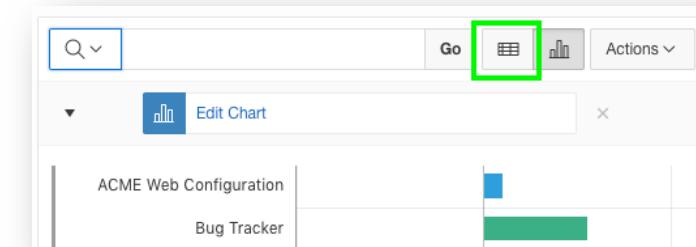
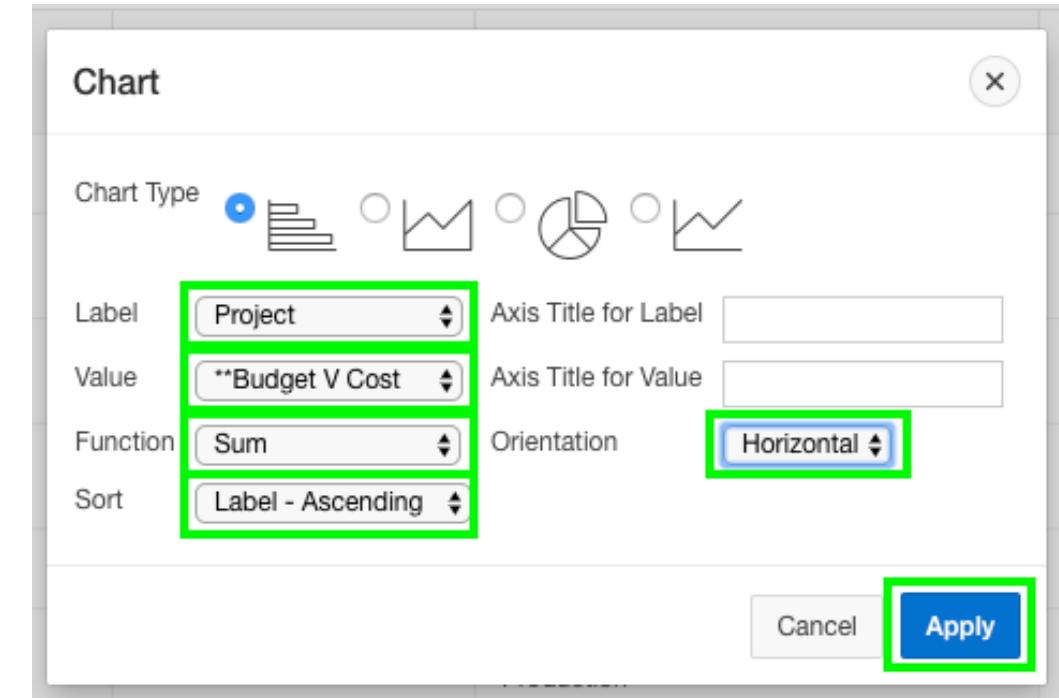
## Step 2 – Add a Computation

- Click Actions, select Data, select Compute
- Column Label enter Budget V Cost
- Format Mask select \$5,234.10
- Computation Expression enter I – H
- Click Apply

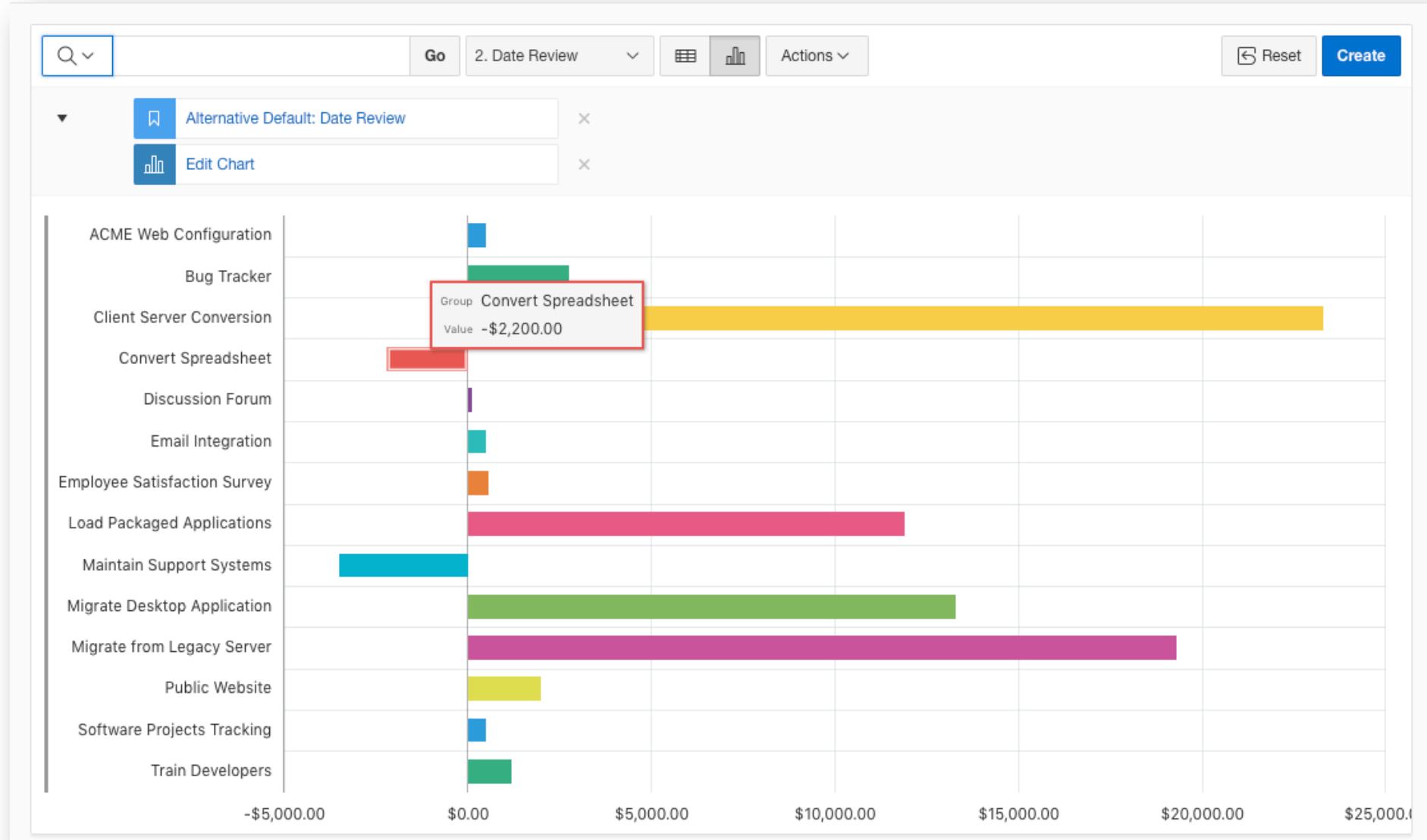


## Step 3 – Add a Chart

- Click Actions, select Chart
- Label select Project
- Value select \*\*Budget V Cost
- Function select Sum
- Sort select Label – Ascending
- Orientation select Horizontal
- Click Apply

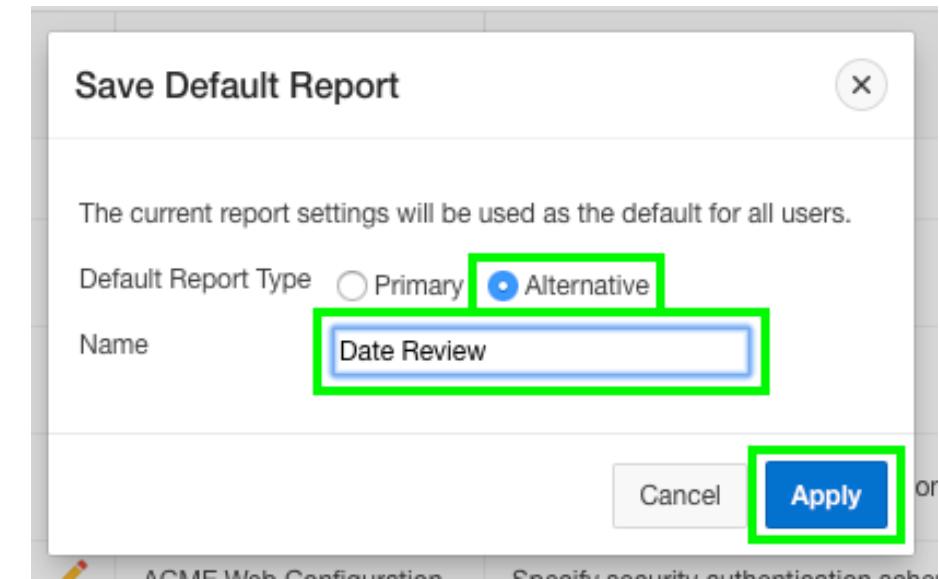
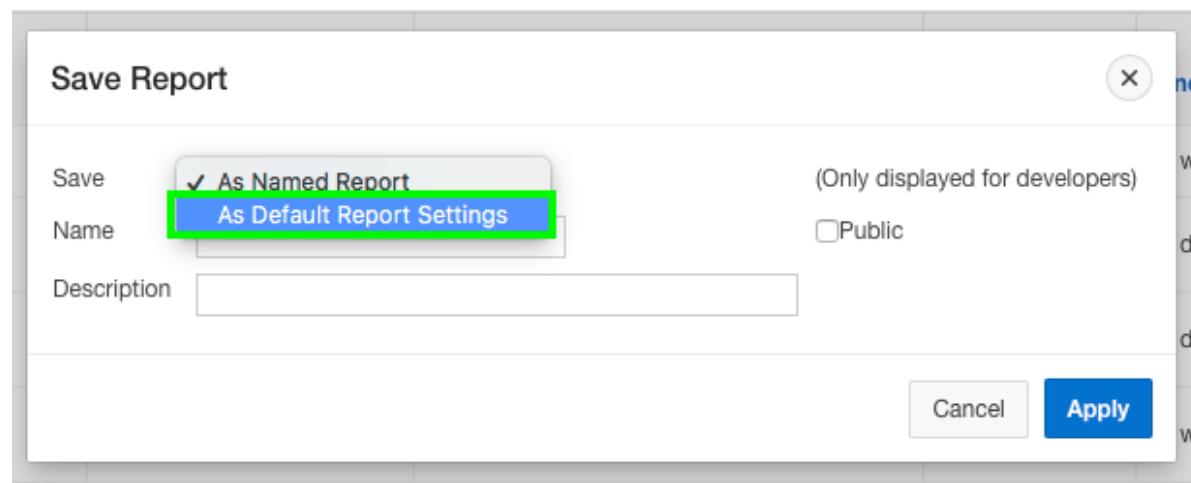


# Step 3b – Add a Chart



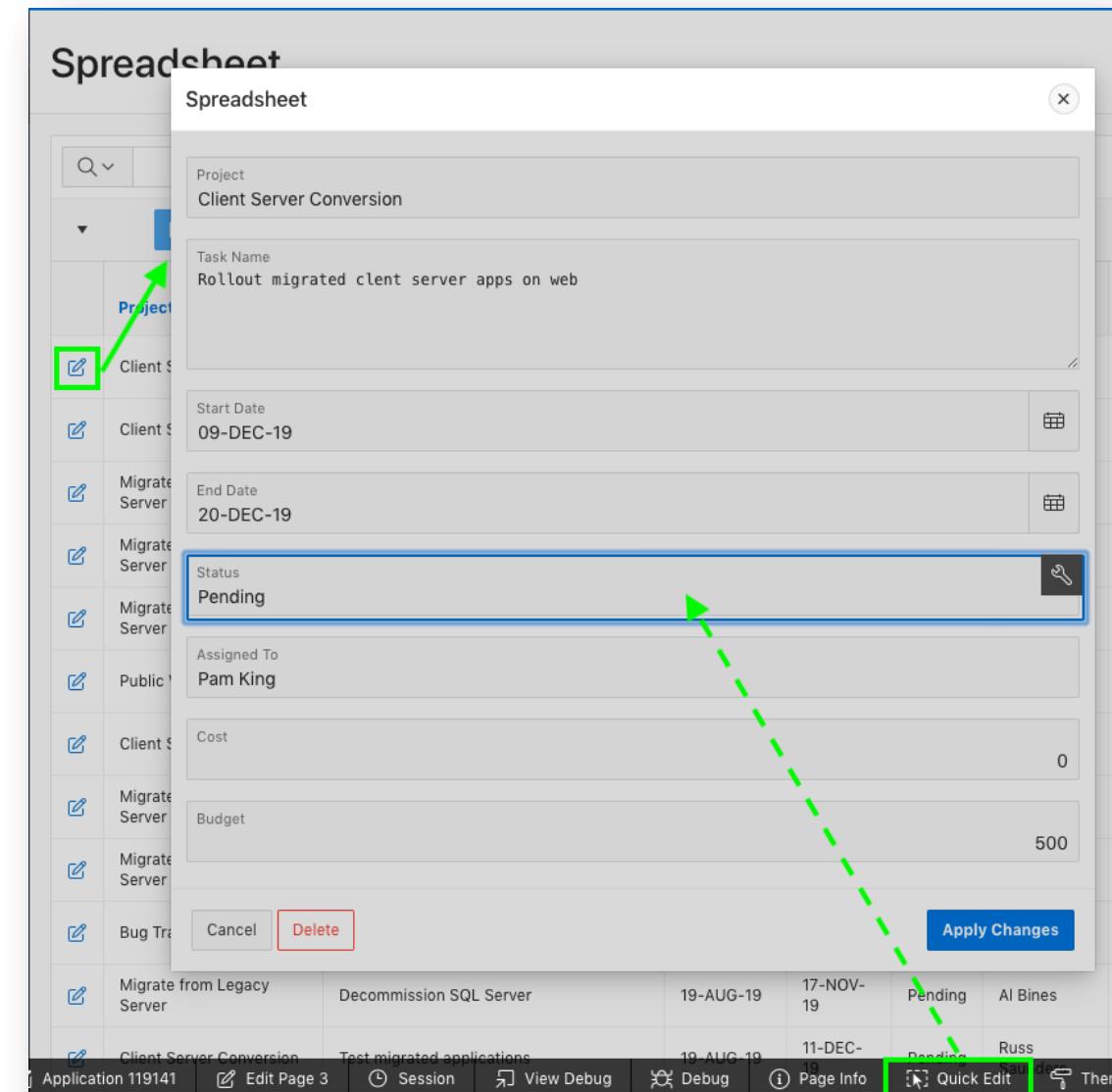
## Step 4 – Save Report

- Click Actions, select Report, select Save Report
- For Save, select As Default Report Settings
- Default Report Type, select Alternative
- Name, enter Date Review
- Click Apply



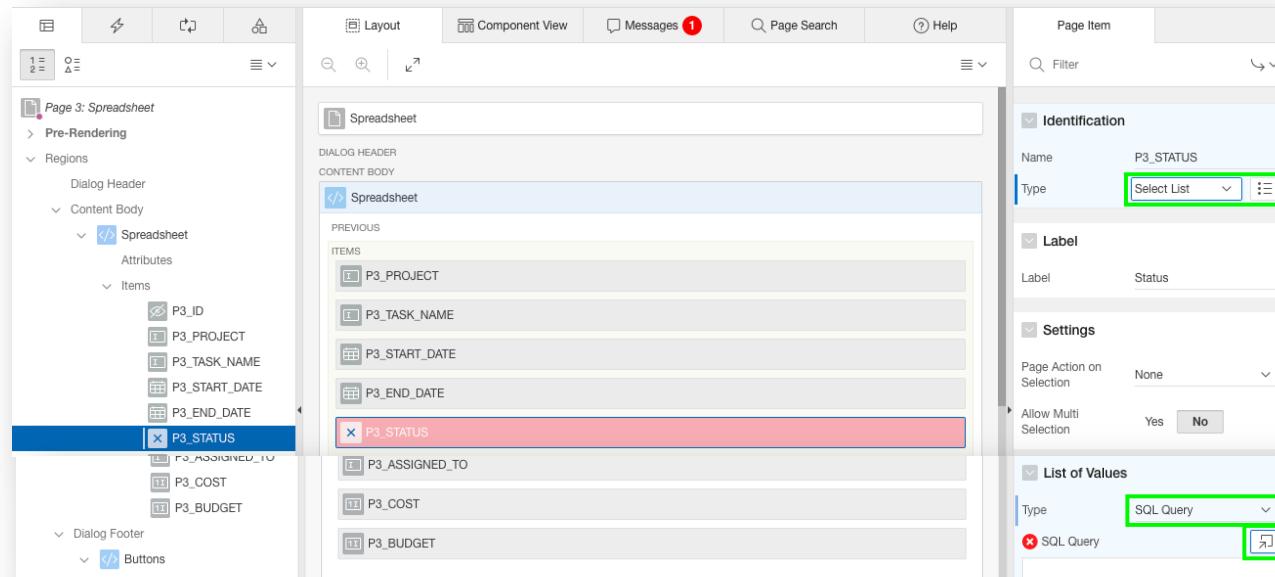
# Step 5 – Restrict the Status

- In the runtime environment, click the edit icon on a record
- A modal page will be displayed
- In the Developer Toolbar, click **Quick Edit**
- Hover over the **Status** item (until a blue outline appears) and click the mouse
- Page Designer displays with focus on the Status item



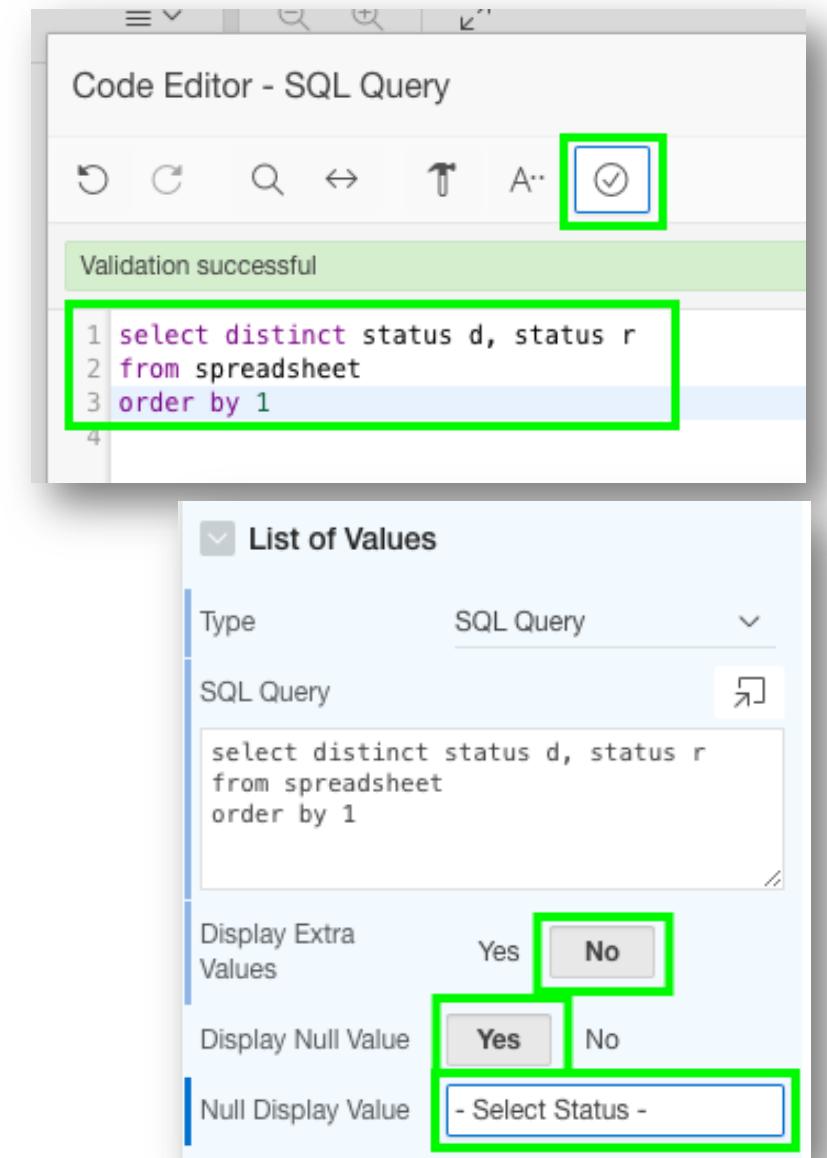
## Step 5b – Restrict the Status

- In Page Designer, within the Property Editor (right pane), for Type select **Select List**
- Under List of Values, for Type select **SQL Query**
- Next to SQL Query, click **Code Editor**



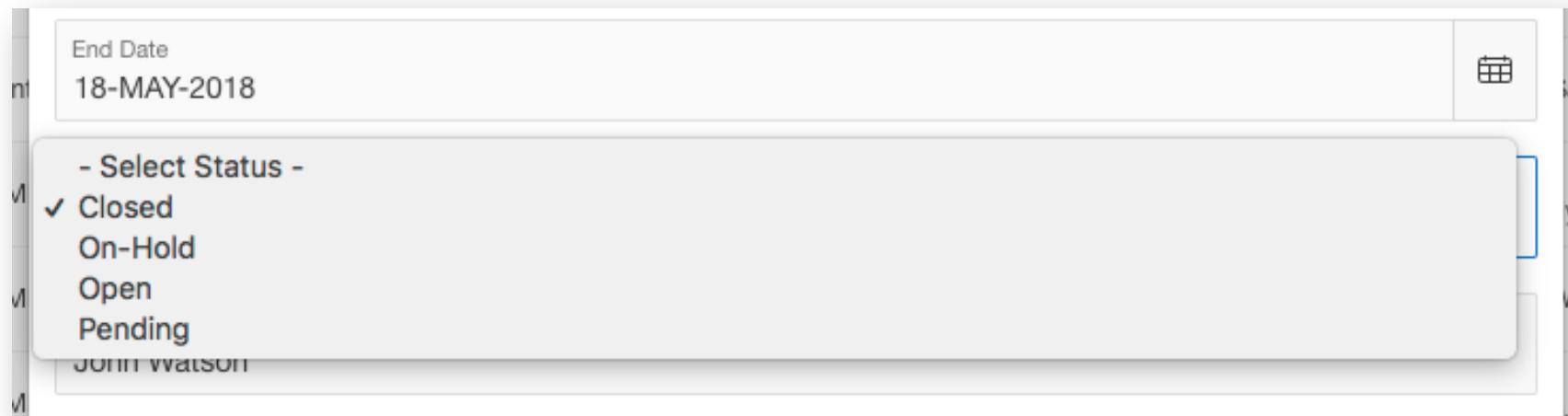
## Step 5c – Restrict the Status

- Within the Code Editor, enter the following:  
select distinct status d, status r  
from spreadsheet  
order by 1
- Click **Validate**
- Click **OK**
- Display Extra Values, select **No**
- Null Value Display, enter - **Select Status** -
- Click **Save** (In the toolbar - top right)



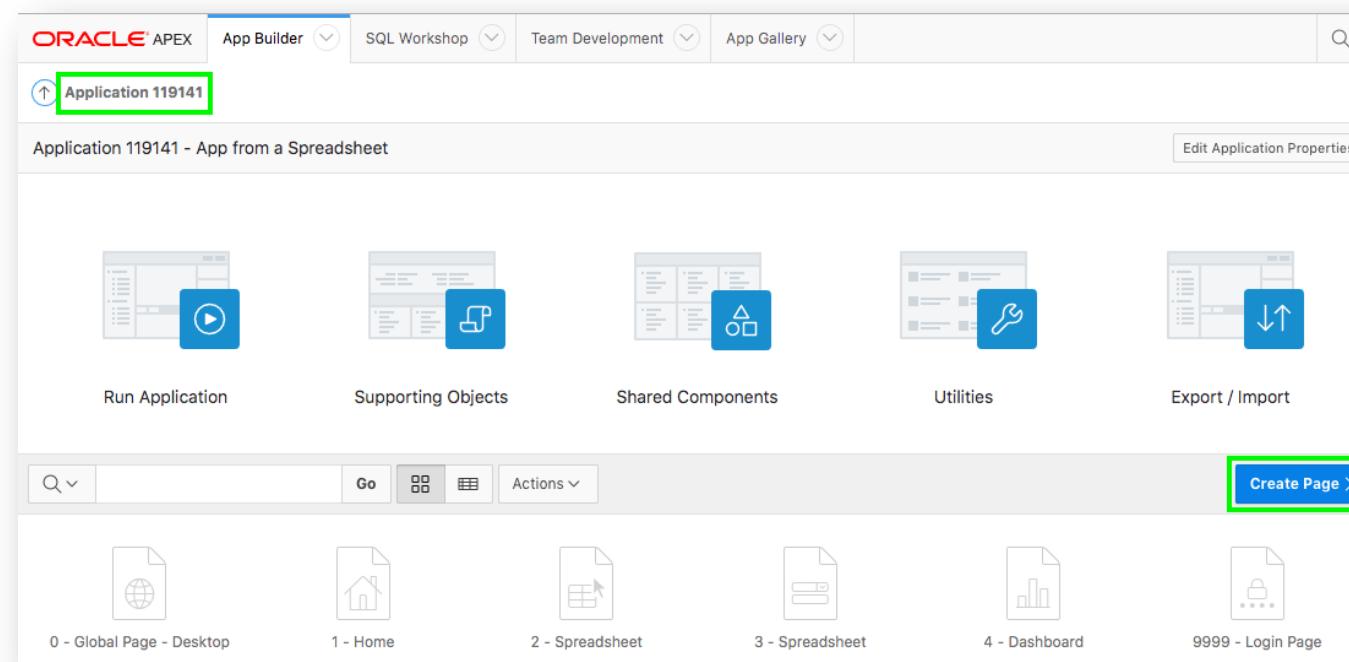
## Step 6 – Run the App

- Navigate back to the runtime environment
- Refresh the browser
- Edit a record
- Click **Status**



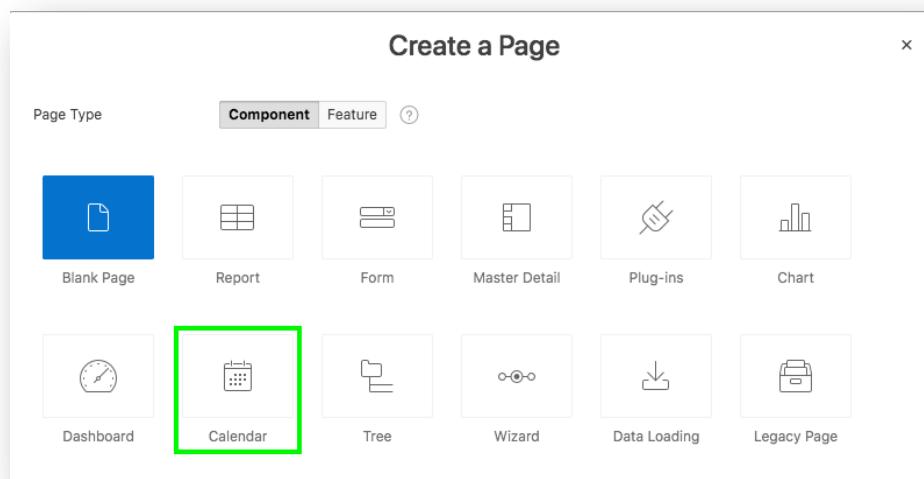
# Step 7 – Add a Calendar

- Navigate back to the development environment
- In App Builder, navigate to the App Home Page
- Click **Create Page**



# Step 7b – Add a Calendar

- Click Calendar



- Page Name, enter **Calendar**
- Breadcrumb, select **Breadcrumb**
- Click **Next**

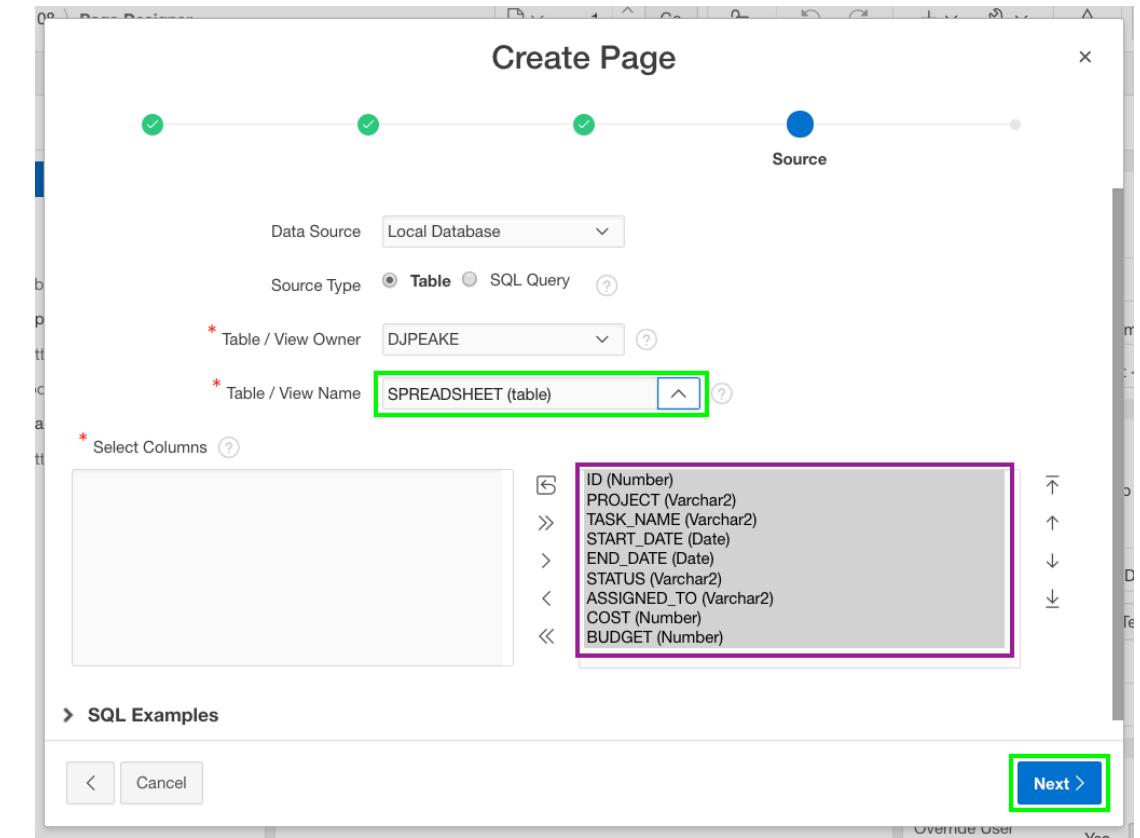
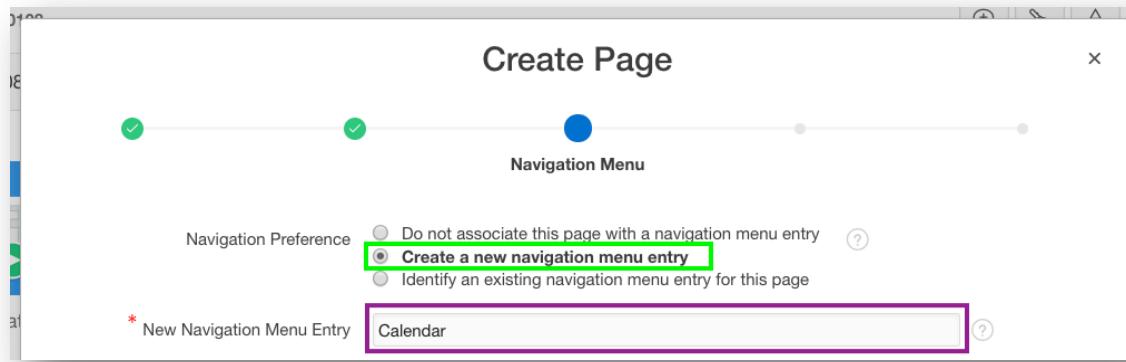
The screenshot shows the 'Create Page' dialog. At the top, there is a progress bar with three steps: 'Page Attributes' (blue dot), 'Region Type' (grey dot), and 'Finish' (grey dot). The 'Page Attributes' section contains the following fields:

- \* Page Number: 6
- \* Page Name: **Calendar** (highlighted with a green border)
- \* Page Mode: Normal (radio button selected)
- Page Group: - Select Page Group -
- Breadcrumb: **Breadcrumb** (highlighted with a green border)
- Parent Entry: No parent entry
- \* Entry Name: Calendar

At the bottom of the dialog are 'Cancel' and 'Next >' buttons. The 'Next >' button is highlighted with a green border.

## Step 7c – Add a Calendar

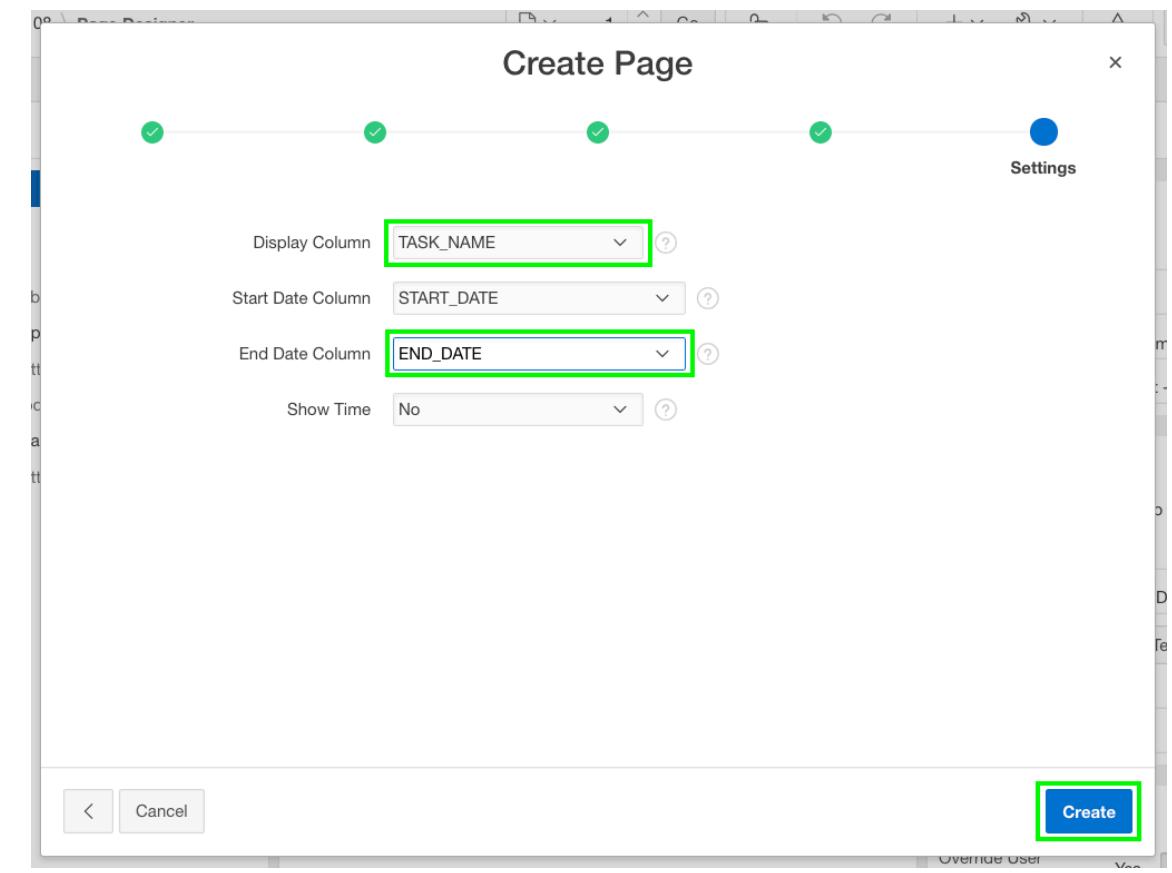
- Navigation Preference, click **Create a new navigation menu entry**
- Click **Next**



- Table / View Name, select **SPREADSHEET (table)**
- Click **Next**

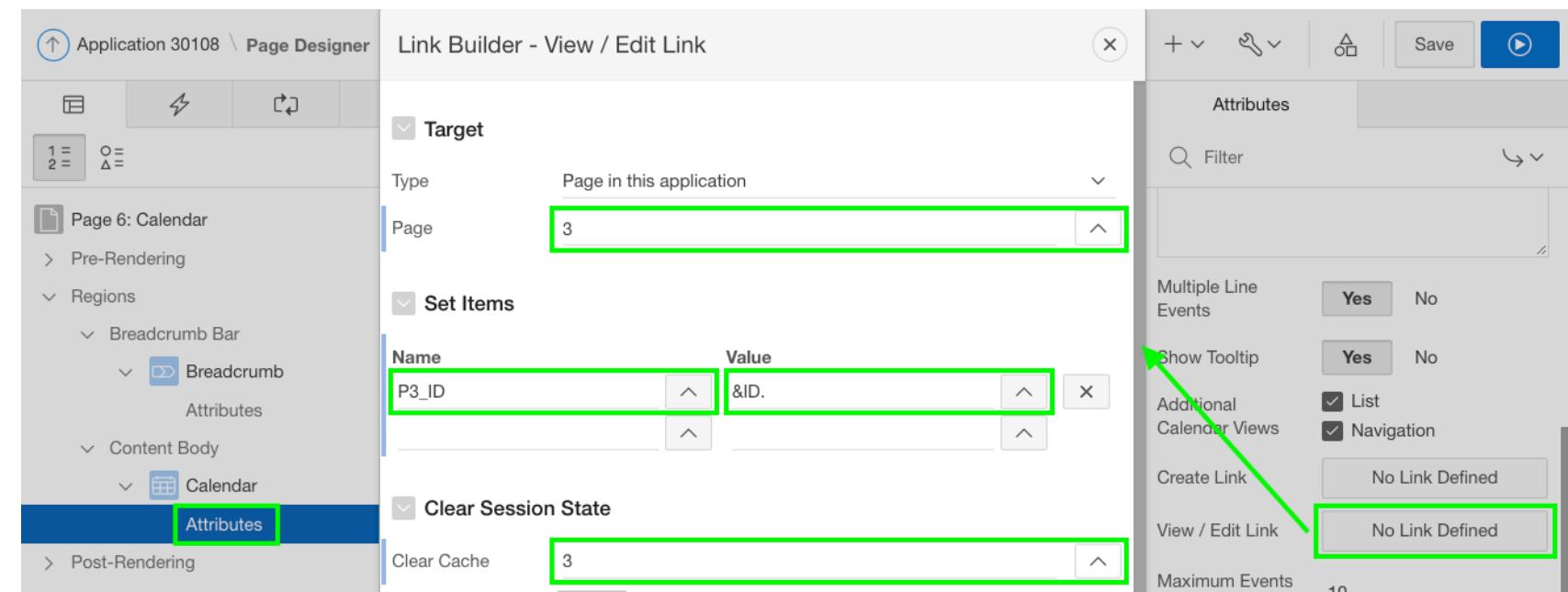
## Step 7d – Add a Calendar

- Display Column, select **TASK\_NAME**
- End Date Column, select **END\_DATE**
- Click **Create**



## Step 8 – Link the Calendar to the Update Form

- In the Rendering tab, under Calendar, click Attributes
- In the Property Editor (right pane), click View / Edit Link
- Page, select 3
- Set Items – Name, select P3\_ID; Value, select &ID.
- Clear Cache, enter 3
- Click OK
- Click Save and Run



# Step 8b – Link the Calendar to the Update Form

The screenshot shows the Oracle App from a Spreadsheet interface. On the left, there's a sidebar with icons for Home, Grid, List, and Search. The main area has a title bar "App from a Spreadsheet" and a "Calendar" section. The "Calendar" section includes a date picker with buttons for back, forward, today, Sun, Mon, and a list of tasks. One task, "Customize solutions", is highlighted with a green box and has a green arrow pointing to it from the text in the note below. The right side of the screen displays a "Spreadsheet" window with the following data:

| Project     | Load Packaged Applications |
|-------------|----------------------------|
| Task Name   | Customize solutions        |
| Start Date  | 23-JUN-2018                |
| End Date    | 18-SEP-2018                |
| Status      | Open                       |
| Assigned To | John Watson                |
| Cost        | 1500                       |
| Budget      | 4000                       |

At the bottom of the spreadsheet window are "Cancel", "Delete" (highlighted with a red box), and "Apply Changes" buttons.

*Note:  
You may need to  
navigate to the  
month of May  
to see calendar  
entries.*

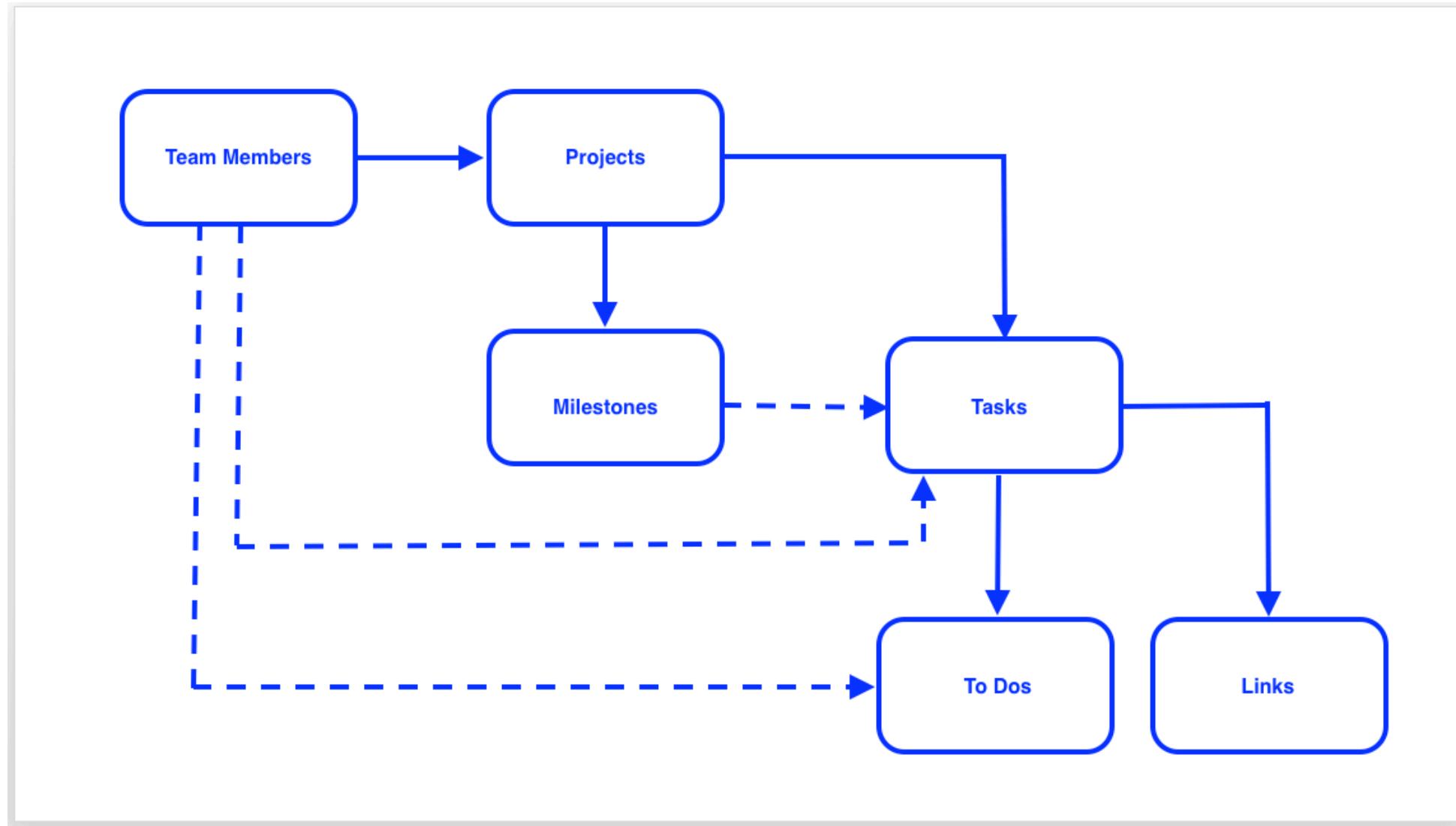
# Defining new data structures Using Quick SQL

# Original Spreadsheet Table

The screenshot shows the Oracle APEX interface with the SQL Workshop module selected. The left sidebar displays the Object Browser with a 'Tables' dropdown and a search bar. The main area is titled 'SPREADSHEET' and contains a table definition for a new table.

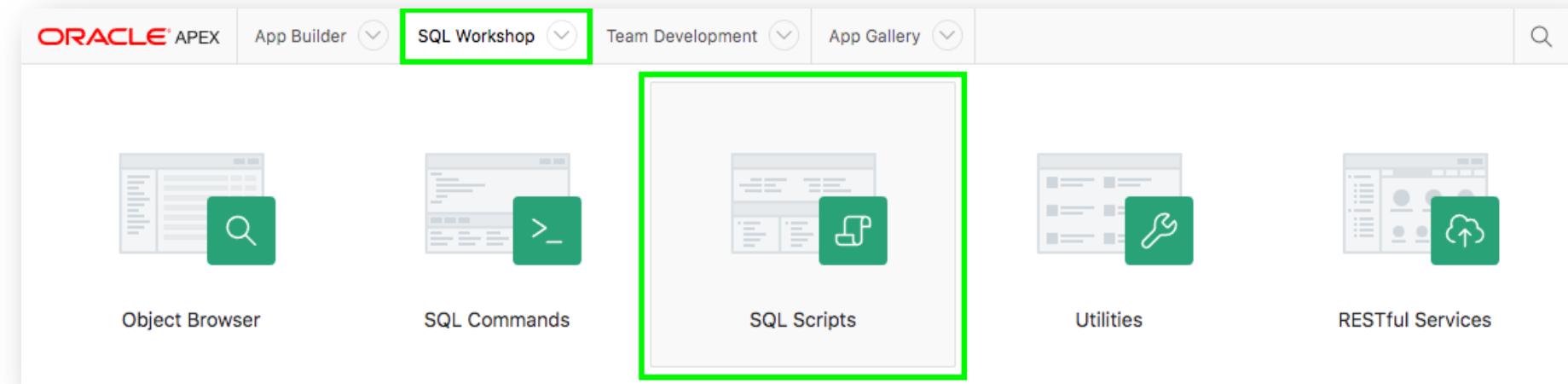
| Column Name | Data Type     | Nullable |
|-------------|---------------|----------|
| ID          | NUMBER        | No       |
| PROJECT     | VARCHAR2(30)  | Yes      |
| TASK_NAME   | VARCHAR2(255) | Yes      |
| START_DATE  | DATE          | Yes      |
| END_DATE    | DATE          | Yes      |
| STATUS      | VARCHAR2(30)  | Yes      |
| ASSIGNED_TO | VARCHAR2(30)  | Yes      |
| COST        | NUMBER        | Yes      |
| BUDGET      | NUMBER        | Yes      |

# Napkin Design – Improved data model for Projects



# Step 1 – Open Quick SQL

- Go back to your development environment - App Builder
- Click **SQL Workshop**
- Click **SQL Scripts**



- Click **Quick SQL**

## Step 2 - Enter shorthand for Team Members table

- Enter the Table Name {Team Members}
- Indent 2 or more spaces and enter the column names

The screenshot shows the Oracle APEX interface with the SQL Workshop selected. In the 'Quick SQL Shorthand' pane, the following code is entered:

```
1 Team Members
2   username
3   full name
4   email
5   phone_number
6   profile
7   photo file
8
```

A green rectangular box highlights the first seven lines of this shorthand. In the 'Oracle SQL Output' pane, the generated SQL code is displayed:

```
-- create tables
create table team_members (
  id          number not null constraint team_members_id_pk primary key,
  username    varchar2(255),
  full_name   varchar2(255),
  email       varchar2(255),
  phone_number number,
  profile     varchar2(4000),
  photo       blob,
  photo_filename varchar2(512),
  photo_mimetype varchar2(512),
  photo_charset  varchar2(512),
  photo_lastupd date
);
```

## Step 3 - Enter details for Projects table

- Enter the Table Name in the first column {Projects}
- Indent 2 or more spaces and enter the column names

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar includes links for ORACLE APEX, App Builder, SQL Workshop (selected), Team Development, and Packaged Apps. The right side of the bar shows a search icon, a user profile for David, and a help icon.

The main area has tabs for Utilities \ Quick SQL, Quick SQL Shorthand, Oracle SQL Output, Settings, Download, Save SQL Script (selected), and Review and Run.

In the Quick SQL Shorthand tab, there is a list of table names and their columns:

```
1 Team Members
2   username
3   full name
4   email
5   phone_number
6   profile
7   photo file
8 Projects
9   name
10  project lead
11  budget
12  status
13  completed_date
14  description
```

The 'Projects' section is highlighted with a green box.

In the Oracle SQL Output tab, the generated SQL code is displayed:

```
-- create tables
create table team_members (
  id          number not null constraint team_members_id_pk primary key,
  username    varchar2(255),
  full_name   varchar2(255),
  email       varchar2(255),
  phone_number number,
  profile     varchar2(4000),
  photo       blob,
  photo_filename varchar2(512),
  photo_mimetype varchar2(512),
  photo_charset varchar2(512),
  photo_lastupd date
);

create table projects (
  id          number not null constraint projects_id_pk primary key,
  name        varchar2(255),
  project_lead varchar2(4000),
  budget      varchar2(4000),
  status      varchar2(60),
  completed_date date
);
```

The entire output block is highlighted with a green box.

# Step 4 – Review Help

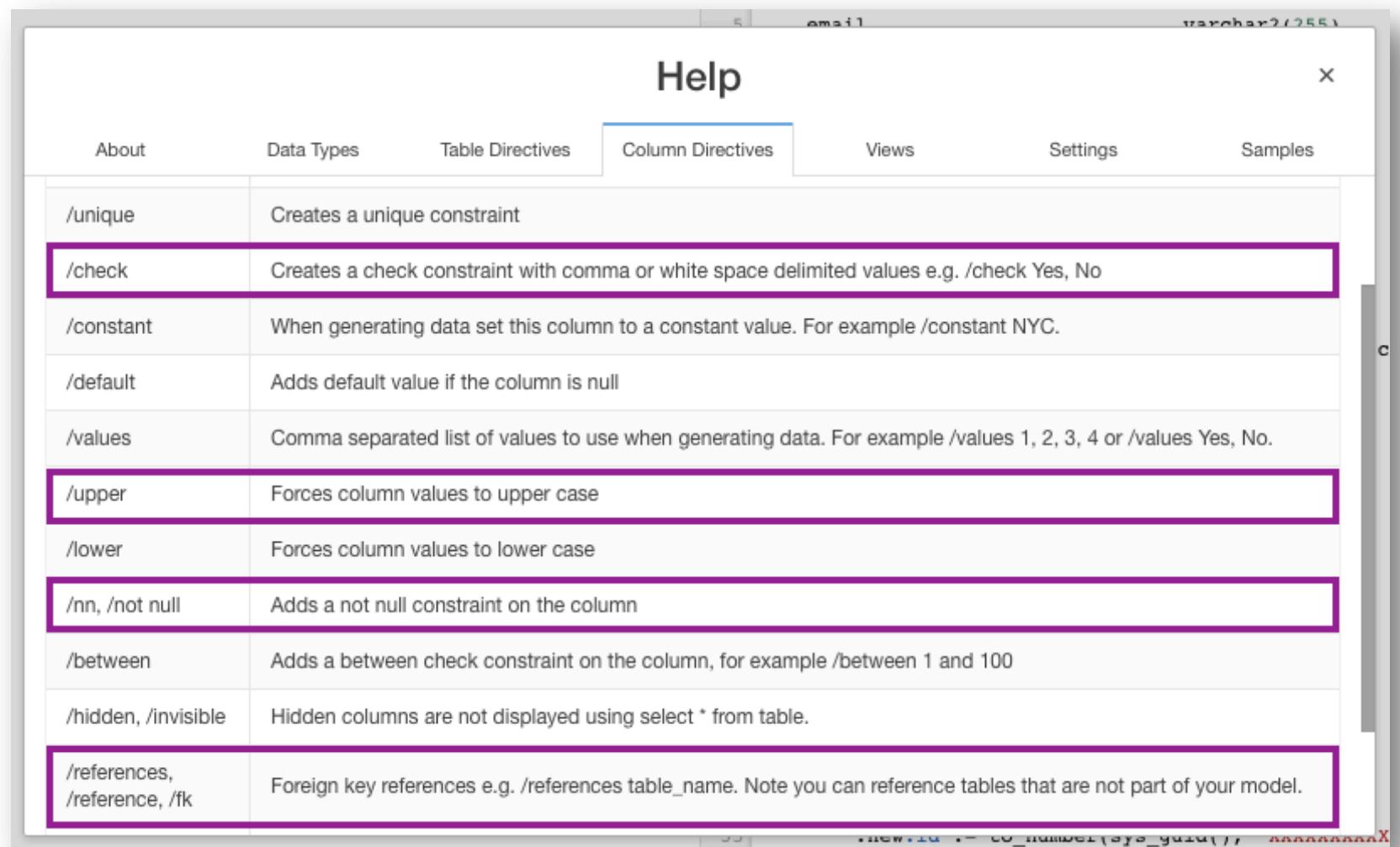
- Click Help
- Click Table Directives

The screenshot shows the Oracle SQL Developer interface. On the left, there's a 'Quick SQL Shorthand' panel with code snippets for 'Team Members' and 'Projects'. At the top, there are tabs for 'Clear', 'Samples', 'Help' (which is highlighted with a green box), and 'Generate SQL'. To the right is the 'Oracle SQL Output' panel displaying a partial SQL script for creating a table. A modal window titled 'Help' is open, with its own tabs: 'About', 'Data Types', 'Table Directives' (highlighted with a green box), 'Column Directives', 'Views', 'Settings', and 'Samples'. The 'Table Directives' tab is active, showing a list of directives with their descriptions. One directive, '/Insert NN', is highlighted with a purple box.

| Directive                               | Description  |
|---|--|
| /api                                    | Generate PL/SQL package API to query, insert, update, and delete data within a table.                                    |
| /audit                                  | Adds Oracle auditing, by default AUDIT ALL ON [TABLE NAME].  |
| /auditcols, /audit cols, /audit columns | Automatically adds an UPDATED, UPDATED_BY, INSERTED, and INSERTED_BY columns and the trigger logic to set column values. |
| /colprefix                              | Prefix all columns of a given table with this value. Automatically adds an underscore if not provided.                   |
| /compress, /compressed                  | Table will be created compressed.  |
| /history                                | Generate code to log changes into a history table for this specific table.   |
| <b>/Insert NN</b>                       | Generate <b>NN</b> SQL INSERT statement(s) with random data, for example: /INSERT 20. (Maximum = 1000)                   |
| /rest                                   | Generate REST enablement of the table using Oracle REST Data Services (ORDS)   |
| /select                                 | Generate SQL SELECT statement after generating data for each table   |

# Step 4b – Review Help

- Click Column Directives



# Step 4c – Review Help

- Click Data Types

The screenshot shows the Oracle Database SQL Developer Help window. The title bar says "Help". The navigation bar includes "About", "Data Types" (which is highlighted with a blue border), "Table Directives", "Column Directives", "Views", "Settings", and "Samples". The main content area is titled "Data Types" and contains a table with the following rows:

|   |  |
|---|--|
| num, number                                 | NUMBER   |
| int, integer                                | INTEGER  |
| d, date                                     | DATE   |
| ts, timestamp                               | TIMESTAMP  |
| tstz, tswtz, timestamp with local time zone | TIMESTAMP WITH LOCAL TIMEZONE                              |
| char, vc, varchar, varchar2, string         | VARCHAR2(4000)   |
| vcNNN                                       | VARCHAR2(NNN) NNN identifies a number between 1 and 32767. |
| vc(NNN)                                     | VARCHAR2(NNN) NNN identifies a number between 1 and 32767. |
| vc32k                                       | VARCHAR2(32767)  |

## Step 5 - Improve the Shorthand

- Close Help
- Enter **/insert xx** for tables
- Enter **/nn** for mandatory columns
- Enter **/references team\_members** for project lead column
- Enter **num** for budget column
- Enter **/vc30** and **/check ASSIGNED, IN-PROGRESS, COMPLETED** for status column

```
1 Team Members /insert 10
2   username /nn /upper
3   full name
4   email /nn
5   phone_number
6   profile
7   photo
8 Projects /insert 20
9   name /nn
10  project lead /nn /references team_members
11  budget num
12  status vc30 /nn /check ASSIGNED, IN-PROGRESS,
13  completed_date
14  description
15
```

## Step 6 - Enter details for a child table

- Enter the Table Name indented {Milestones}
- Indent 2 or more spaces and enter the column names

```
31 create table milestones (
32     id                      number not null constraint milestones_id_pk pr
33     project_id               number
34                                         constraint milestones_project_id_fk
35                                         references projects on delete cascade,
36     name                     varchar2(255) not null,
37     due_date                 date not null,
38     description              varchar2(4000)
39 )
```

```
1 Team Members /insert 10
2     username /nn /upper
3     full name
4     email /nn
5     phone_number
6     profile
7     photo
8 Projects /insert 20
9     name /nn
10    project lead /nn /refer
11    budget num
12    status vc30 /nn /check .
13    completed_date
14    description
15 Milestones /insert 30
16     name /nn
17     due_date /nn
18     description
19
```

## Step 7 - Enter details for another child table

- Enter the Table Name indented {Tasks}
- Indent 2 or more spaces and enter the column names

```
1 Team Members /insert 10
2   username /nn /upper
3   full name
4   email /nn
5   phone_number
6   profile
7   photo
8 Projects /insert 20
9   name /nn
10  project lead /nn /references team_members
11  budget num
12  status vc30 /nn /check ASSIGNED, IN-PROGR
13  completed_date
14  description
15 Milestones /insert 30
16  name /nn
17  due_date /nn
18  description
19 Tasks /insert 100
20  name /nn
21  assignee /nn /references team_members
22  milestone_id /references milestones
23  start_date /nn
24  end_date
25  cost num
26  description
27  is_complete_yn /check Y, N
```

## Step 8 – Complete the Shorthand

- Copy the following URL into a new window in your browser:  
*{Remember you are on Slide 50 if you click the link directly}*

<http://www.oracle.com/technetwork/developer-tools/apex/application-express/apex-beginner-quicksql-5095785.txt>

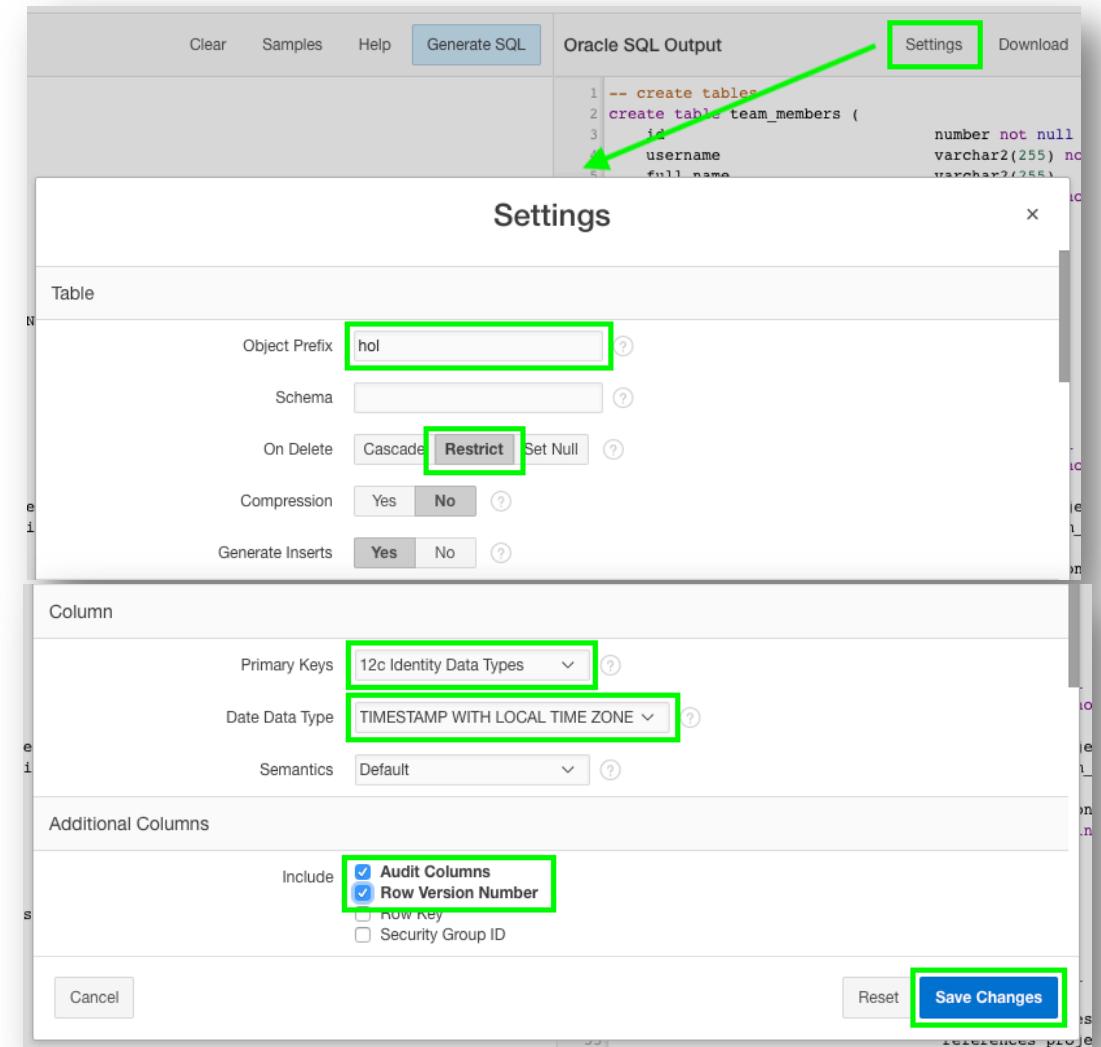
- Copy and Paste the full script  
into the Quick SQL Shorthand pane  
{on the left}
- Click **Generate SQL**

```
team_members /insert 10
username /nn /upper
full name
email /nn
phone_number
profile
photo file
projects /insert 20
name /nn
project_lead /nn /references team_members
budget num
status vc30 /nn /check ASSIGNED, IN-PROGRESS, COMPLETED
completed_date
description
milestones /insert 30
name /nn
due_date /nn
description
tasks /insert 100
name /nn
assignee /nn /references team_members
milestone_id /references milestones
start_date /nn
end_date
cost num
description
is_complete_yn /check Y, N
```

view project\_tasks projects tasks

# Step 9 – Update the Settings

- Click **Settings**
- Object Prefix, enter **hol**
- On Delete, select **Restrict**
- Primary Keys, select **12c Identity Data Types**
- Date Data Type, select **TIMESTAMP WITH LOCAL TIME ZONE**
- Audit Columns, check Include
- Row Version Number, check Include
- Click **Save Changes**

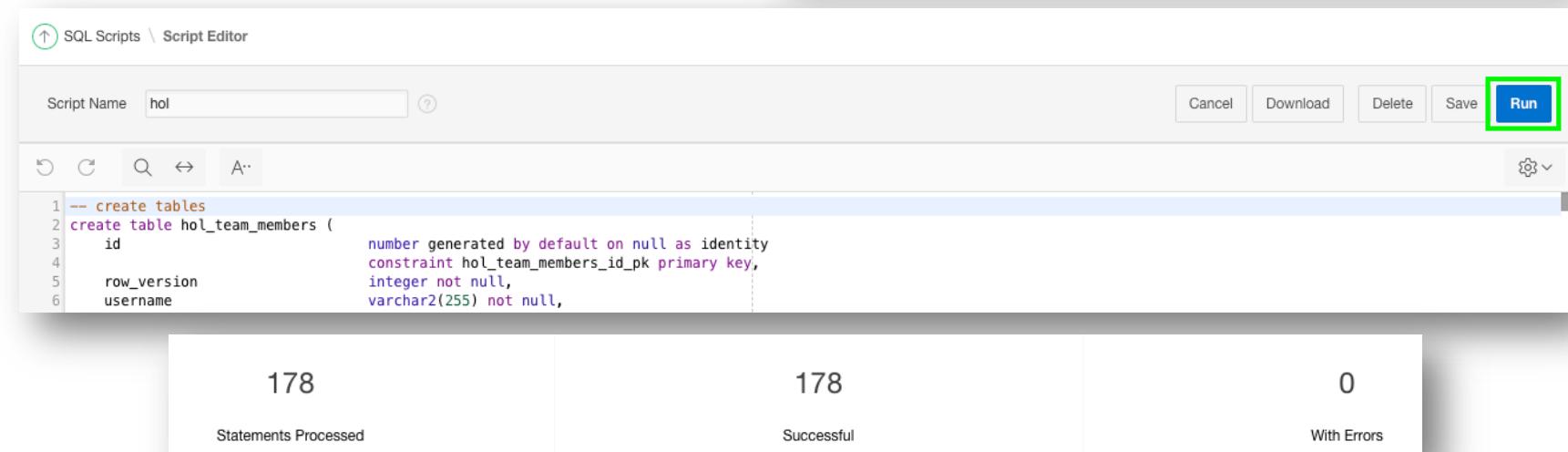
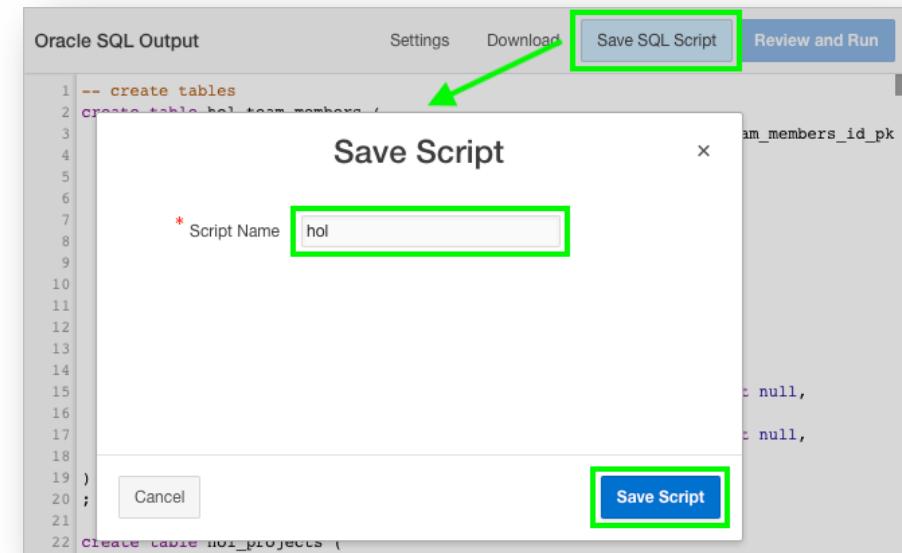


# Step 10 – Save, Review, and Run the Script

- Click Save SQL Script
- For Script Name, enter hol
- Click Save Script
- Click Review and Run

*{Note: The script will be displayed in the Script Editor within SQL Scripts}*

- Click Run
- Click Run Now

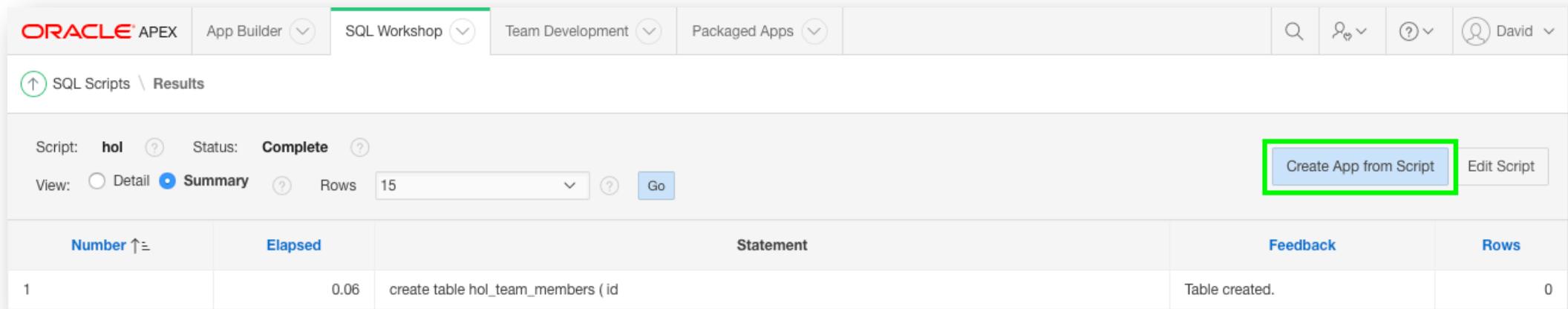


Creating an app on the tables from Quick SQL

# Using the Create Application Wizard

# Step 1 – Start the Create App Wizard

- Click Create App from Script

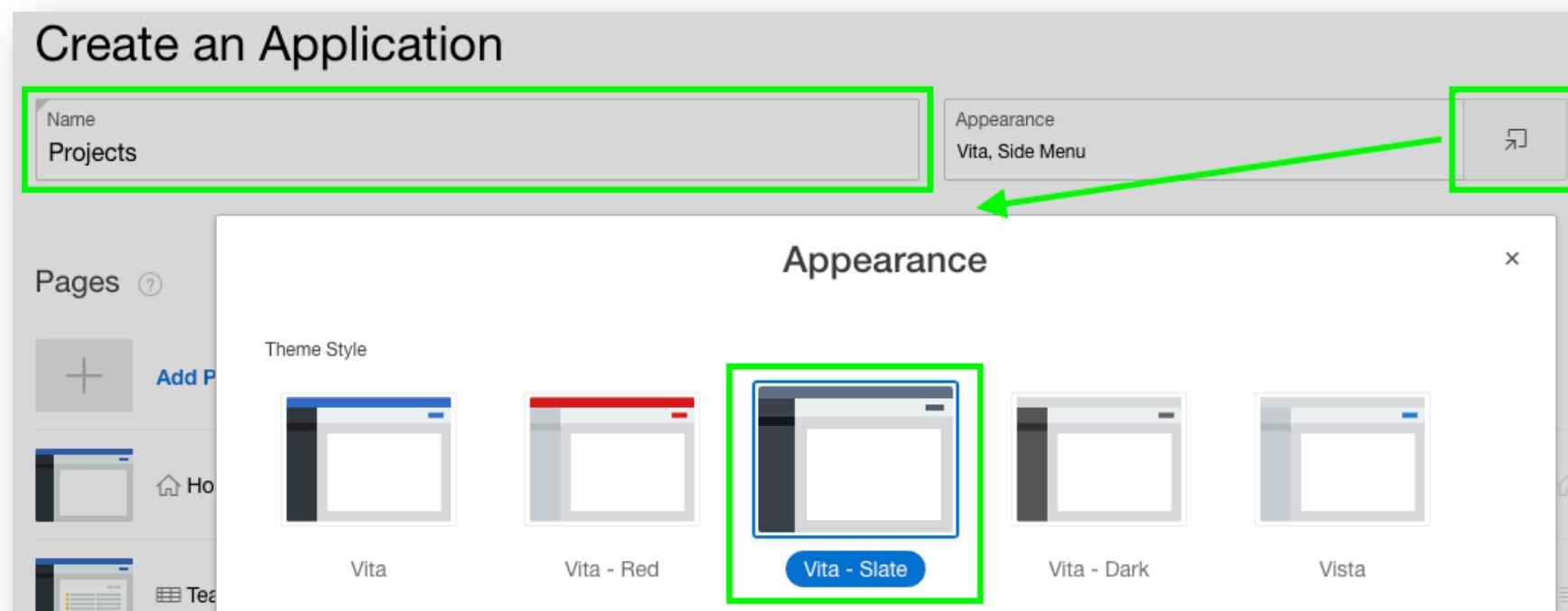


The screenshot shows the Oracle APEX interface with the SQL Workshop tab selected. The results page displays a completed script named 'hol'. The 'Create App from Script' button is highlighted with a green box. The table below shows the creation of a table 'hol\_team\_members'.

| Number | Elapsed | Statement                          | Feedback       | Rows |
|--------|---------|------------------------------------|----------------|------|
| 1      | 0.06    | create table hol_team_members ( id | Table created. | 0    |

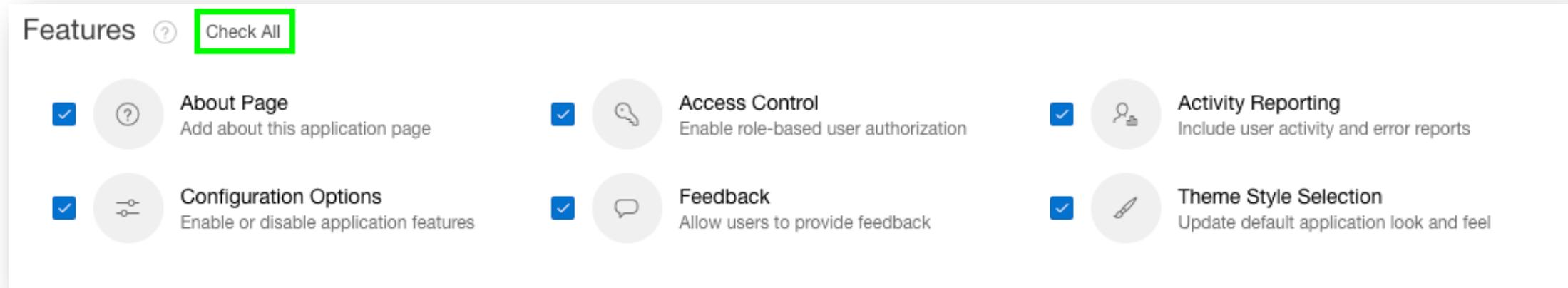
## Step 2 – Name the App and Update Appearance

- For Name, enter Projects
- Click Appearance
- For Theme Style, select Vita-Slate



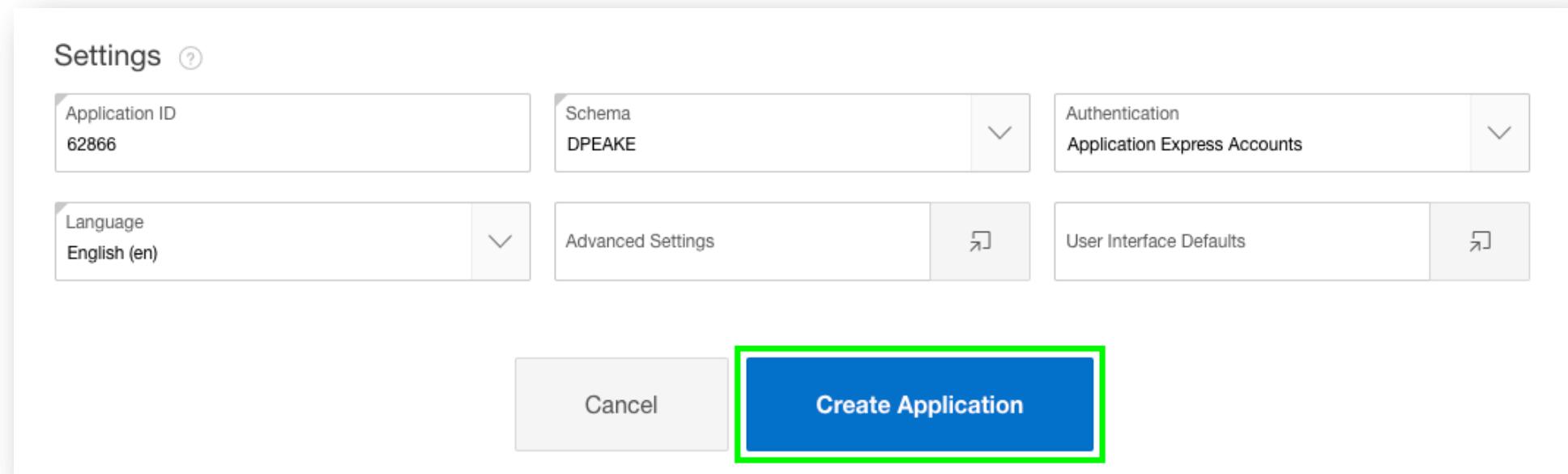
## Step 3 – Add Features

- For Features, click Check All



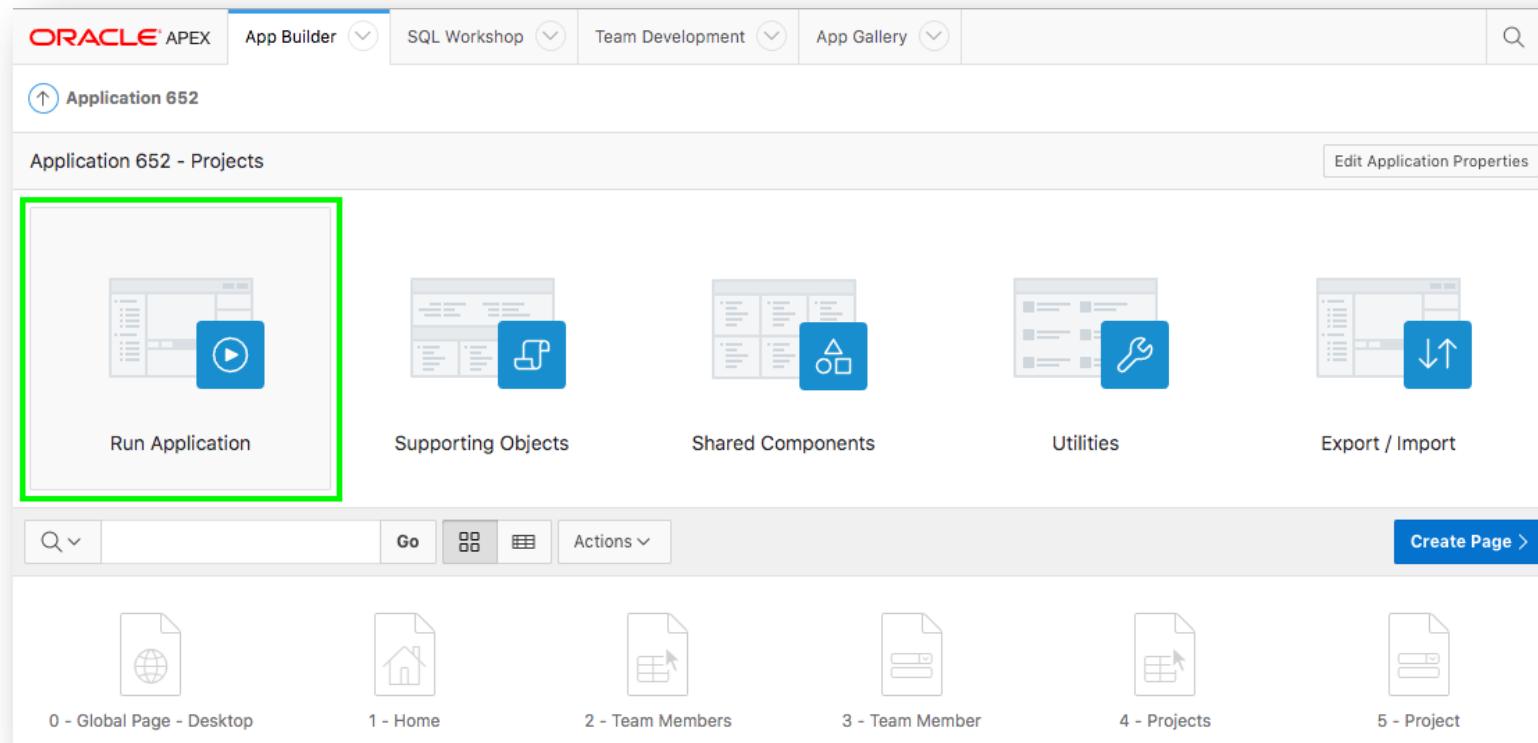
# Step 4 – Create Application

- Click Create Application



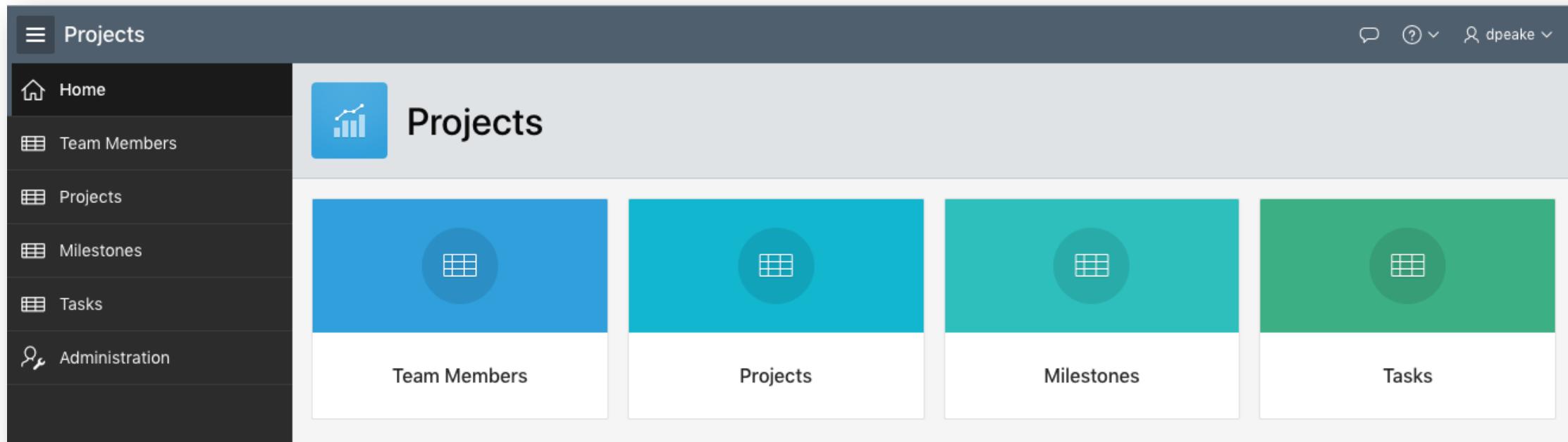
# Step 5 – App in Page Designer

- Your new application will be displayed in Page Designer
- Click Run Application



# Step 8 – Runtime App

- Enter your credentials
- Play around with your new application

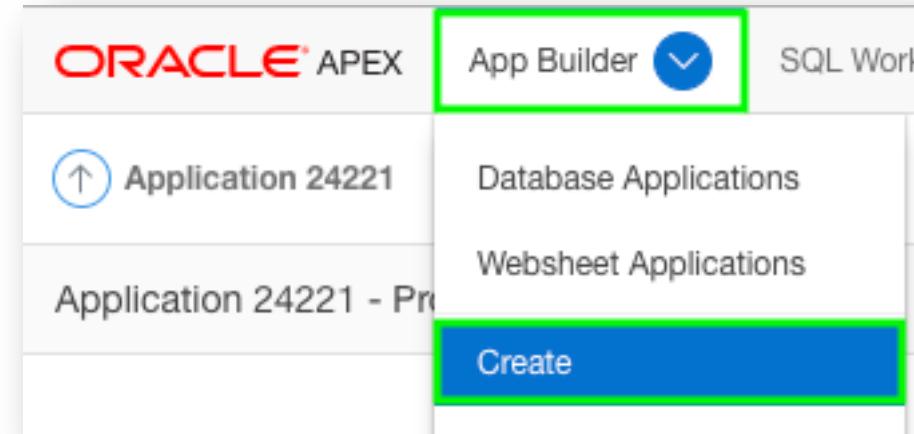


# Improving the App

## Updating a Page

# Step 1 – Restart the Create App Wizard

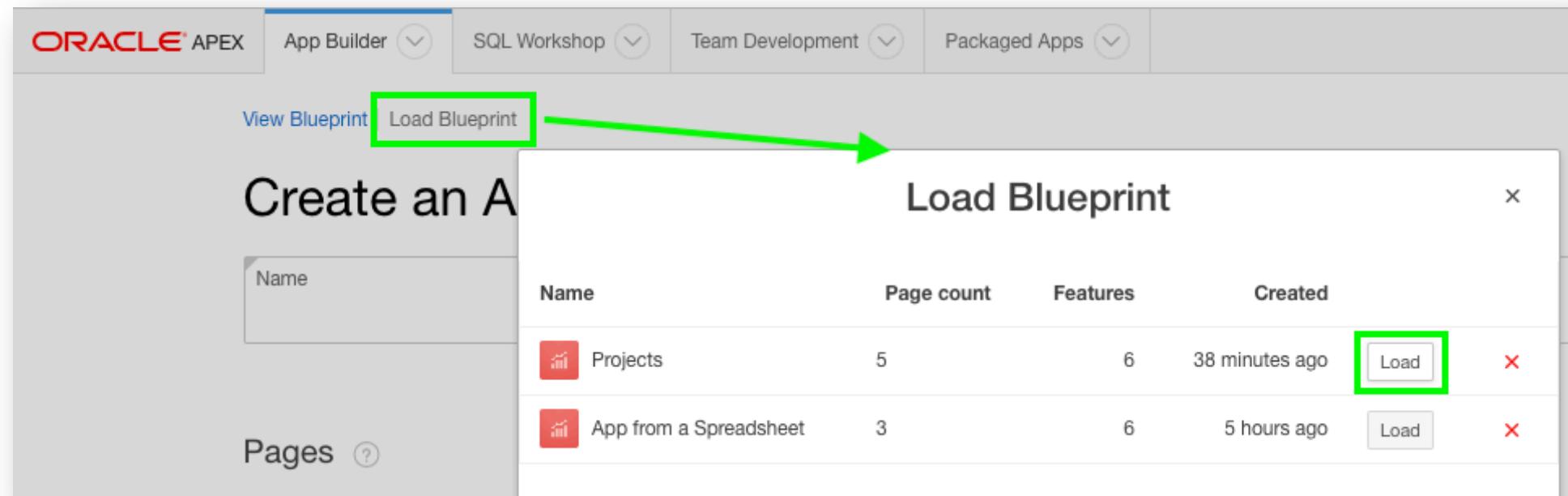
- From the development environment, click **App Builder**, and then select **Create**



- Click **New Application**

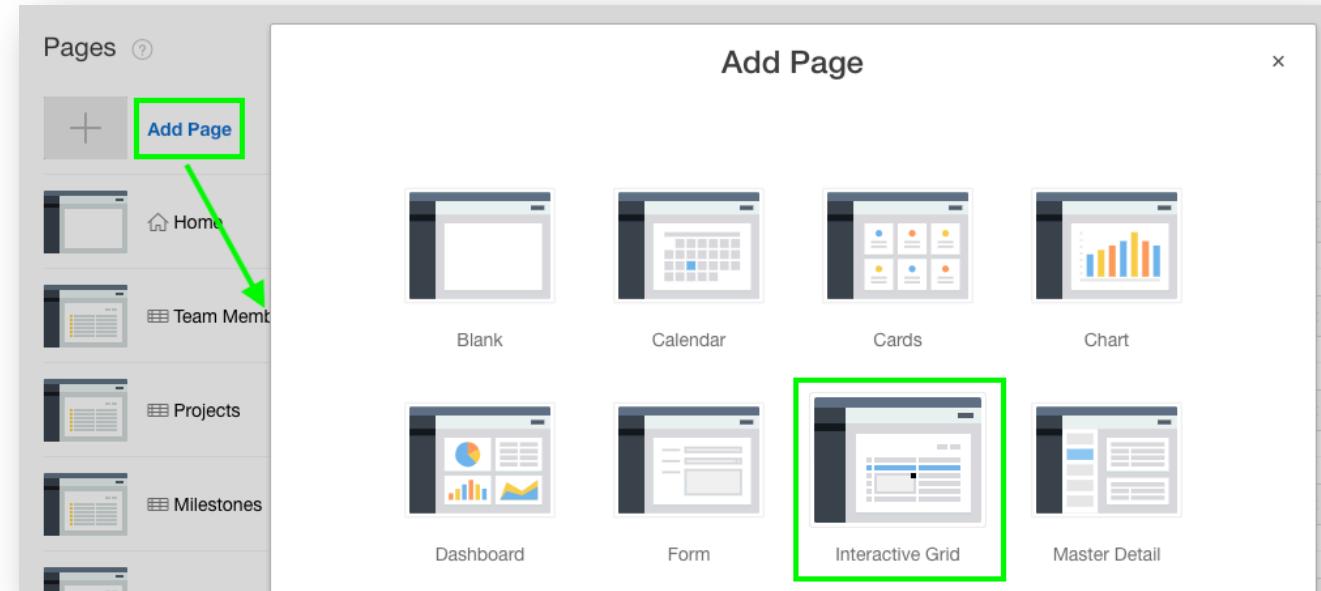
## Step 2 – Load Blueprint

- In the Create App Wizard, click **Load Blueprint**
- For Projects, click **Load**

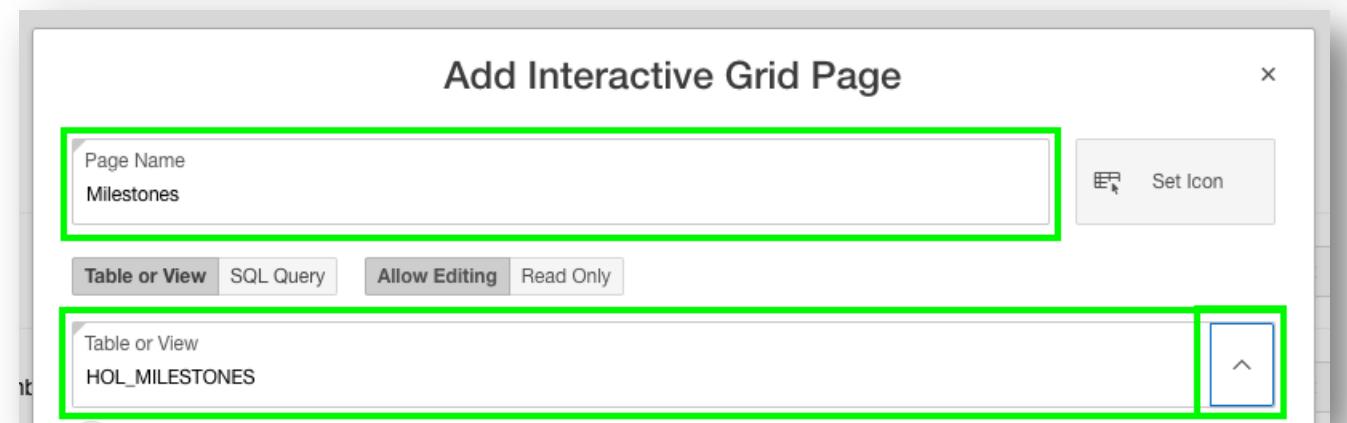


## Step 3 – Add a Page

- Click Add Page
- Click Interactive Grid

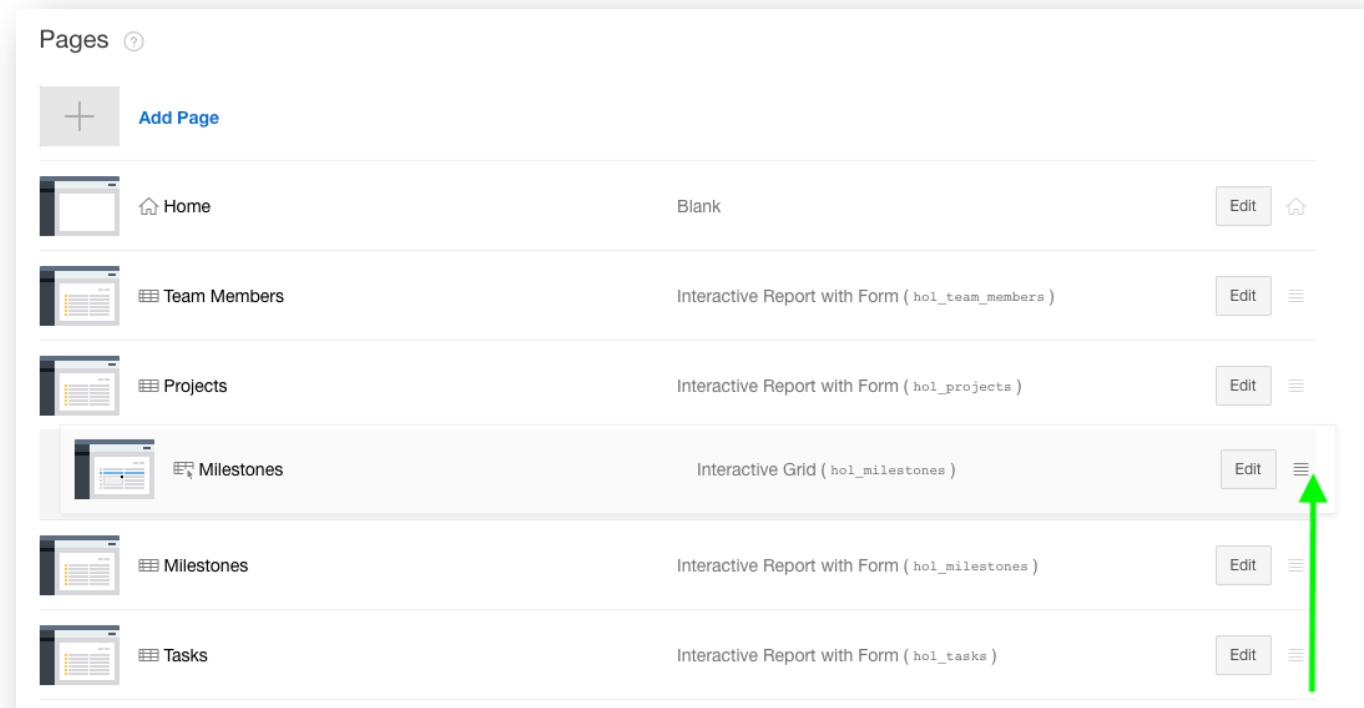


- For Page Name, enter **Milestones**
- For Table or View, select **HOL\_MILESTONES**
- Click Add Page



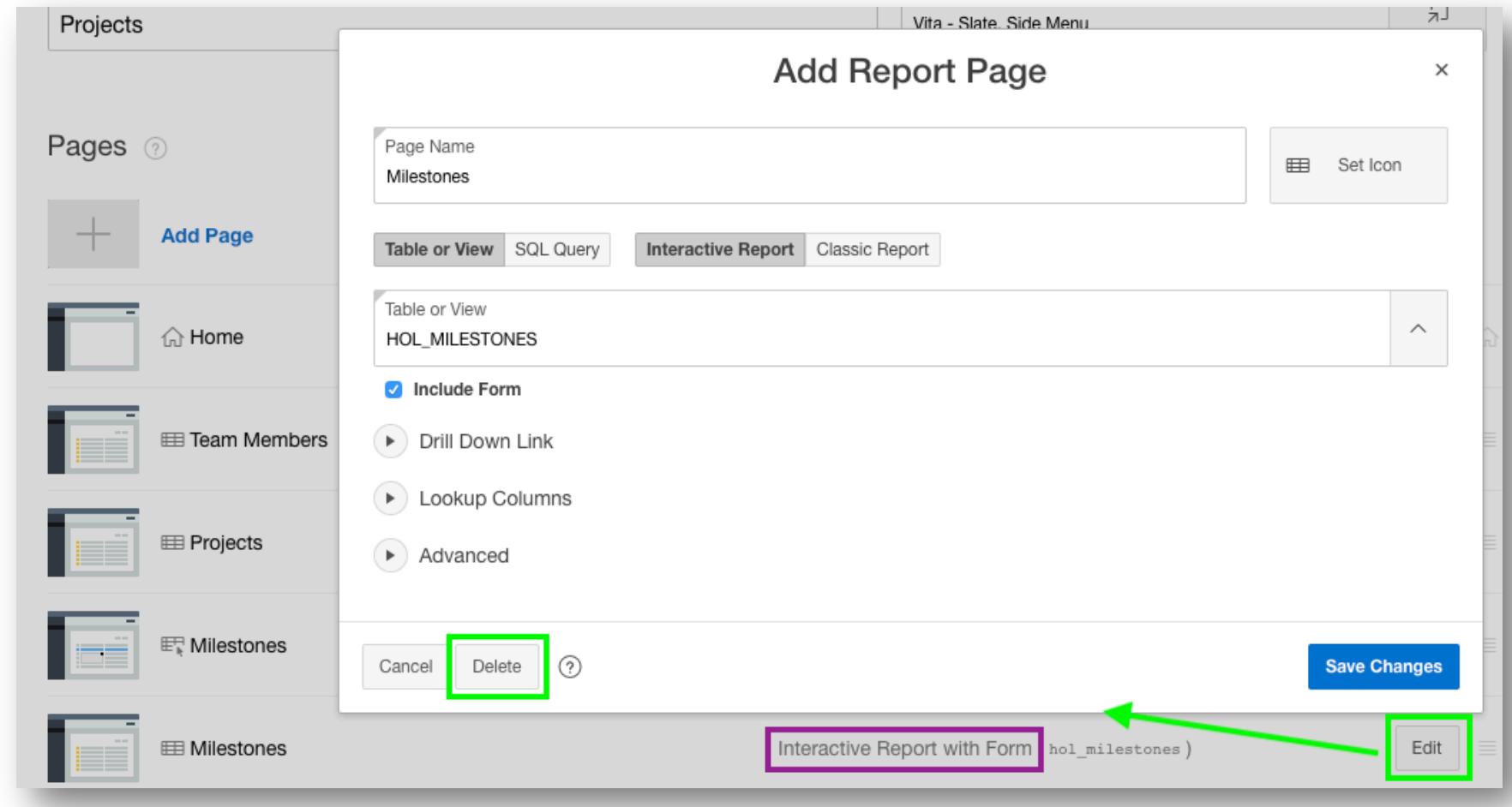
## Step 4 – Reorder a Page

- Click and hold the mouse when hovering over the hamburger for the **Milestones – Interactive Grid** page
- Move it up until the page is under Projects
- Release the mouse



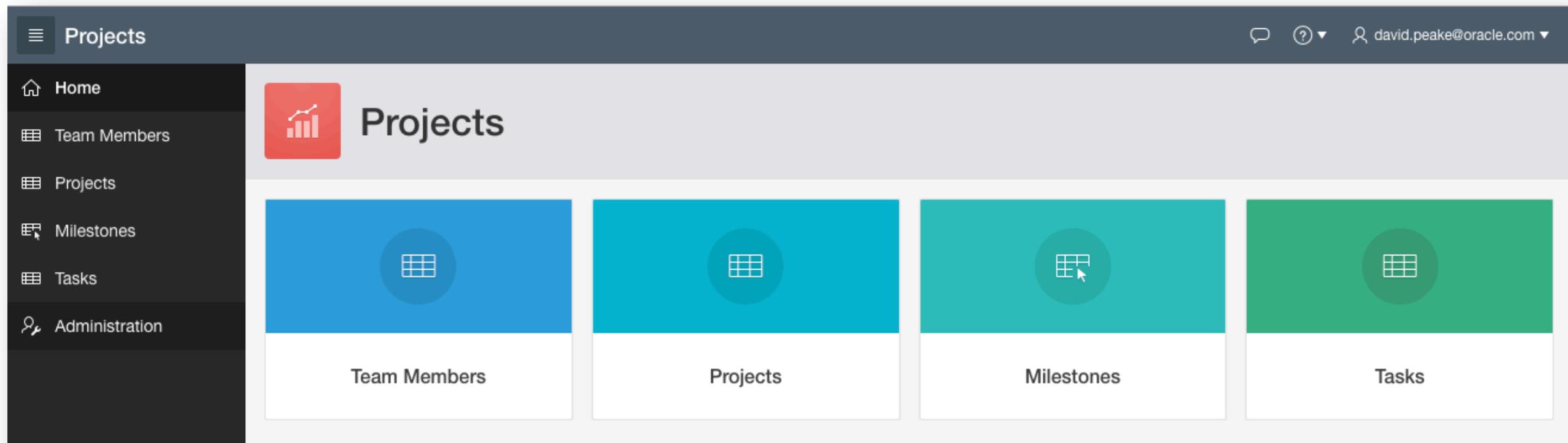
# Step 5 – Delete a Page

- For Milestones – Interactive Report with Form page, click Edit
- Click Delete



## Step 6 – Create App and Run

- Click Create Application
- In Page Designer, click Run Application



# Step 7 – Navigate to Milestones

- In the runtime environment, click **Milestones**

The screenshot shows the Oracle ADF runtime environment. The left sidebar has a dark theme with the following menu items:

- Projects
- Home
- Team Members
- Projects
- Milestones** (highlighted with a green border)
- Tasks
- Administration

The main content area is titled "Milestones". It contains a search bar with "Search: All Text Columns" and a "Go" button, followed by a toolbar with "Actions", "Edit", "Save", and "Add Row" buttons. Below is a table with the following data:

|                                     | Project Id | Row Version | Name               | Due Date    | Description        | Created     | Created By      | Updated     | Upda  |
|-------------------------------------|------------|-------------|--------------------|-------------|--------------------|-------------|-----------------|-------------|-------|
| <input checked="" type="checkbox"/> | 8          | 1           | Energy Efficiency  | 09-NOV-2017 | Mi venenatis ne... | 09-JUL-2018 | DAVID.PEAKE@... | 09-JUL-2018 | DAVID |
| <input type="checkbox"/>            | 16         | 1           | Transfer To Man... | 09-AUG-2017 | Nec. Donec con...  | 09-JUL-2018 | DAVID.PEAKE@... | 09-JUL-2018 | DAVID |

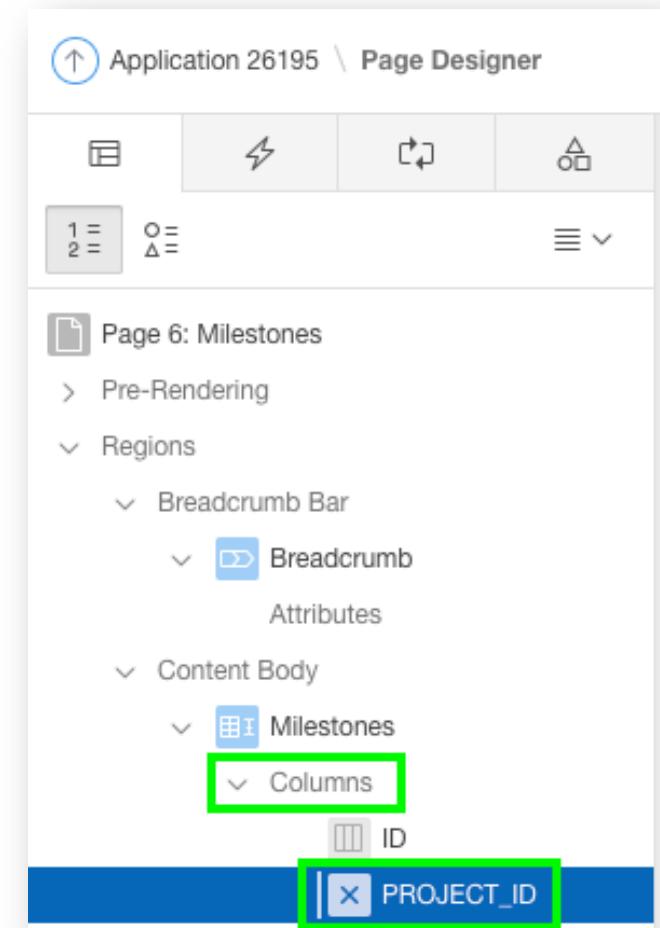
- In the Developer Toolbar, click **Edit Page 6**

The screenshot shows the Oracle ADF developer toolbar. The buttons from left to right are:

- Home
- Application 24221
- Edit Page 6** (highlighted with a green border)
- Session
- View Debug
- Debug
- Page Info
- Quick Edit
- Theme Roller
- Total 30

## Step 8 – Update Project ID Column

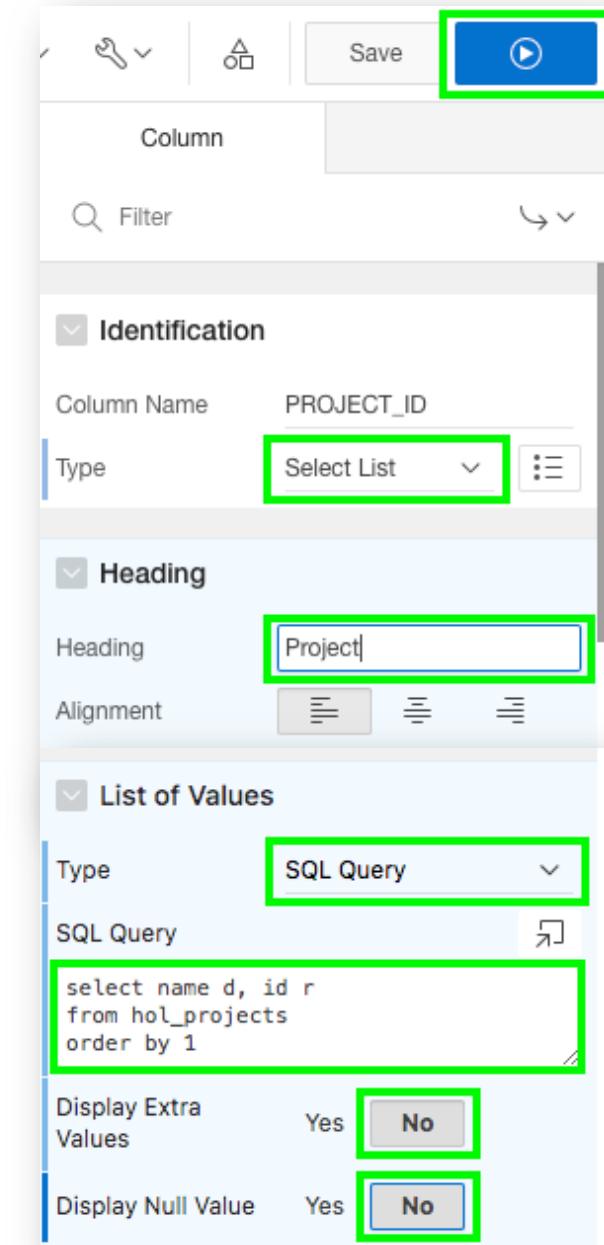
- In Page Designer, under Milestones, click Columns
- Click PROJECT\_ID



## Step 8b – Update Project ID Column

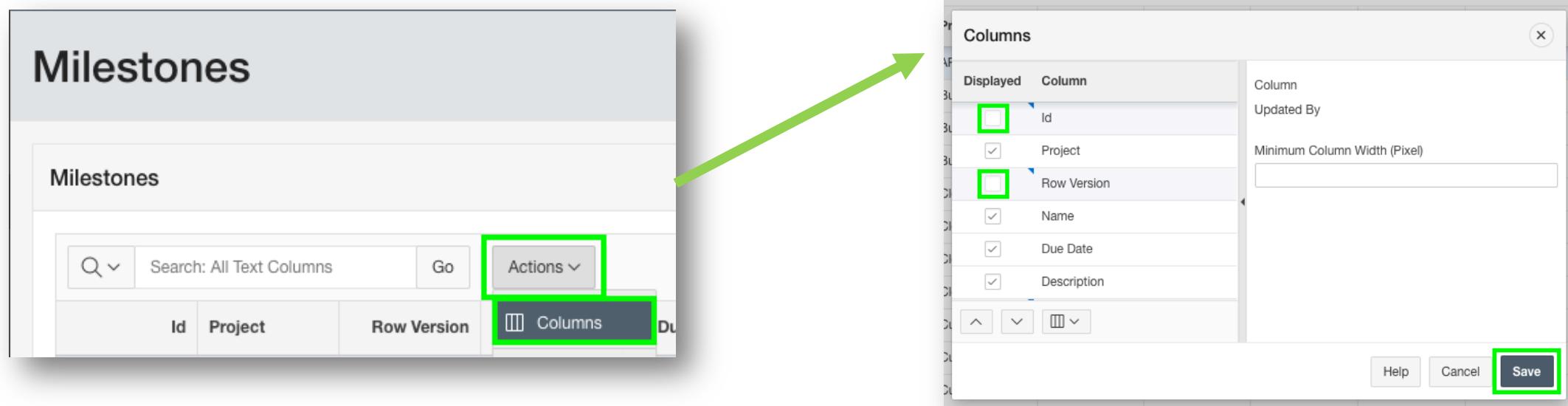
- In the Property Editor, update the following:
  - Identification: Type – select **Select List**
  - Heading: Heading – enter **Project**
  - List of Values: Type – select **SQL Query**
  - List of Values – SQL Query enter

```
select name d, id r
from hol_projects
order by 1
```
  - Display Extra Values – click **No**
  - Display Null Value – click **No**
- Save and Run the App



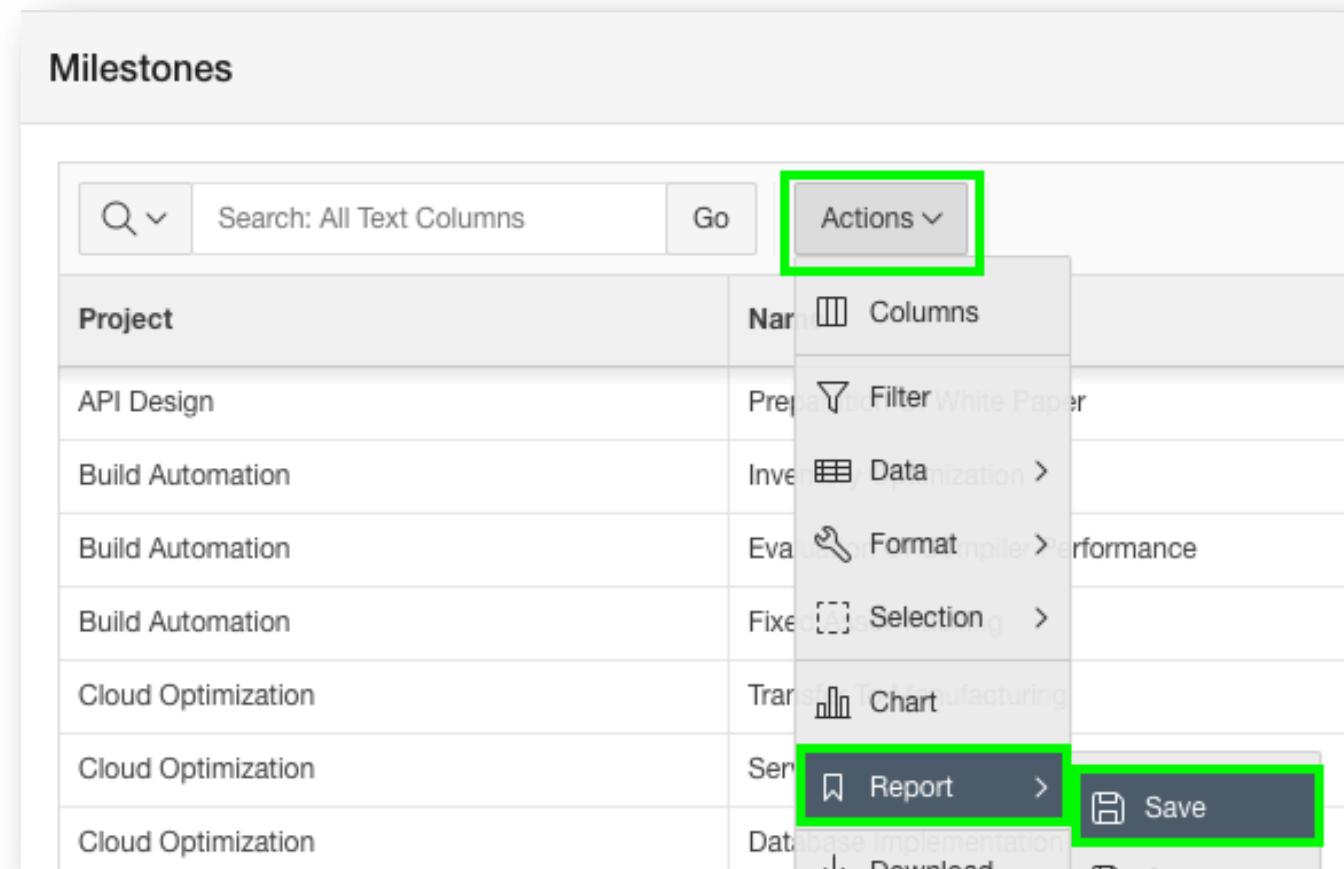
## Step 9 – Hide Columns

- In the runtime environment, click **Actions**, select **Columns**
- Uncheck **Displayed** for **Id**, **Row Version**, **Created**, **Created By**, **Updated**, and **Updated By**
- Click **Save**



## Step 10 – Save the Report

- In the runtime environment, click **Actions**, select **Report**, select **Save**



# Learn More Useful Links

# Useful Links

- APEX Collateral
- Hands-on Labs
- Community
- External Site + Slack

<http://apex.oracle.com>

<http://apex.oracle.com/hols>

<http://apex.oracle.com/community>

<http://apex.world>

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