

Everything you need to know about Oracle APEX and AI

– Karkuvelraja Thangamariappan

Associate Vice President @ Vibhathi Labs
Oracle ACE Pro

Getting Started

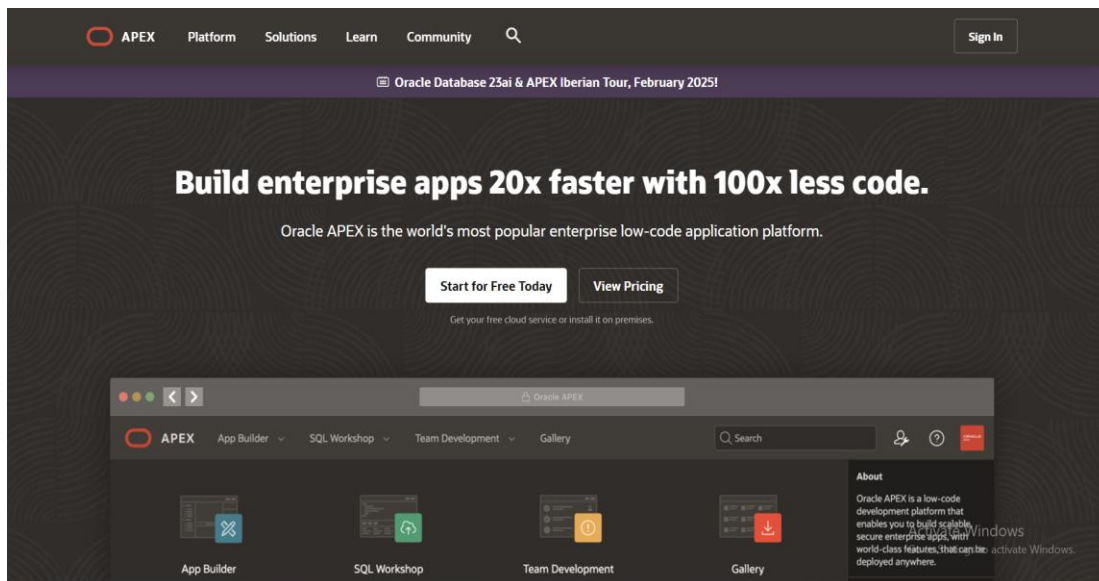
What is an APEX Workspace?

An APEX Workspace is a logical domain where you define APEX applications. Each workspace is associated with one or more database schemas (database users) which are used to store database objects, such as tables, views, packages, and more. APEX applications are built on top of these database objects.

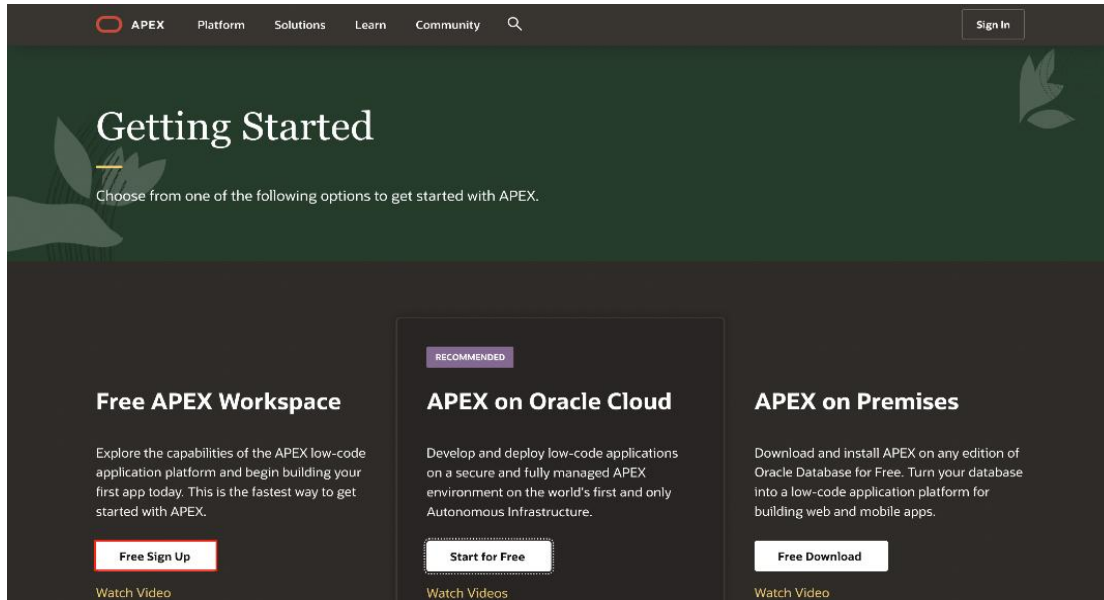
Setting up your APEX Development Environment

Signing up for apex.oracle.com is simply a matter of providing details on the workspace you wish to create and then waiting for the approval email.

1. Go to <https://apex.oracle.com> and click **Start for Free Today**

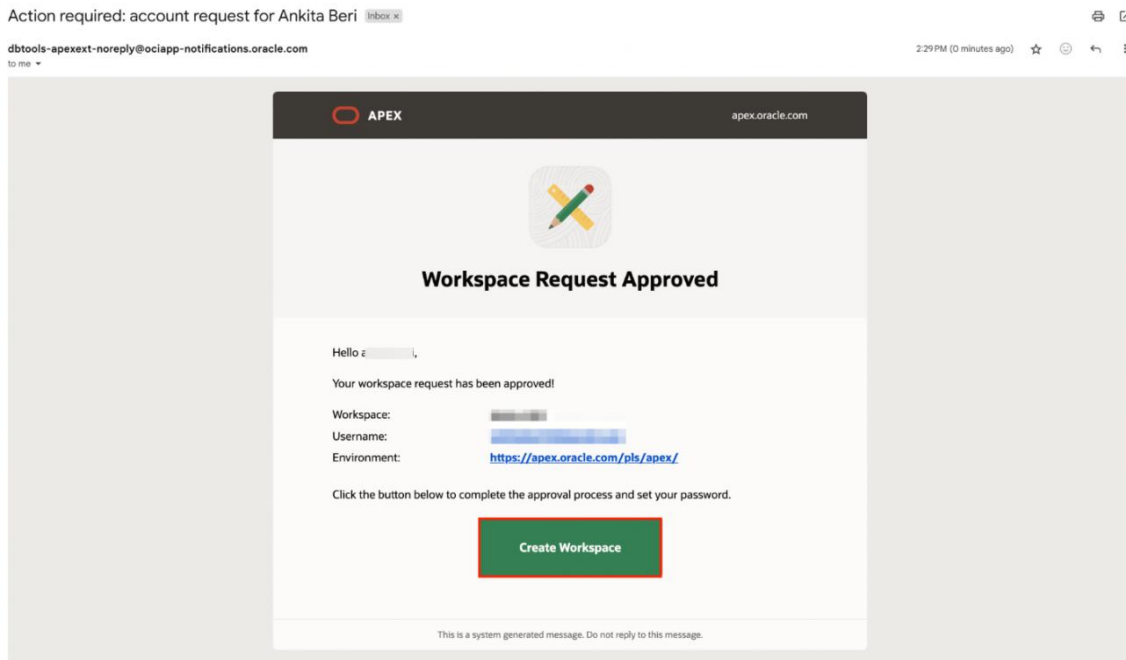


2. Under Free APEX Workspace, click **Free Sign Up**.

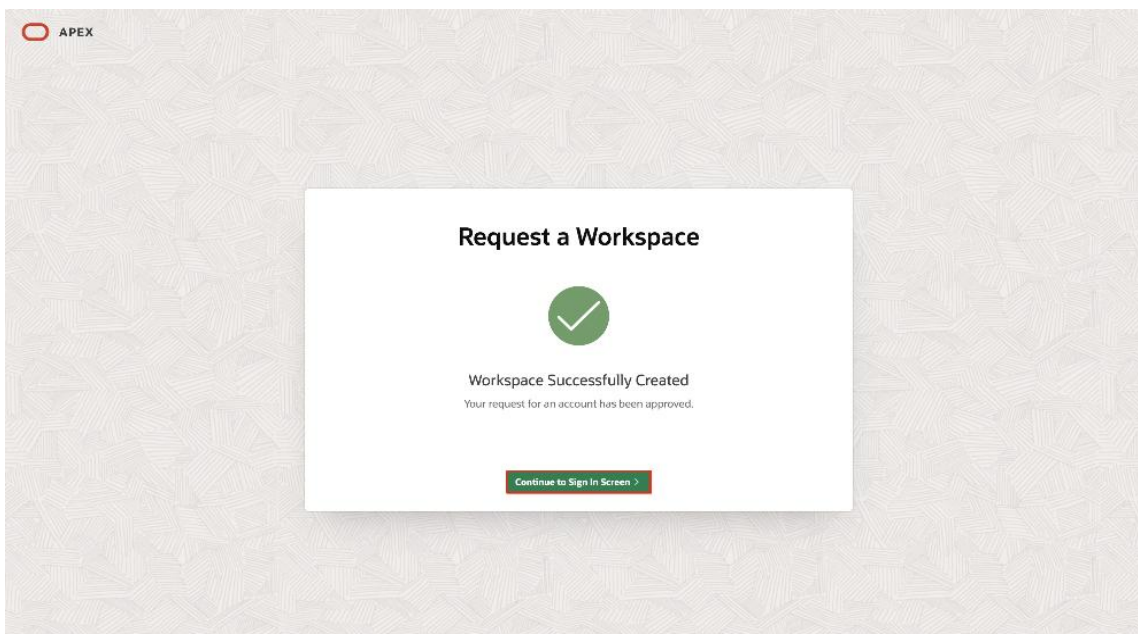


3. On the **Request a Workspace** page, enter your identification details – **First Name, Last Name, Email, Workspace name**. And then click **Request Workspace**.

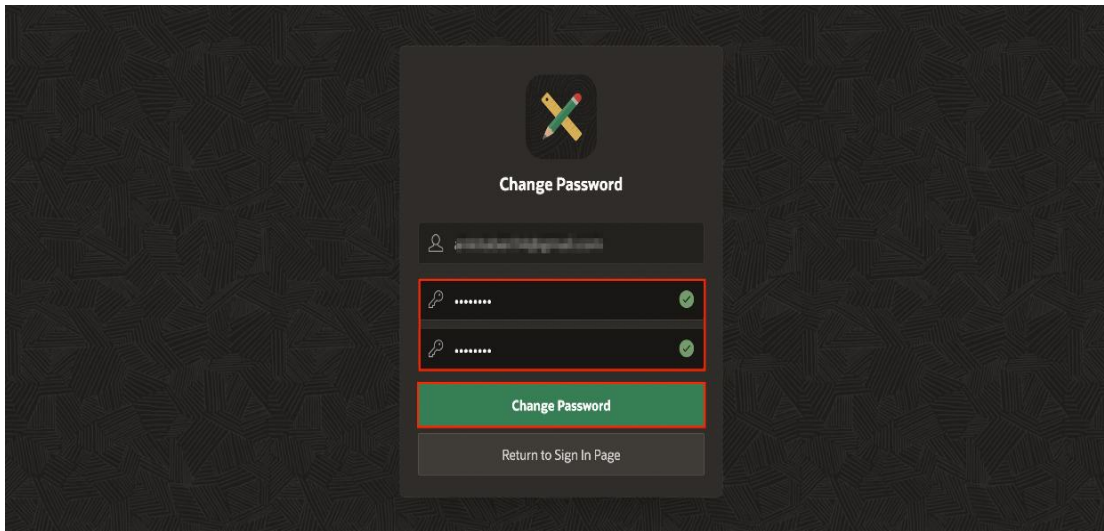
4. You should get an email from Oracle APEX within a few minutes. Click **Create Workspace**.



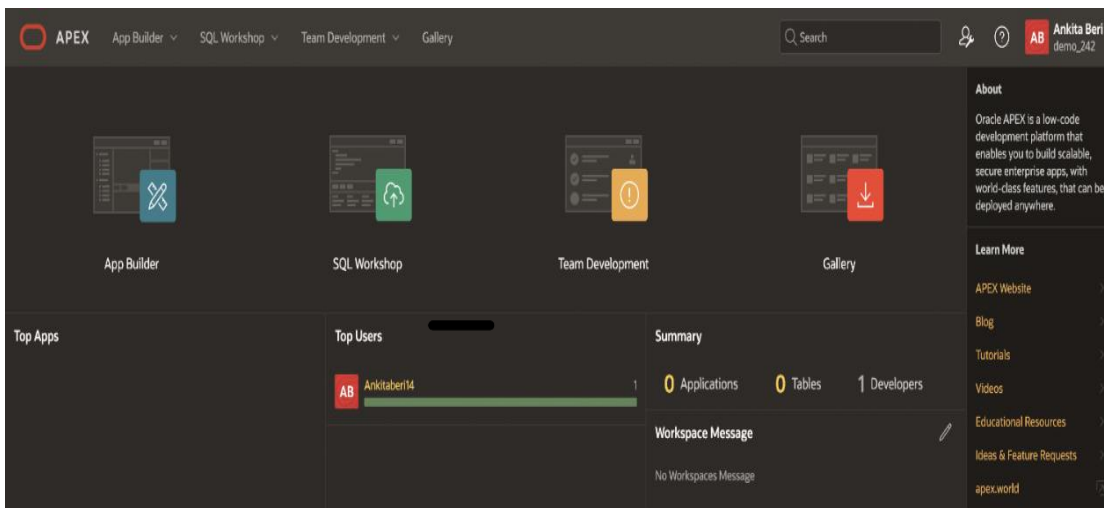
5. Click **Continue to Sign in Screen**.



6. Enter your password and click **Change Password**.



7. You should now be in the APEX Builder.



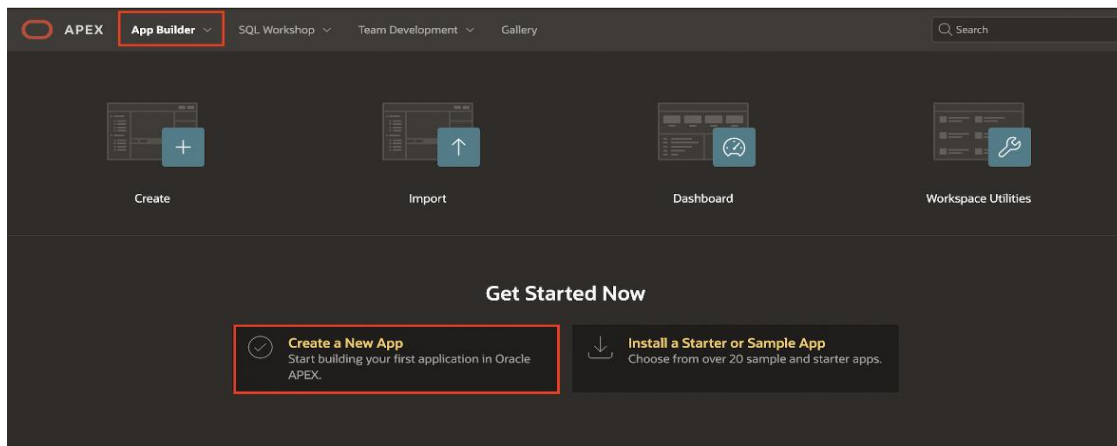
You are all set! Ready to start building your first App ?

Build your first APEX App, from a Spreadsheet

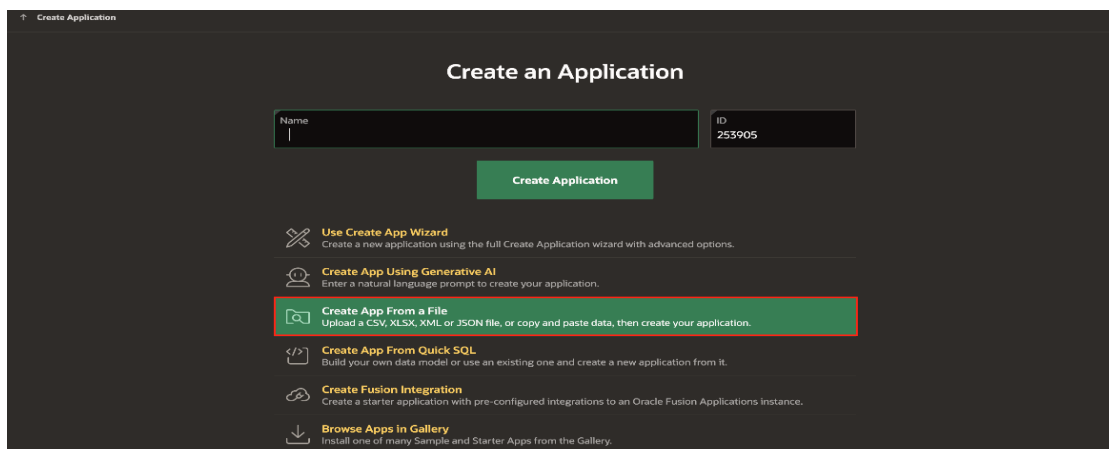
In this module, you will learn that with just a few clicks, you can create an APEX Application using the data imported from a spreadsheet.

For this workshop, we use a spreadsheet which consists of a list of High Schools in New York City.

1. From your APEX workspace home page, select **App Builder**, then, select **Create a New App**

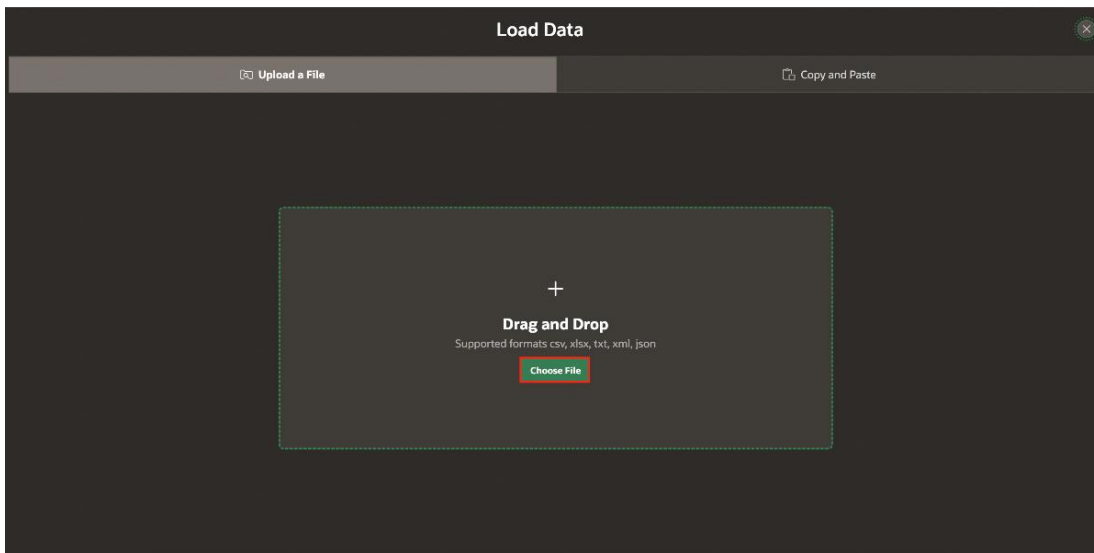


2. Click **Create App from a File**.

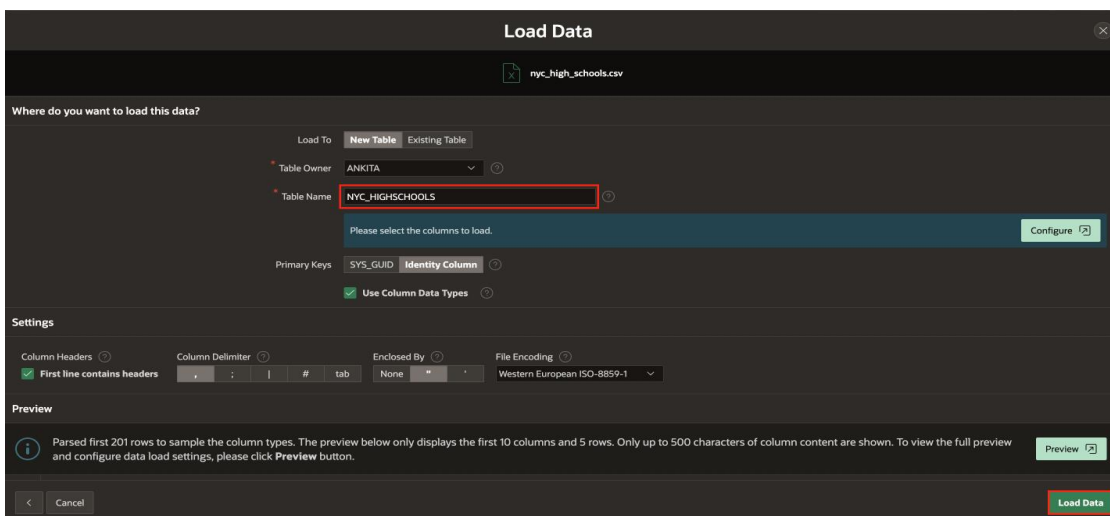


When creating an application from a file, APEX allows you to upload CSV, XLSX, XML, or JSON files and then build apps based on their data. Alternatively, you can also copy and paste CSV data or load sample data.

3. Click the **Choose File** option or drag and drop the file on to the dialog window.



4. Review the parsed data. Set Table Name to **NYC_HIGHSCHOOLS** and click **Load Data**.



Note: You can configure what columns to load from the spreadsheet by clicking the Configure button

5. Click **Create Application** and enter application name and choose an icon or upload your own.
6. In the Create Application page, review the pages listed. When the wizard finishes creating the application, you will be redirected to the application's home page in the App Builder. Clicking **Run Application** will open the runtime application in a new browser tab, allowing you to see how end users will view the app.

You now know how to create an application from a spreadsheet!

Build your APEX App hassle-free using APEX AI Assistant

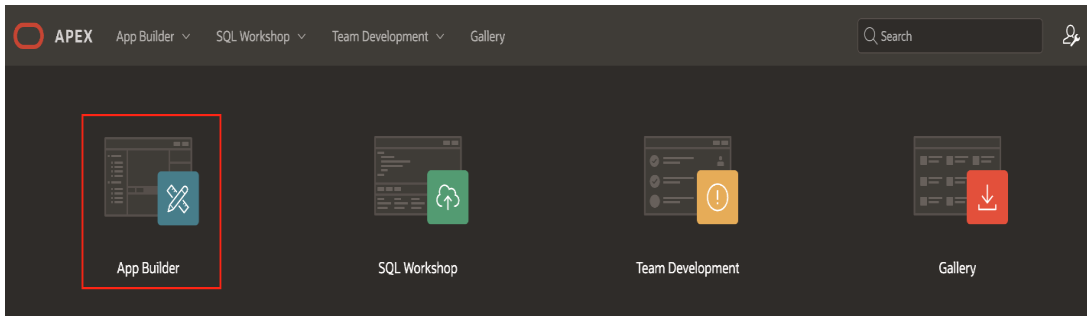
In this module, you will learn how AI-driven features of Oracle APEX can accelerate application development and simplify complex tasks, helping you create powerful applications with ease.

Creating your own free Cohere API Keys

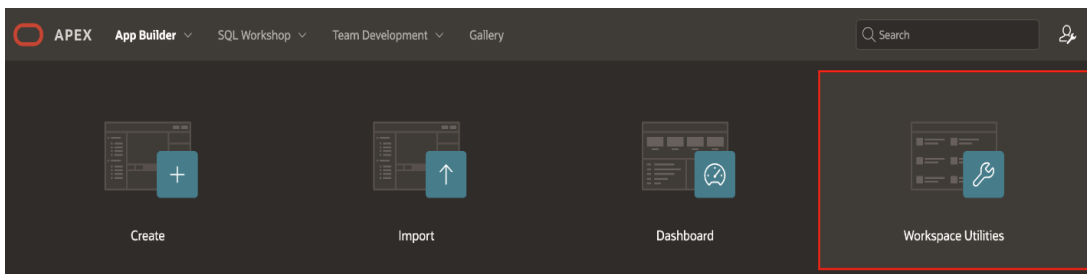
1. Create an Cohere Account at <https://dashboard.cohere.com/>.
2. Click Sign Up and register or Log in if you already have an account
3. Navigate to “**API Keys**” and generate API key by clicking on **Generate trial key**.
4. **Copy the key**. Once generated, Copy and use it.

Configuring Generative AI Service in Oracle APEX

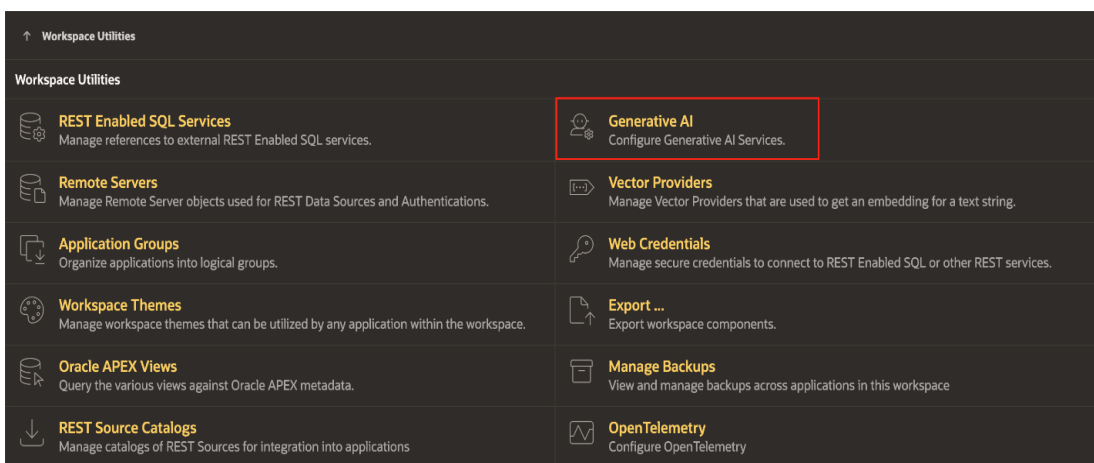
1. Login to your workspace and click **App Builder**



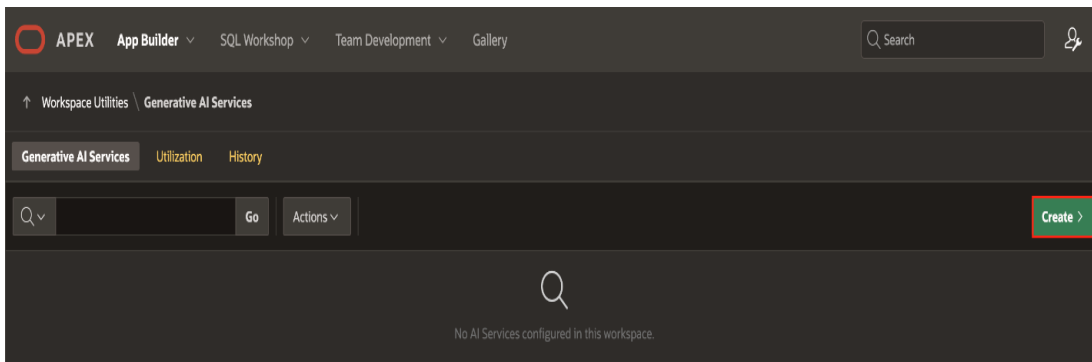
2. On the **App Builder** page, select **Workspace Utilities**.



3. Under Workspace Utilities, click **Generative AI**.



4. On the **Generative AI Services** page, click **Create**.



5. If the AI Provider is Cohere, under **Create/Edit** Generative AI Service Page, enter the following details.

*Note: At the moment, Oracle APEX supports the following AI providers – **OpenAI, Cohere and OCI Generative AI***

- Under Identification
 - AI Provider: **Cohere**
 - Name: **Cohere**
 - Static ID: **cohere**
- Settings > Used by App Builder: **Toggle On**
- Credentials > API Key: Type 'Bearer **Enter the API Key you procured from cohere**
- Advanced > AI Model: **command-r**

- To validate the information you enter prior to completing the setup, click **Test Connection**.

Generative AI Service Cancel Create

Show All Identification Settings Advanced

Identification

AI Provider: Cohere

Name: Cohere

Static ID: cohere

Settings

Used by App Builder: ☒

Base URL: https://api.cohere.ai/v1

Credentials Test Connection

Credential: Create New

API Key: [Masked]

Advanced Additional Attributes

AI Model: command-r

unique within the workspace. The developer can select from a list of supported AI Services and specify if the AI Service should be used by App Builder. Only one AI Service can be configured for App Builder. Advanced properties including additional HTTP headers and JSON attributes can be configured.

- Once the Connection is Successful, click **Create**.

Workspace Utilities \ Generative AI Services \ Create/Edit

✓ Connection Succeeded!

Generative AI Service Cancel Create

Show All Identification Settings Advanced

Identification

AI Provider: Cohere

Name: Cohere

Static ID: cohere

Settings

Used by App Builder: ☒

Base URL: https://api.cohere.ai/v1

Credentials Test Connection

Credential: Create New

API Key: [Masked]

Advanced

AI Model: command-r

APEX

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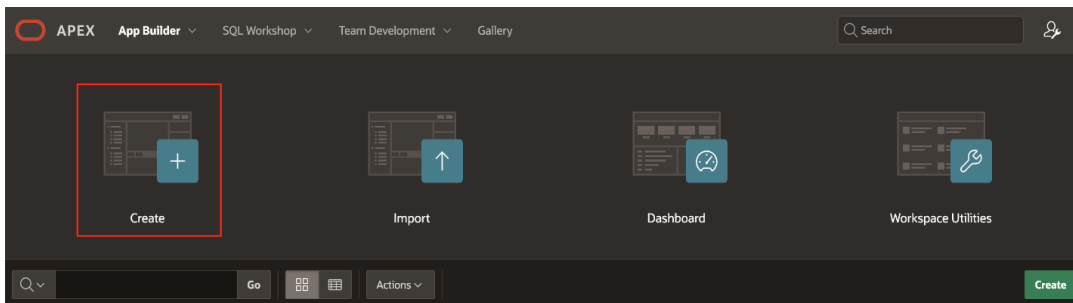
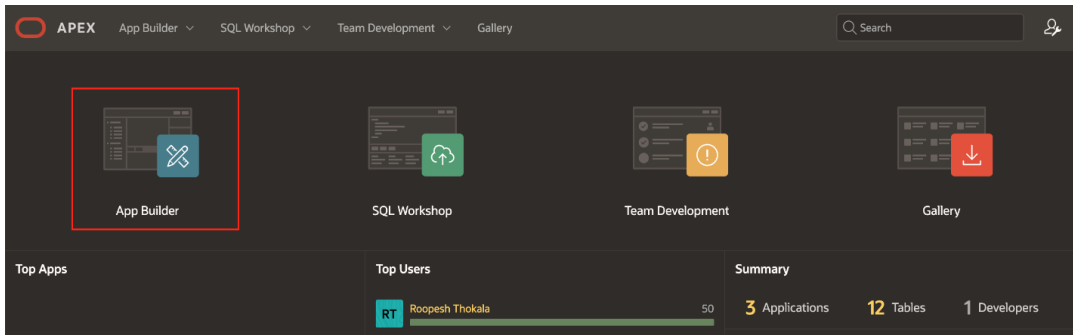
Name	Static ID	Provider Type	Base URL	Used by App Builder
Cohere	cohere	Cohere	https://api.cohere.ai/v1	Yes

1 - 1

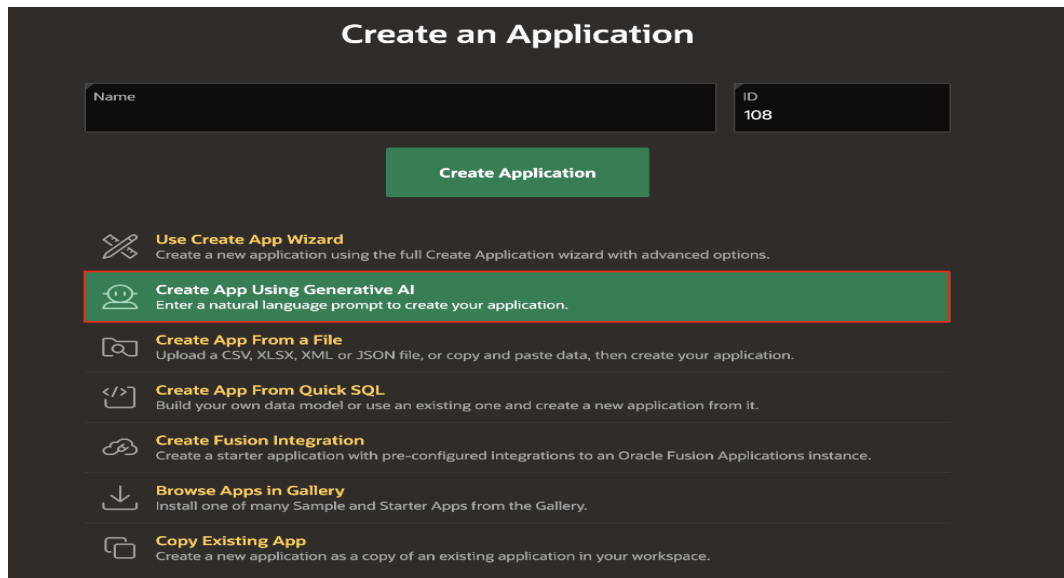
Create the application using Generative AI

In this module, you will learn how to create an application using the AI-driven Create Application wizard configured in the previous module.

1. From your APEX workspace homepage, click **App Builder** and Click **Create**.



2. In the Create an Application Page, select **Create APP Using Generative AI**



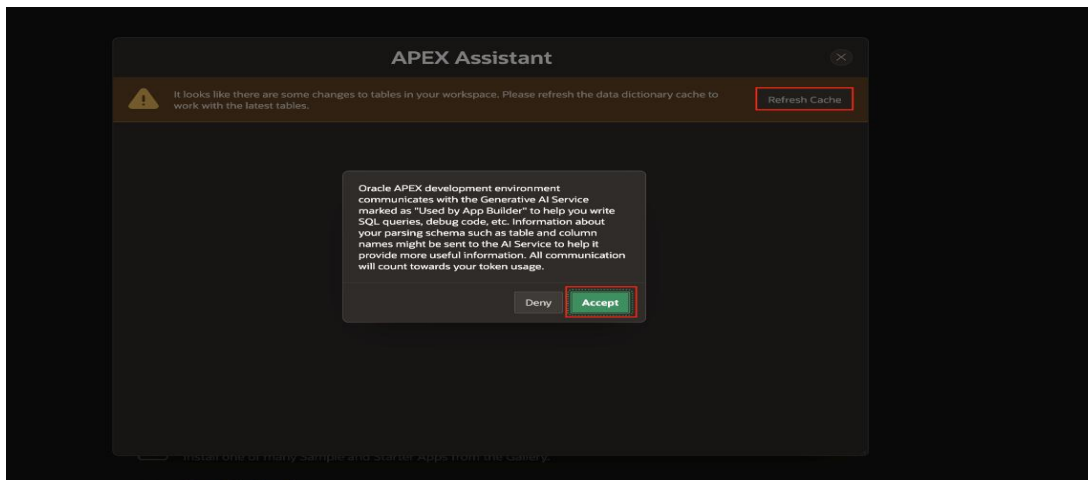
Create an Application

Name ID

Create Application

- Use Create App Wizard**
Create a new application using the full Create Application wizard with advanced options.
- Create App Using Generative AI**
Enter a natural language prompt to create your application.
- Create App From a File**
Upload a CSV, XLSX, XML or JSON file, or copy and paste data, then create your application.
- Create App From Quick SQL**
Build your own data model or use an existing one and create a new application from it.
- Create Fusion Integration**
Create a starter application with pre-configured integrations to an Oracle Fusion Applications instance.
- Browse Apps in Gallery**
Install one of many Sample and Starter Apps from the Gallery.
- Copy Existing App**
Create a new application as a copy of an existing application in your workspace.

3. In the APEX Assistant Wizard, if you see a warning that says "It looks like there are some changes to tables in your workspace. Please refresh the data dictionary cache to work with the latest tables". Click on **Accept** and then click **Refresh Cache**.



APEX Assistant

⚠ It looks like there are some changes to tables in your workspace. Please refresh the data dictionary cache to work with the latest tables. **Refresh Cache**

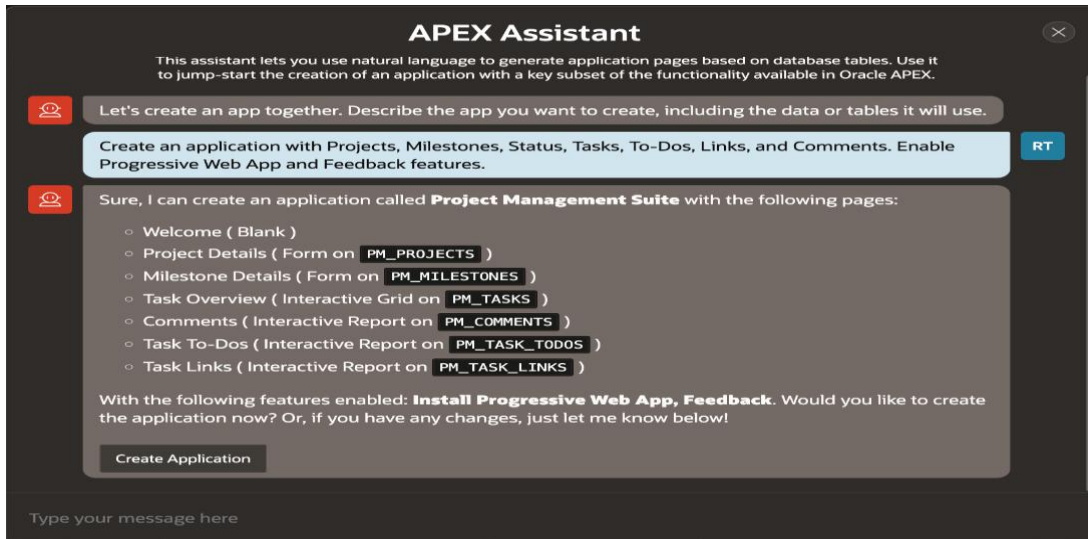
Oracle APEX development environment communicates with the Generative AI Service marked as "Used by App Builder" to help you write SQL queries, debug code, etc. Information about your parsing schema such as table and column names might be sent to the AI Service to help it provide more useful information. All communication will count towards your token usage.

Accept

4. Use the APEX Assistant Wizard to create an application you wish to create by typing the appropriate prompt hit **Enter**.

Note: In this module, Project Management Application is used as an example. Make sure that for your application, the necessary database objects are created and available before using the APEX AI Assistant, as the application will be created based on the objects

Prompt 1: Create an application with Projects, Milestones, Status, Tasks, To-Dos, Links, and Comments. Enable Progressive Web App and Feedback features



The screenshot shows the APEX Assistant interface. At the top, it says "APEX Assistant" and "This assistant lets you use natural language to generate application pages based on database tables. Use it to jump-start the creation of an application with a key subset of the functionality available in Oracle APEX." Below this, there is a text input area with a prompt: "Let's create an app together. Describe the app you want to create, including the data or tables it will use." The prompt is: "Create an application with Projects, Milestones, Status, Tasks, To-Dos, Links, and Comments. Enable Progressive Web App and Feedback features." The assistant's response is: "Sure, I can create an application called **Project Management Suite** with the following pages:" followed by a list of pages and their corresponding database objects:

- Welcome (Blank)
- Project Details (Form on **PM_PROJECTS**)
- Milestone Details (Form on **PM_MILESTONES**)
- Task Overview (Interactive Grid on **PM_TASKS**)
- Comments (Interactive Report on **PM_COMMENTS**)
- Task To-Dos (Interactive Report on **PM_TASK_TODOs**)
- Task Links (Interactive Report on **PM_TASK_LINKS**)

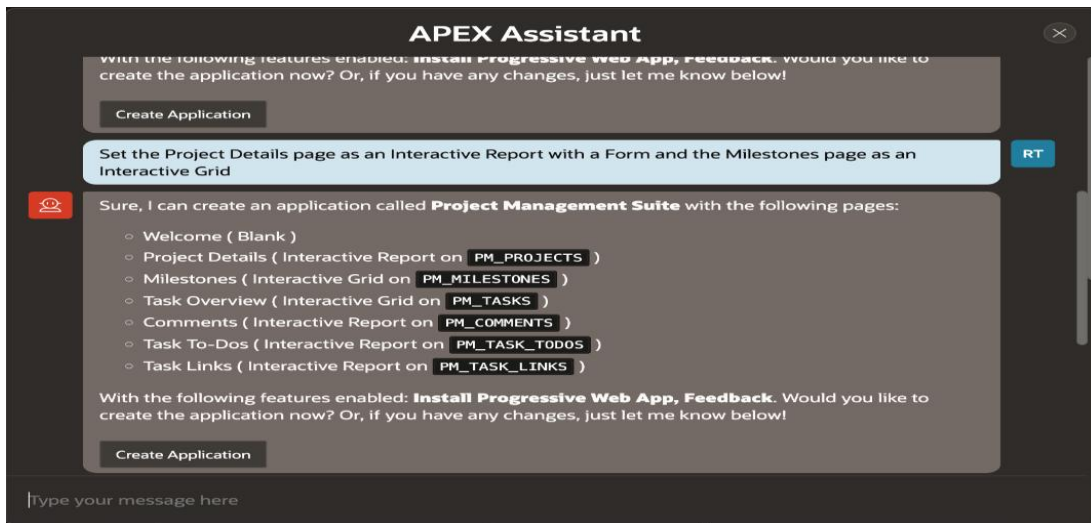
Below the list, it says: "With the following features enabled: **Install Progressive Web App, Feedback**. Would you like to create the application now? Or, if you have any changes, just let me know below!" At the bottom, there is a "Create Application" button and a text input area labeled "Type your message here".

5. Check the pages listed by the AI Assistant and make any changes based on your requirement.

In this example, we need the Project Details page as an interactive report, Milestones page as interactive grid and a new page for Project Dashboard as the Home page.

Prompt 2: Set the Project Details page as an Interactive Report with a Form and the Milestones page as an Interactive Grid

Prompt 3: Add a project dashboard as a Cards page, set it as the Home page, and remove the Welcome page



APEX Assistant

With the following features enabled: **Install Progressive Web App, Feedback.** Would you like to create the application now? Or, if you have any changes, just let me know below!

Create Application

Set the Project Details page as an Interactive Report with a Form and the Milestones page as an Interactive Grid RT

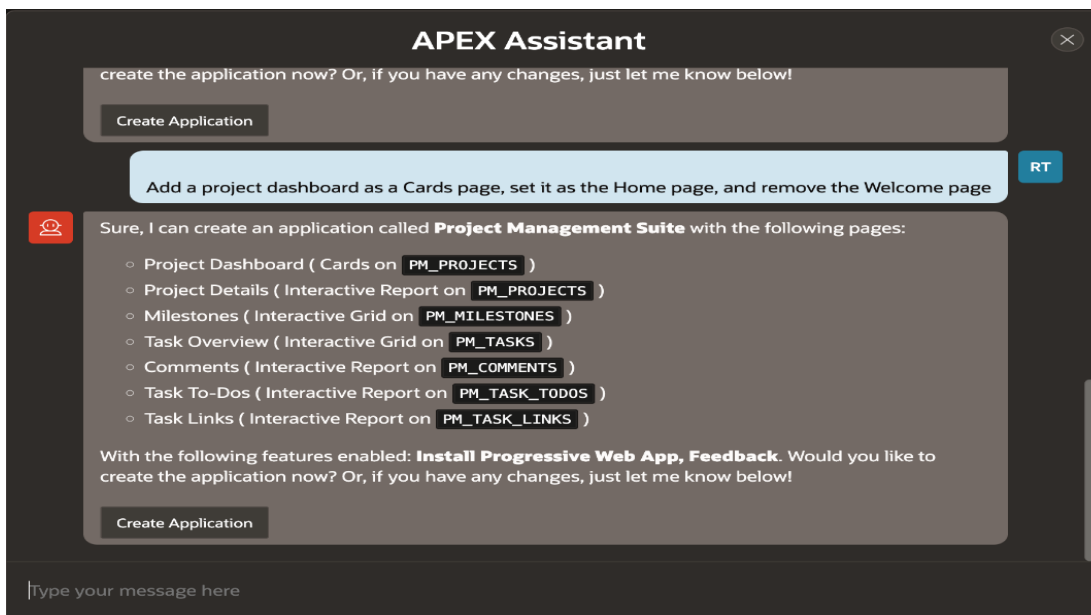
Sure, I can create an application called **Project Management Suite** with the following pages:

- Welcome (Blank)
- Project Details (Interactive Report on **PM_PROJECTS**)
- Milestones (Interactive Grid on **PM_MILESTONES**)
- Task Overview (Interactive Grid on **PM_TASKS**)
- Comments (Interactive Report on **PM_COMMENTS**)
- Task To-Dos (Interactive Report on **PM_TASK_TODOs**)
- Task Links (Interactive Report on **PM_TASK_LINKS**)

With the following features enabled: **Install Progressive Web App, Feedback.** Would you like to create the application now? Or, if you have any changes, just let me know below!

Create Application

Type your message here



APEX Assistant

create the application now? Or, if you have any changes, just let me know below!

Create Application

Add a project dashboard as a Cards page, set it as the Home page, and remove the Welcome page RT

Sure, I can create an application called **Project Management Suite** with the following pages:

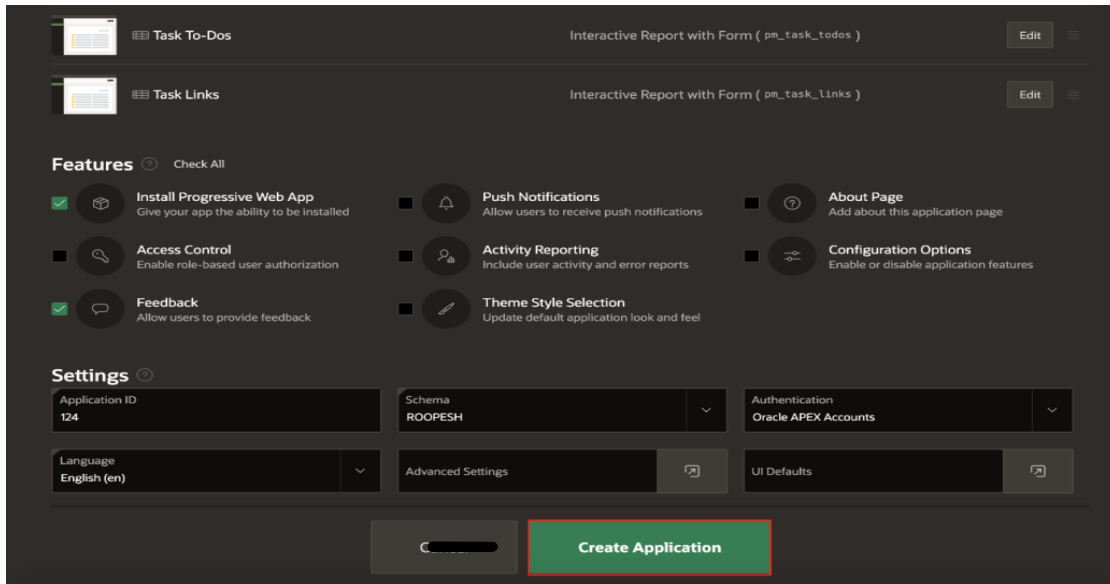
- Project Dashboard (Cards on **PM_PROJECTS**)
- Project Details (Interactive Report on **PM_PROJECTS**)
- Milestones (Interactive Grid on **PM_MILESTONES**)
- Task Overview (Interactive Grid on **PM_TASKS**)
- Comments (Interactive Report on **PM_COMMENTS**)
- Task To-Dos (Interactive Report on **PM_TASK_TODOs**)
- Task Links (Interactive Report on **PM_TASK_LINKS**)

With the following features enabled: **Install Progressive Web App, Feedback.** Would you like to create the application now? Or, if you have any changes, just let me know below!

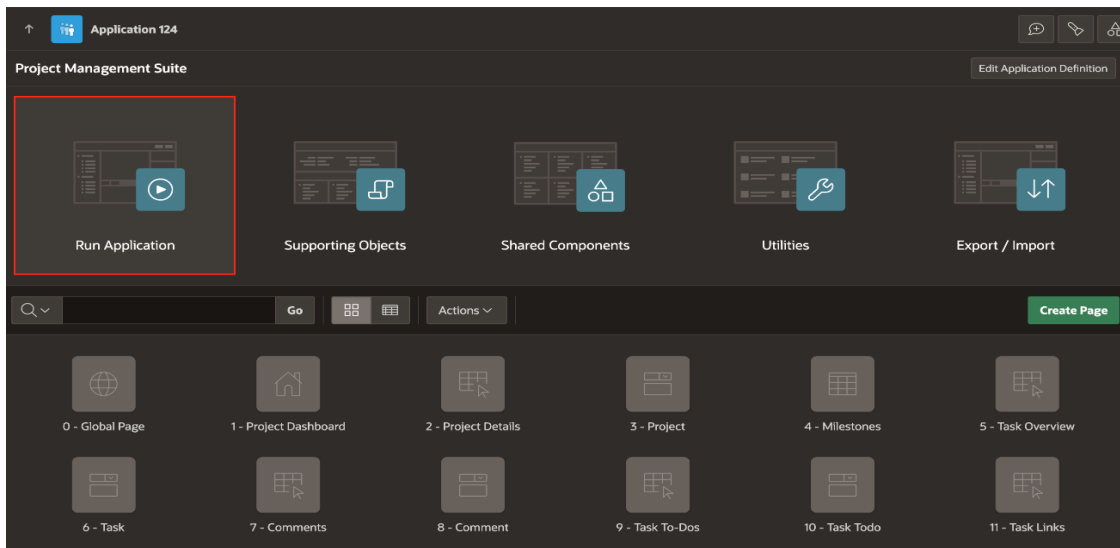
Create Application

Type your message here

- Finally, review the pages and click **Create Application**. On this page, make the required configurations such as App icon and theme. Save the changes and create the application.



7. Your new application will be displayed in Page Designer. Click **Run Application**.



It's as simple as that. You have created a full-fledged application with the help of Generative AI and APEX AI Assistant!