Oracle Academy Oracle APEX Learner Guide

Contents Page

Introduction

This document will help Oracle Academy learners and instructors become familiar with how to use Oracle APEX and each of its components from an end user's perspective. If you would like to learn more about the instructor's capabilities of Oracle APEX, please refer to the Oracle APEX Instructor Guide.

Using Oracle Academy Cloud Program Oracle APEX on Autonomous Database

1. Logging in to Oracle APEX – on an Autonomous Database (Cloud only)

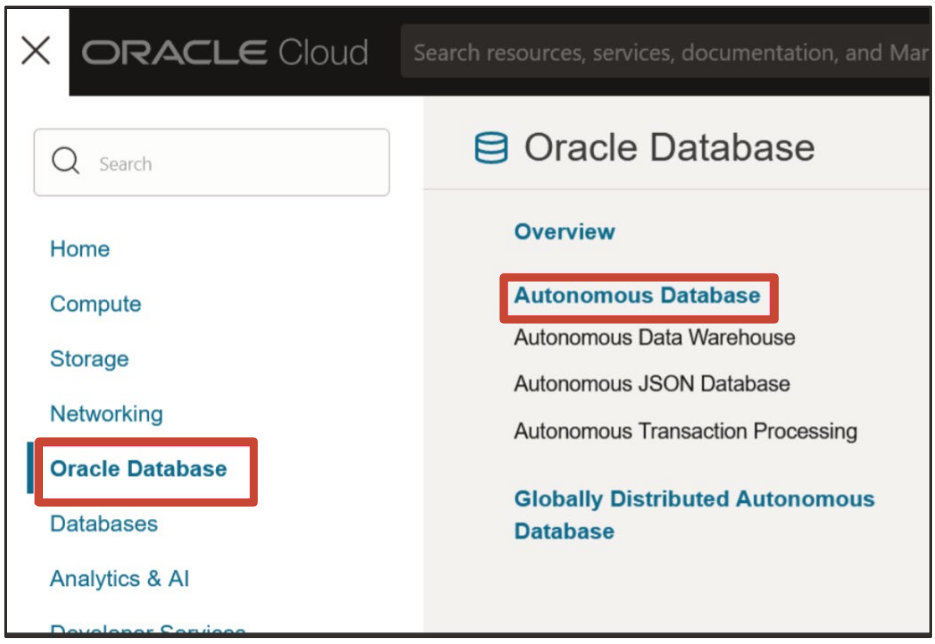
Note: It is recommended that learners keep all passwords associated with their Cloud, Autonomous DB, and APEX accounts the same.

1. Look for Cloud account setup email – set up account – document password.
2. Follow instructor's instructions for setting up Autonomous Database.
3. Complete the following instructions for creating your APEX workspace.
4. Email your instructor the link to your APEX workspace.

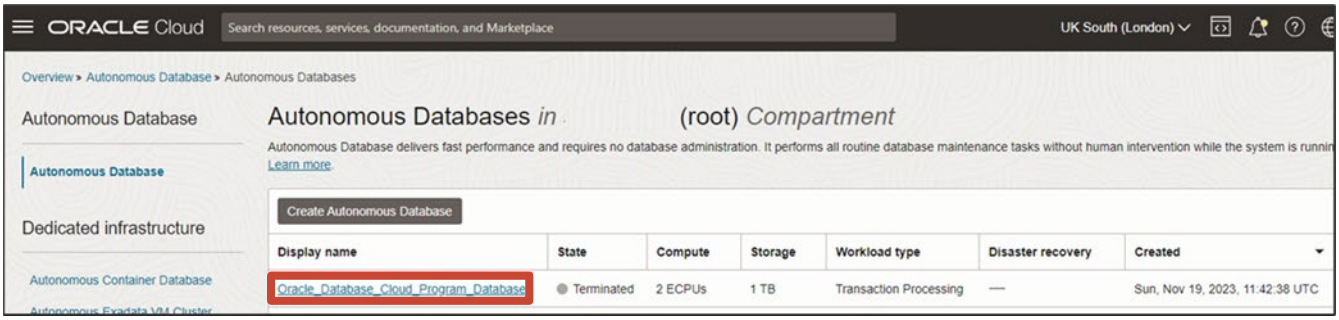
2. First Time Logging in to Oracle APEX – on an Autonomous Database

Creating APEX Cloud Workspace:

1. Sign into your Oracle Cloud Account.
   Click the **Navigation menu** (top left), select **Autonomous Database.**

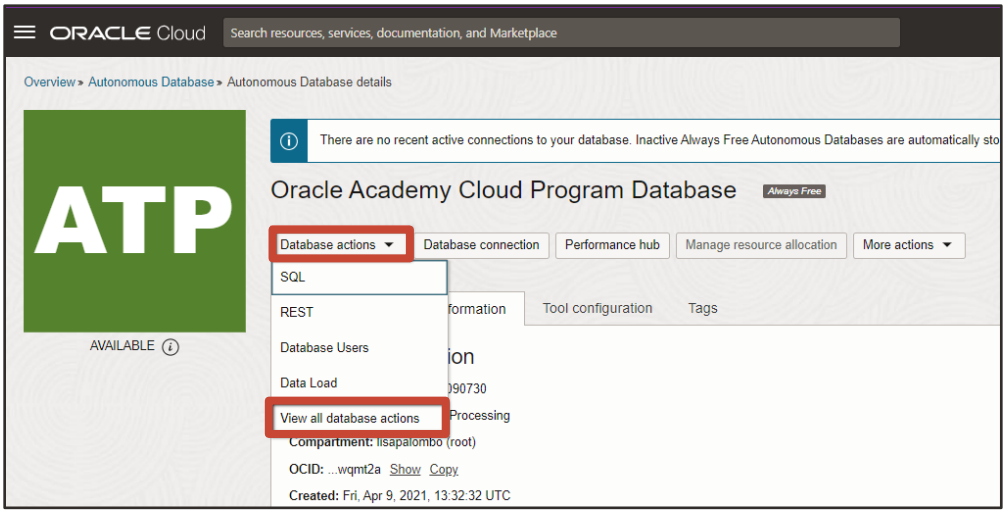


2. Click **<Your Database>** from the list.

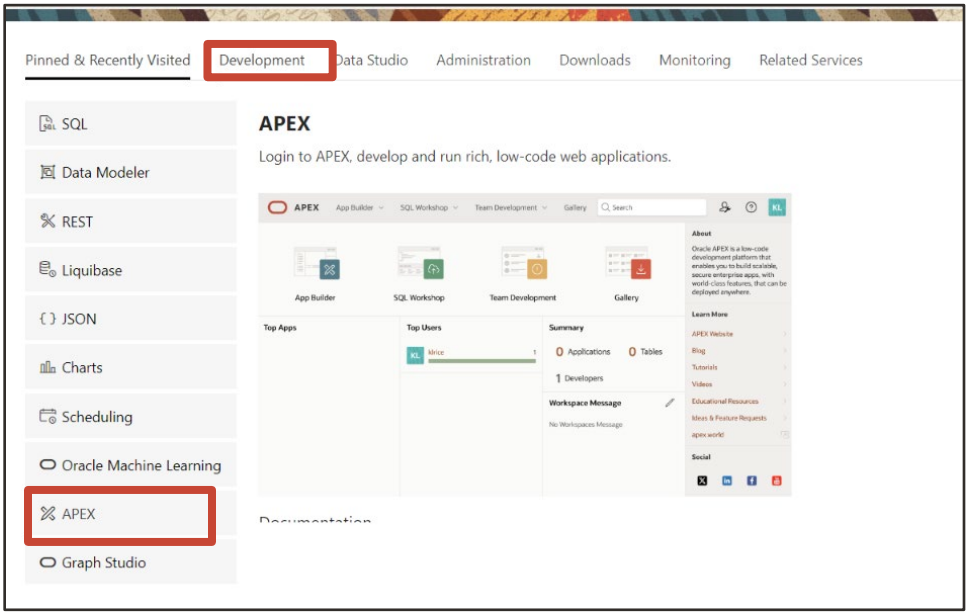


Note: *If your database is stopped (no activity for a period of 7 consecutive days) see the Autonomous Database Startup guide for instructions on restarting your Autonomous Database.*

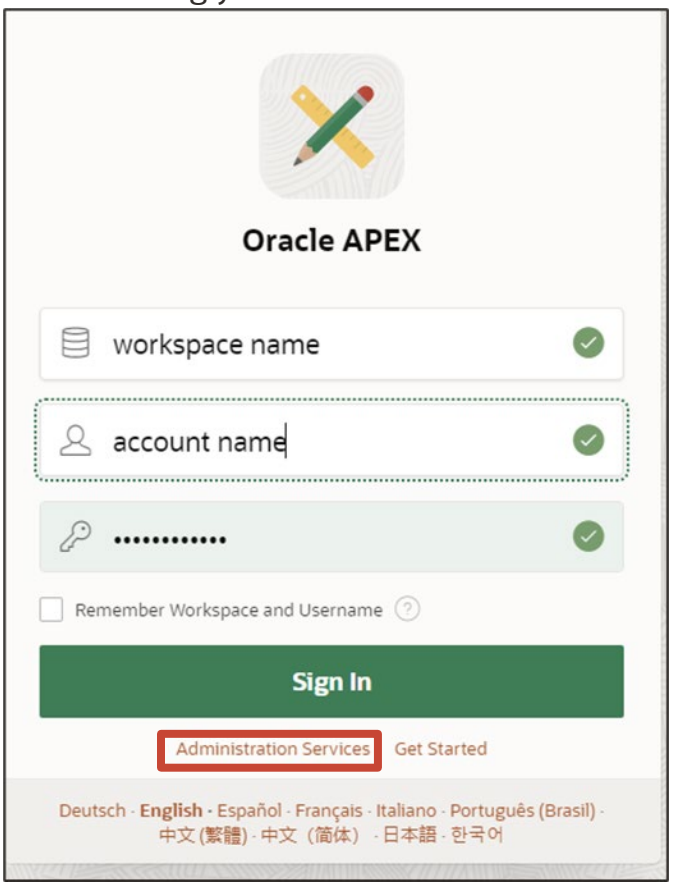
3. Click **Database actions** > **View all database actions.**

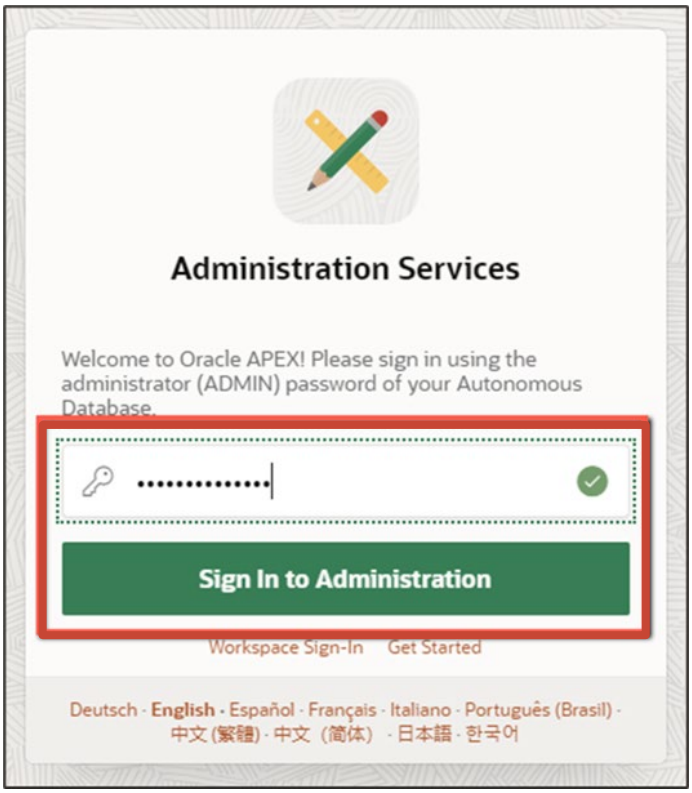


4. Select **APEX** under the **Development** section.

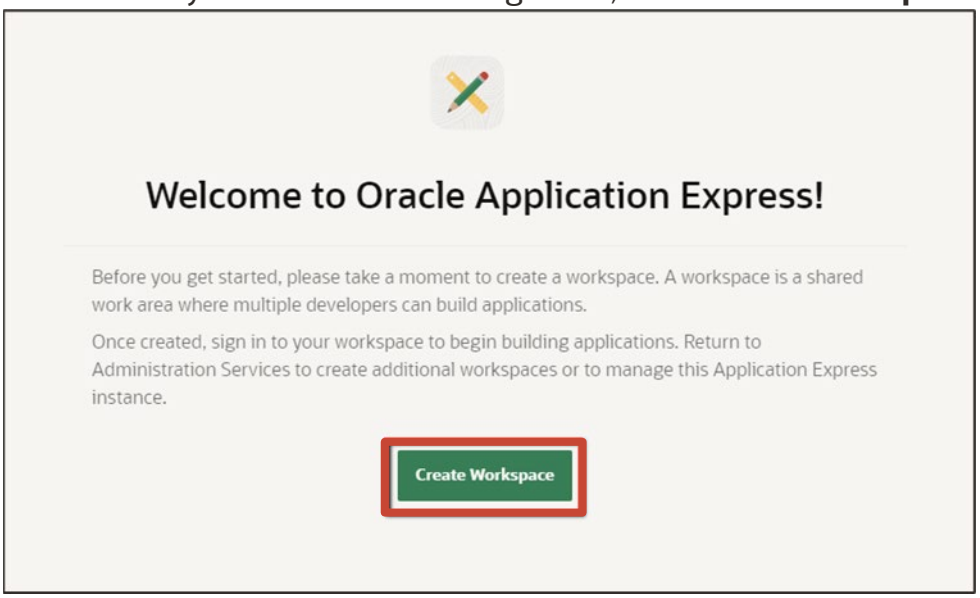


5. Sign into **Administration Services** using the password supplied for administrator credentials when creating your Autonomous Database instance, click **Sign In to Administration.**

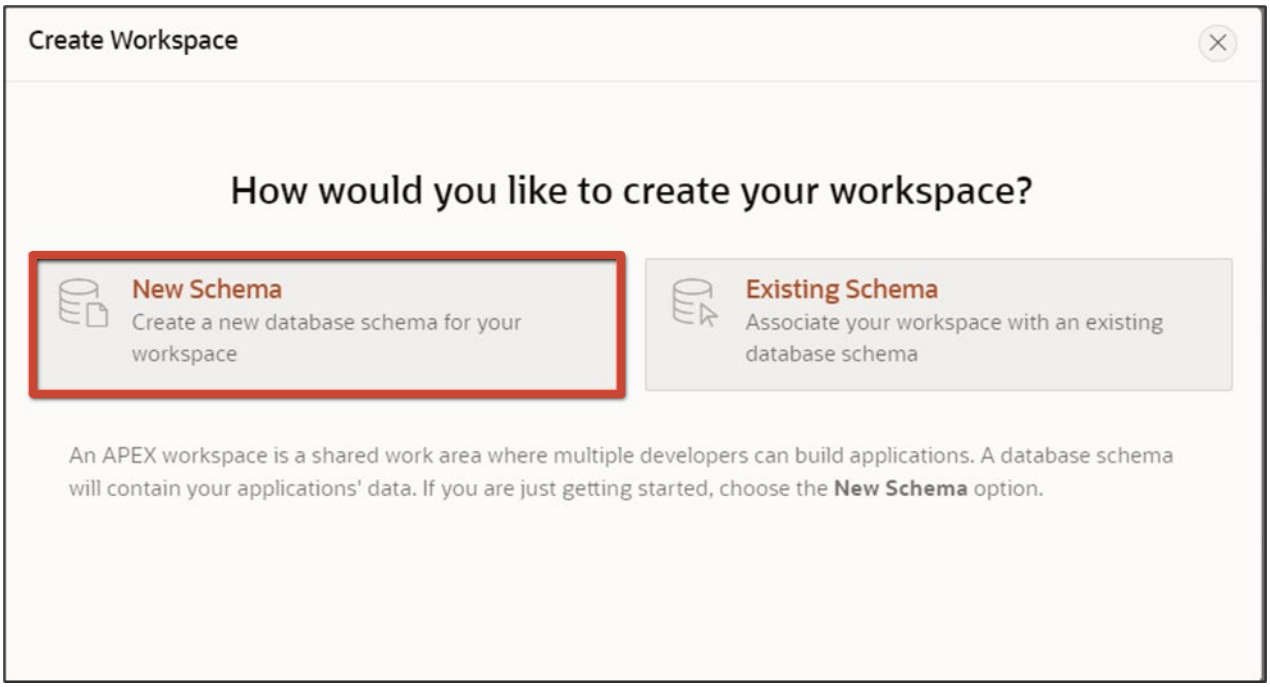




6. Given this is your first-time entering APEX, click **Create Workspace.**



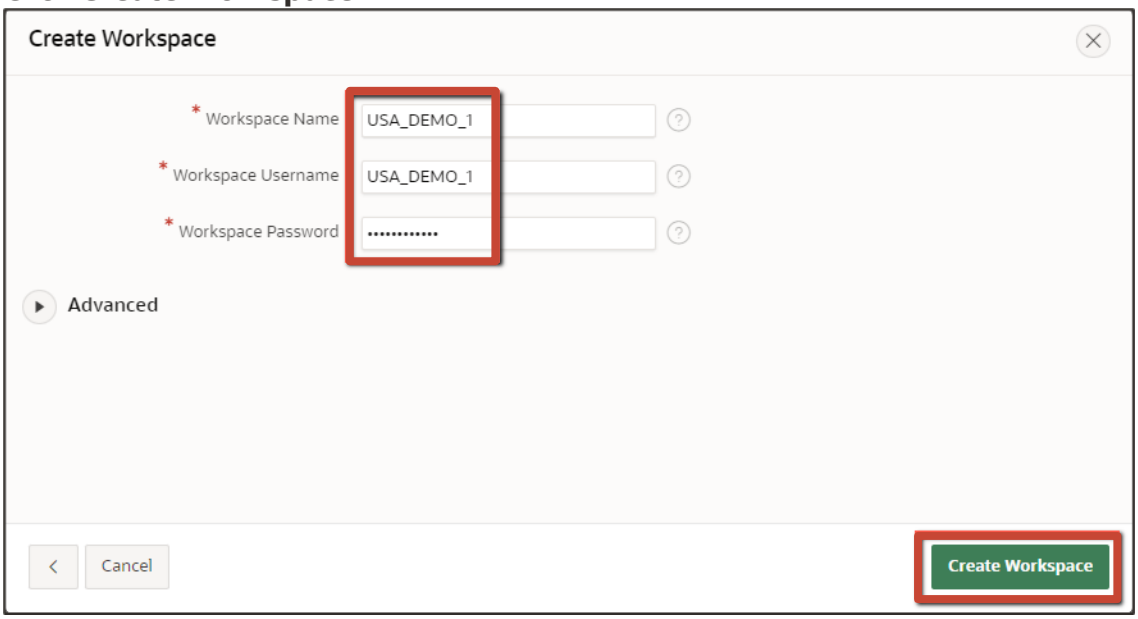
7. Select **New Schema**.



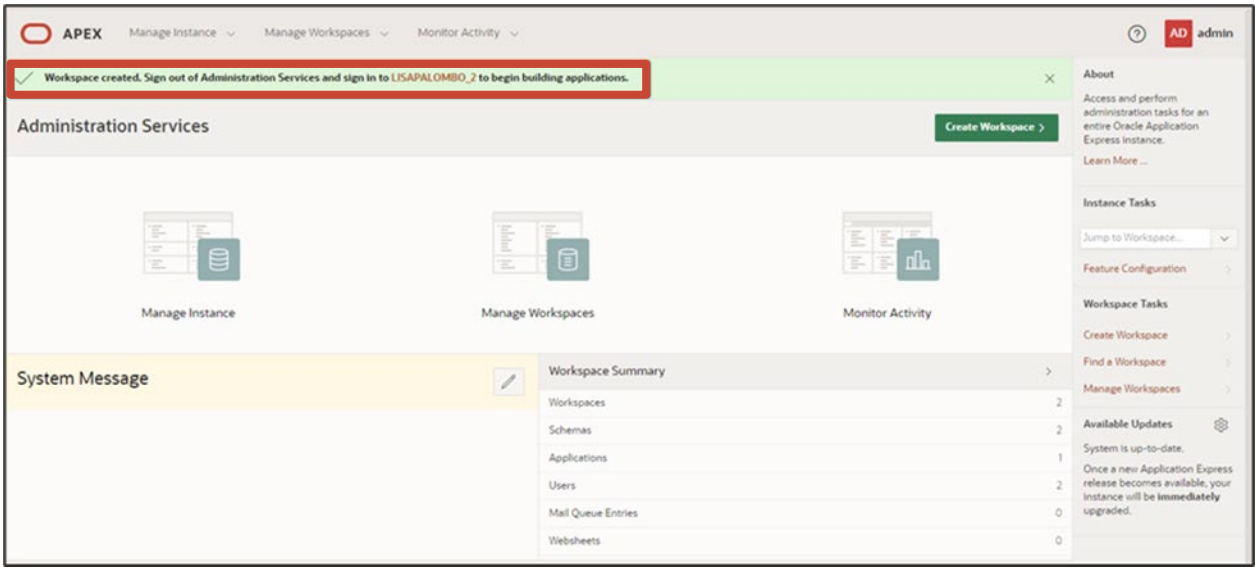
8. For **Workspace Name,** enter an appropriate name. This will be the same for the **Workspace Username**. Then, enter a password to be used for APEX. Follow Oracle password guidelines shown here.

   Note: *It is recommended this remain the same as your Admin password.*

9. Click **Create Workspace**.

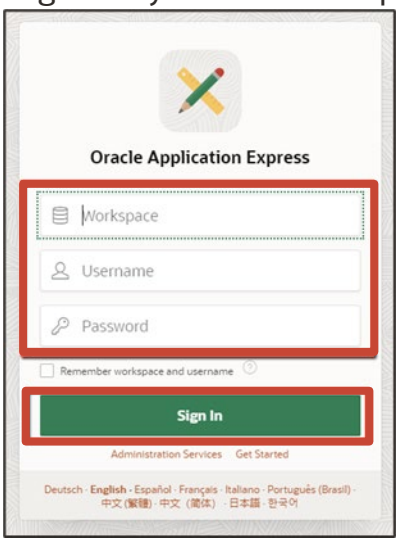


10. Click on the link within the success message.

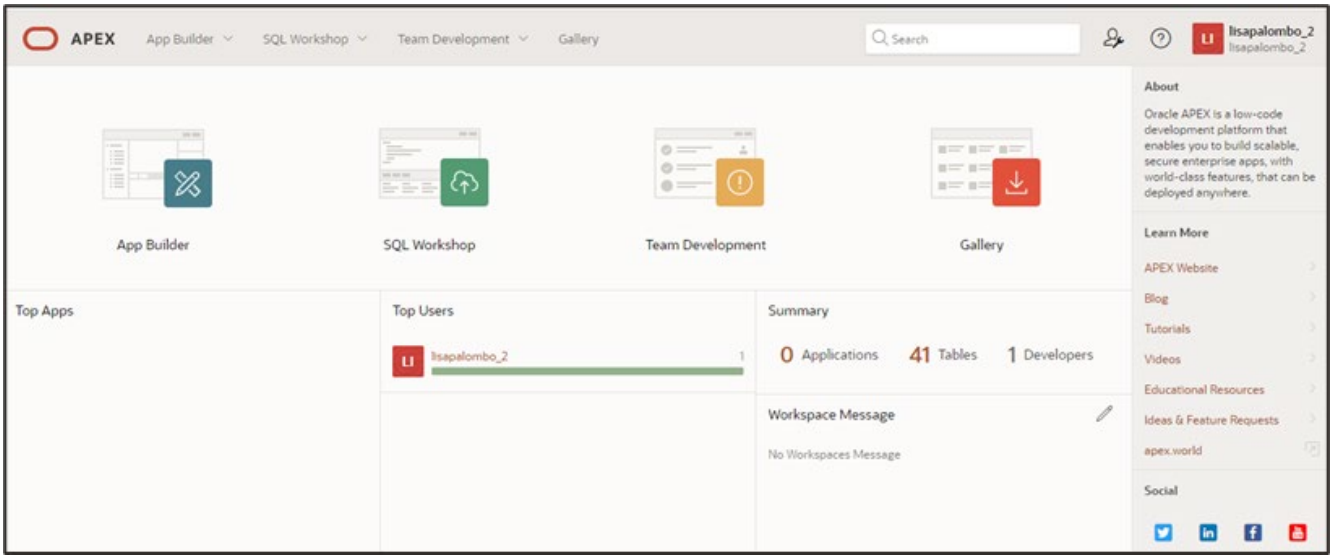


Note: *If you miss the above link then to switch, click your admin account at the top right and select Log Out.*

11. Sign into your new Workspace using credentials established in step 8.

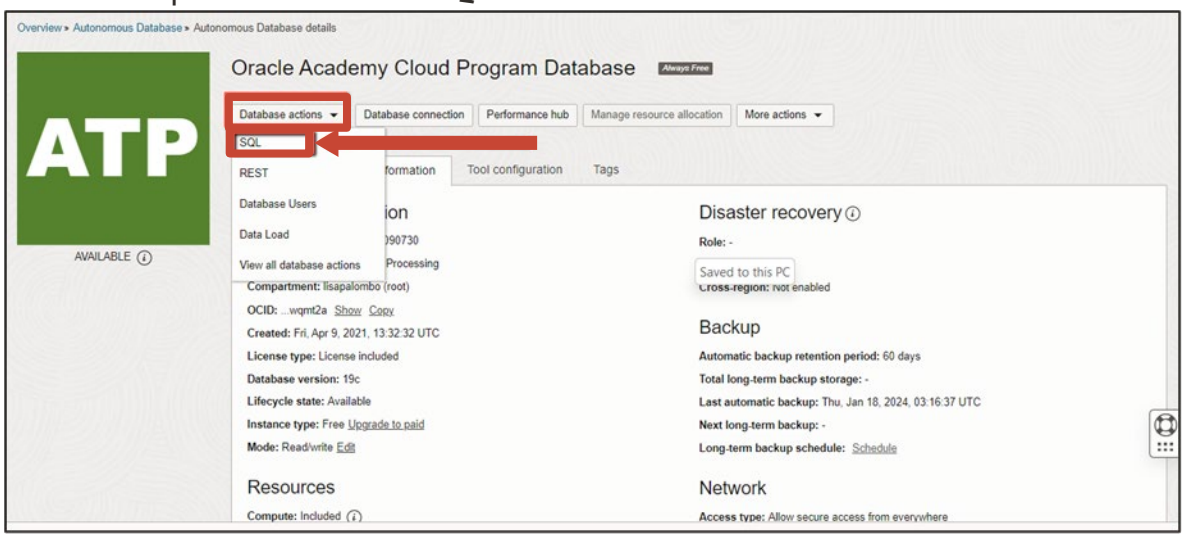


12. You will see your workspace at the top right. Begin using APEX!



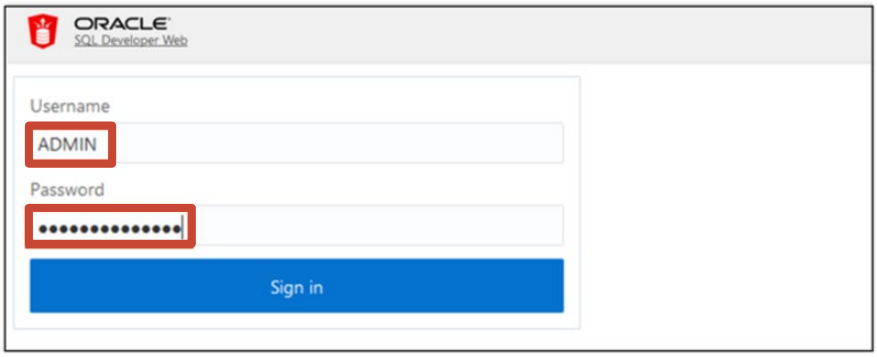
3. Changing your Oracle APEX Cloud Password

1. Sign in to your Oracle Cloud Account, click **<Your Database>** from the list, click the **Database actions** dropdown and select **SQL**.



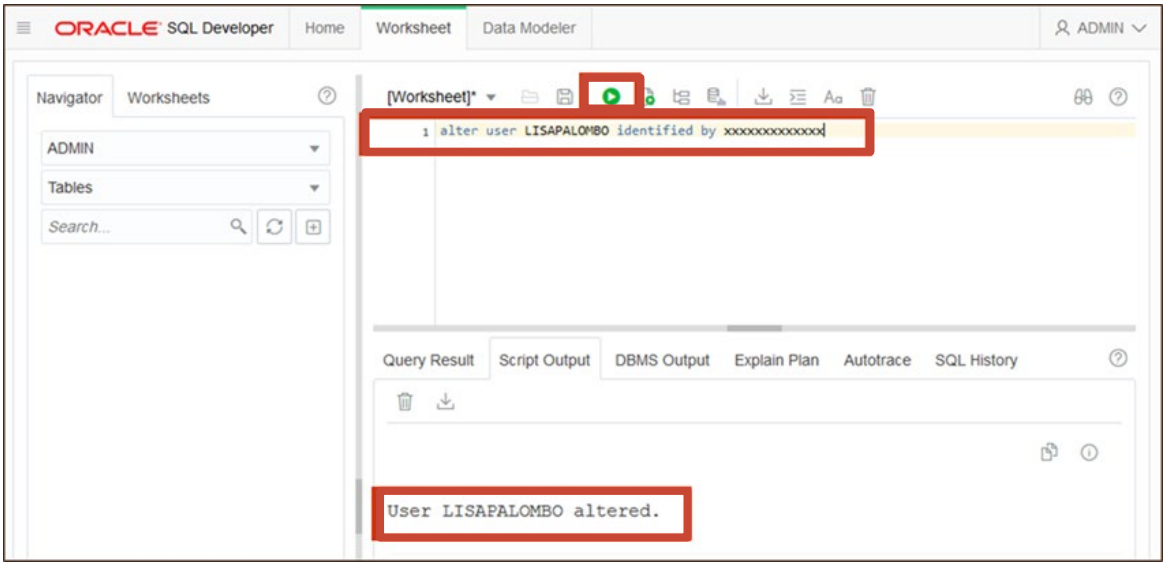
2. If not already, sign in with Username: ADMIN and your Admin password established when first creating your APEX account.

   Note: *If you need to reset your Admin password, see the Autonomous Database Startup Guide.*

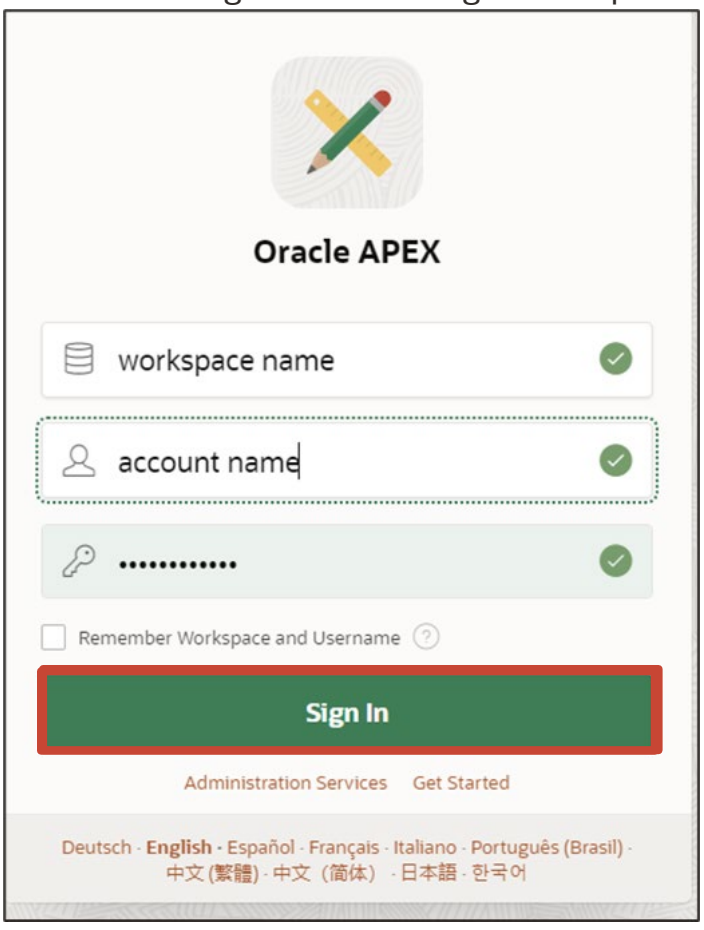


3. Once in SQL Developer – enter the following command to reset your password:
   alter user <APEX user name> identified by <new password>
   (follow Oracle password guidelines shown here)

4. Click the **Run** button – you will see a message that password has been altered.



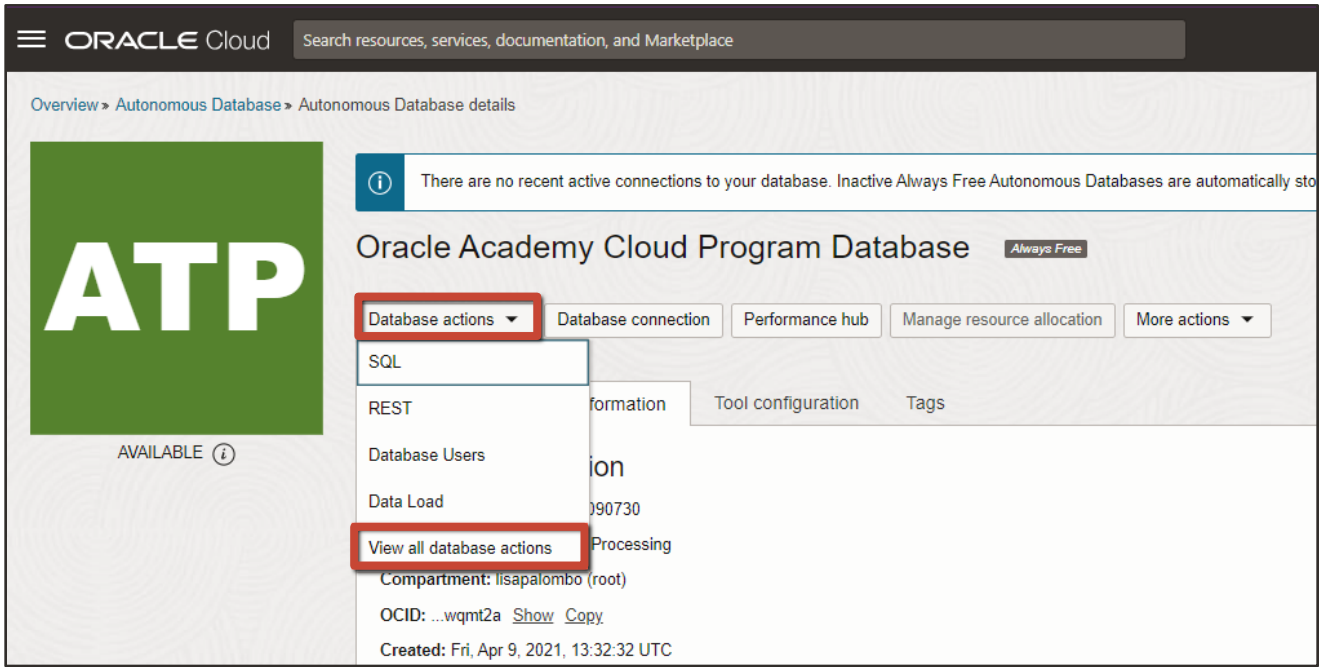
5. You can now log into APEX using the new password.



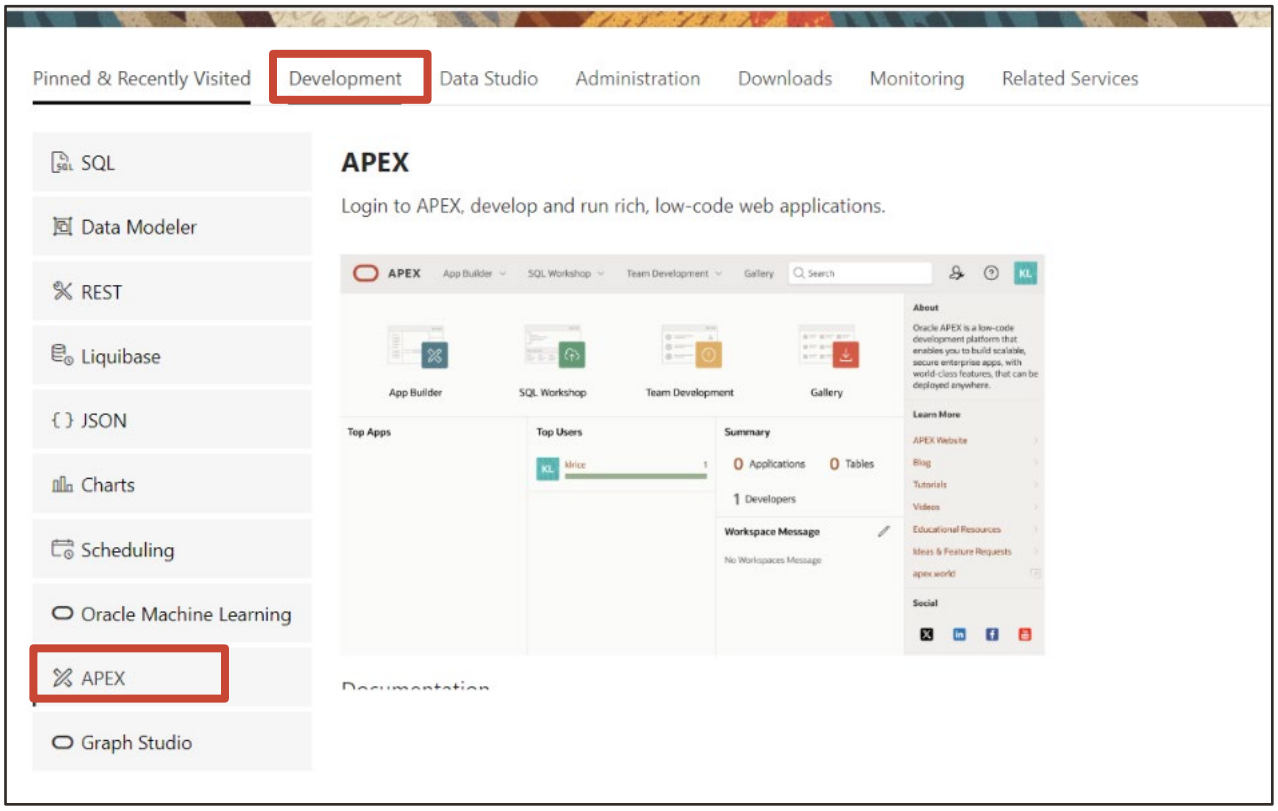
4. Unlocking/Locking your Oracle APEX Cloud Account

1. Sign in to your Oracle Cloud Account, click **<Your Database>** from the list.\

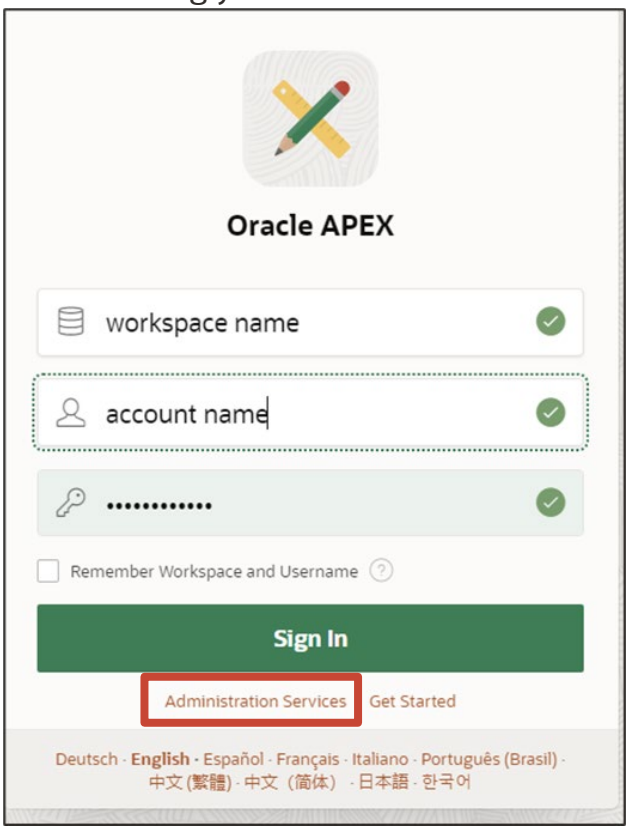
2. Click **Database actions**, **View all database actions**.

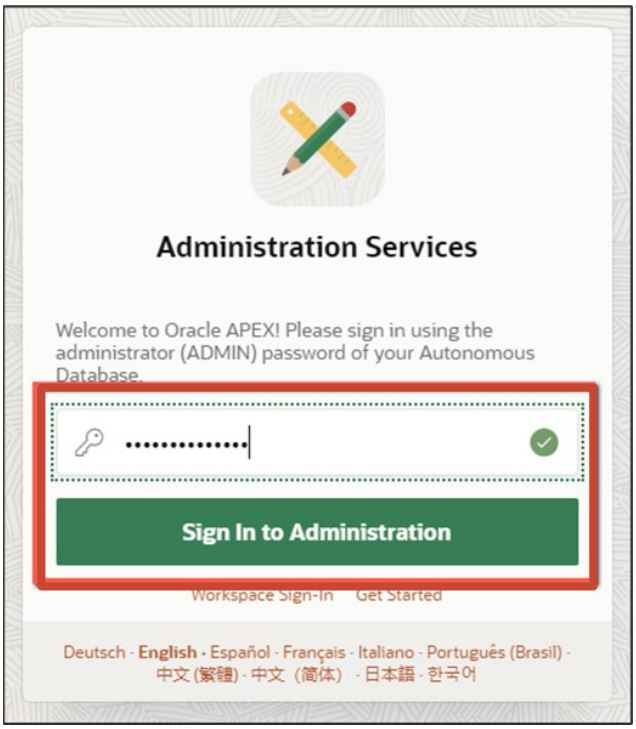


3. Select **APEX** under the **Development** section.

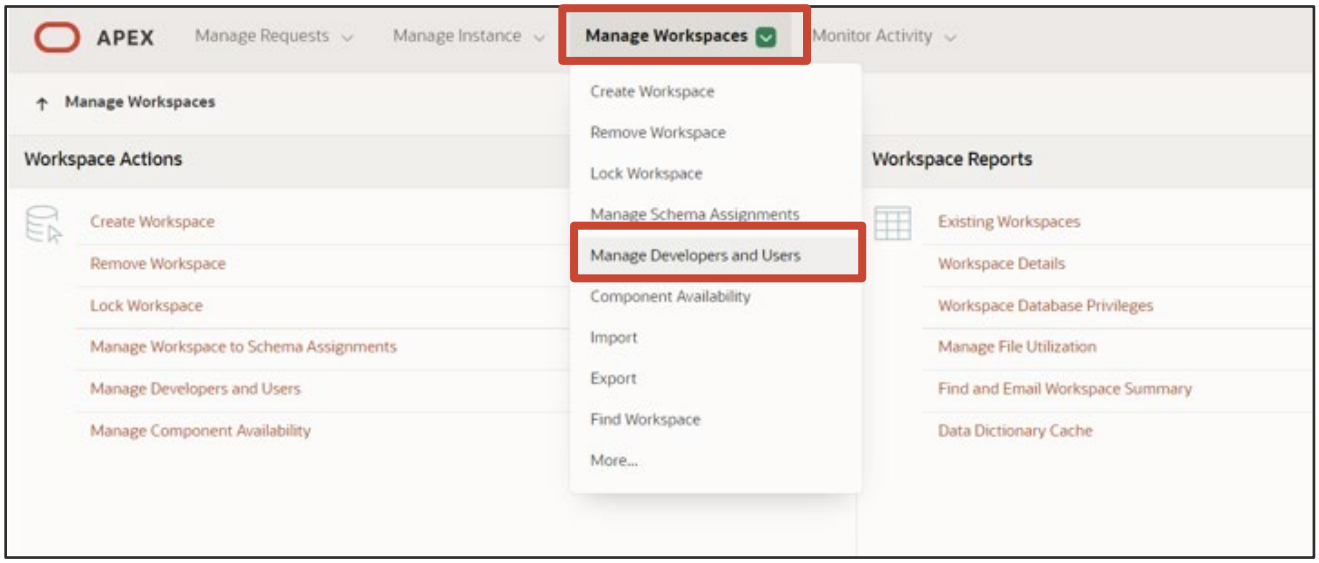


4. Sign into **Administration Services** using the password supplied for administrator credentials when creating your Autonomous Database instance, click **Sign In to Administration.**



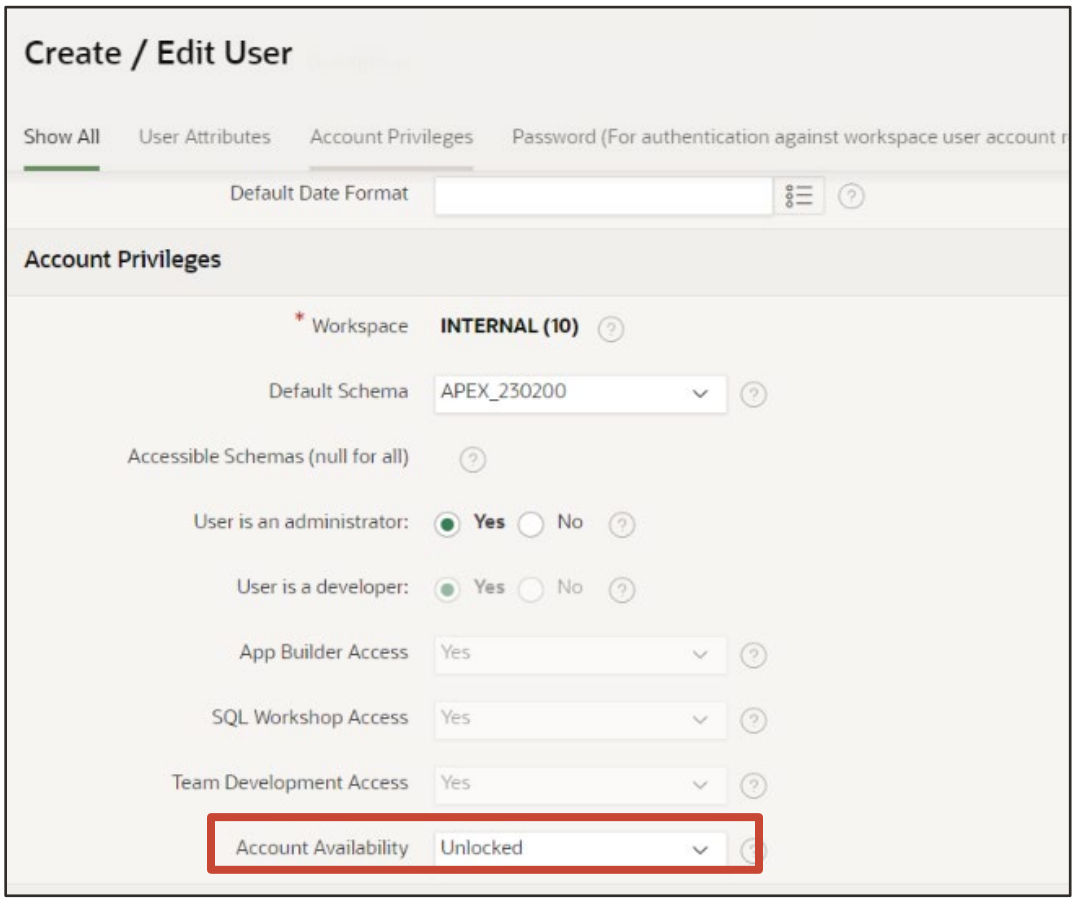


5. Click on Manage Workspaces and then Manage Developers and Users



6. Select a user and the Create/Edit User page appears then scroll down to Account Privileges.

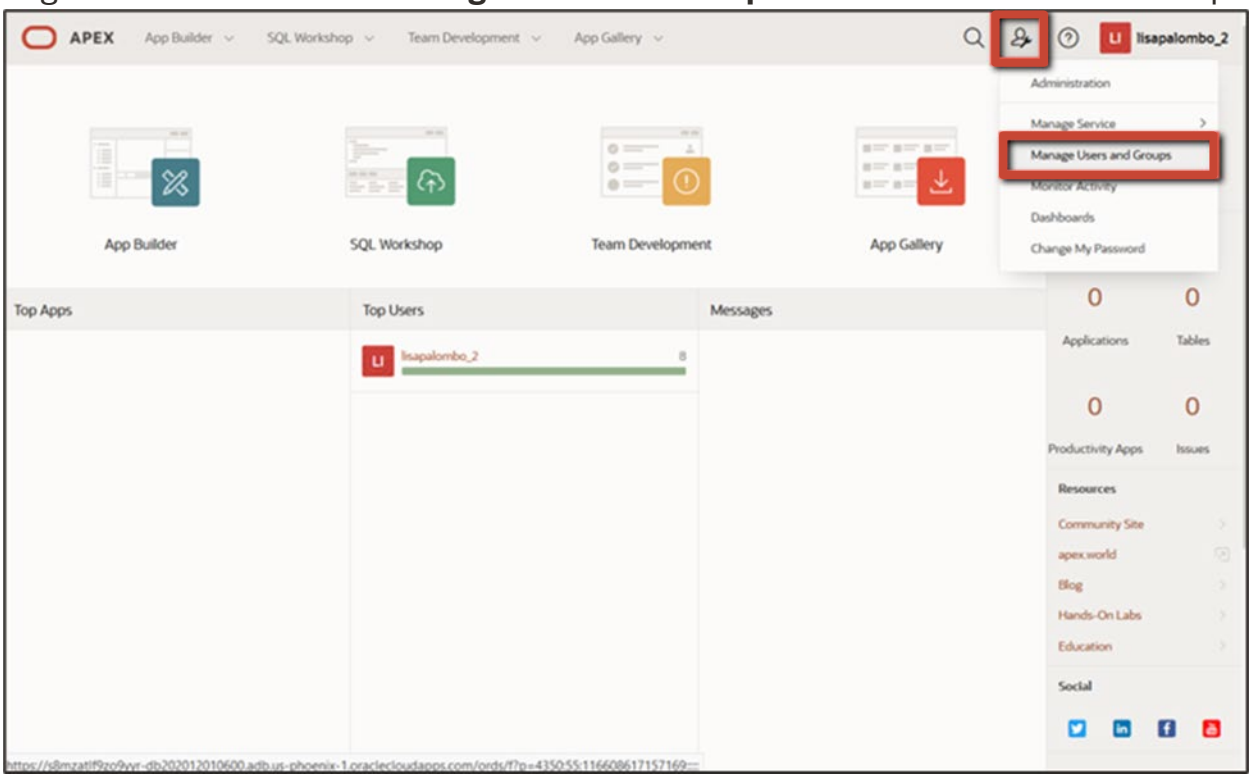
7. Using the **Account Availability** dropdown, select the **Unlocked** option to make the account available, or Locked to make the account unavailable.



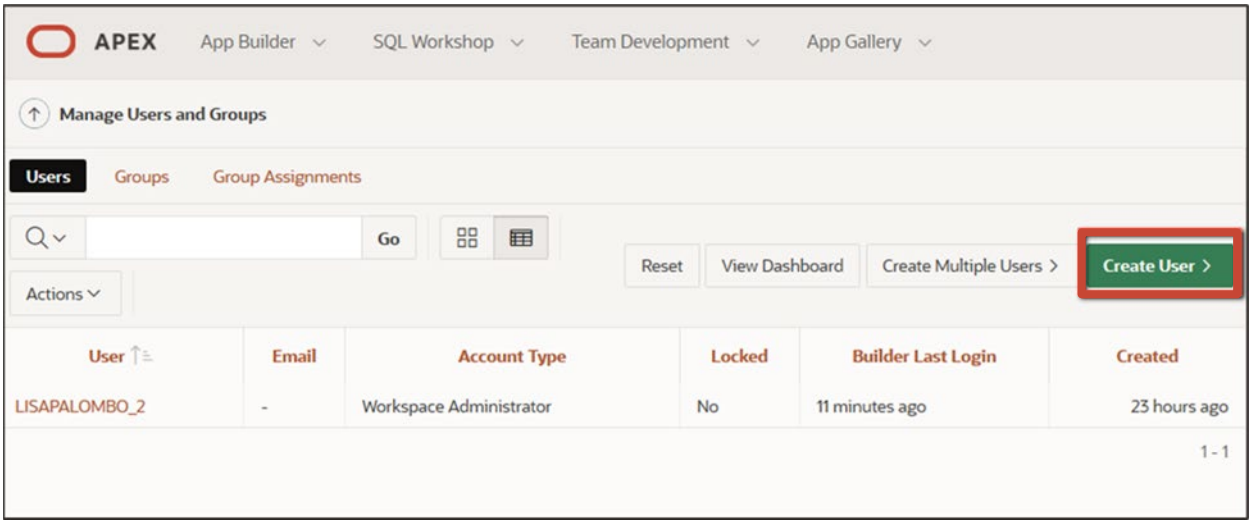
5. Adding an Instructor Account to your Workspace

To allow your instructor to view your work you must add them as a user to your workspace. Your instructor will then be able to login to your workspace and view saved queries and procedures, scripts and database objects.

1. Logon to APEX and select **Manage Users and Groups** from the **Administration** drop down.

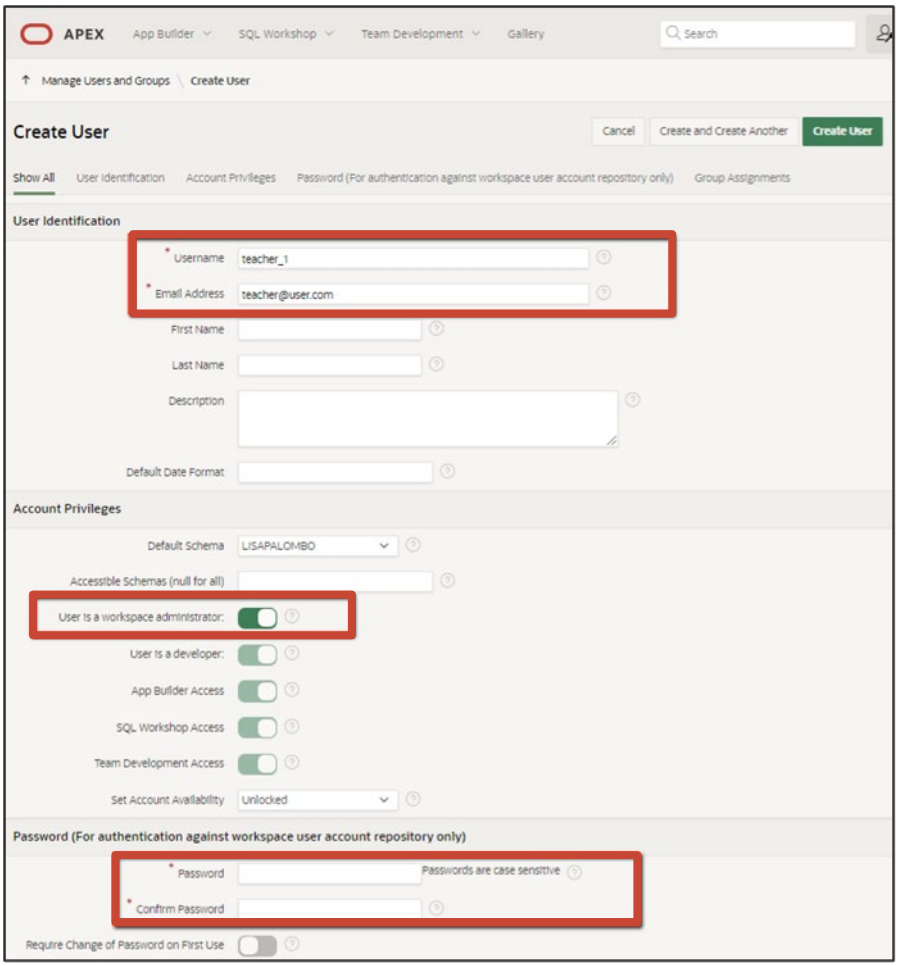


2. Click **Create User**.

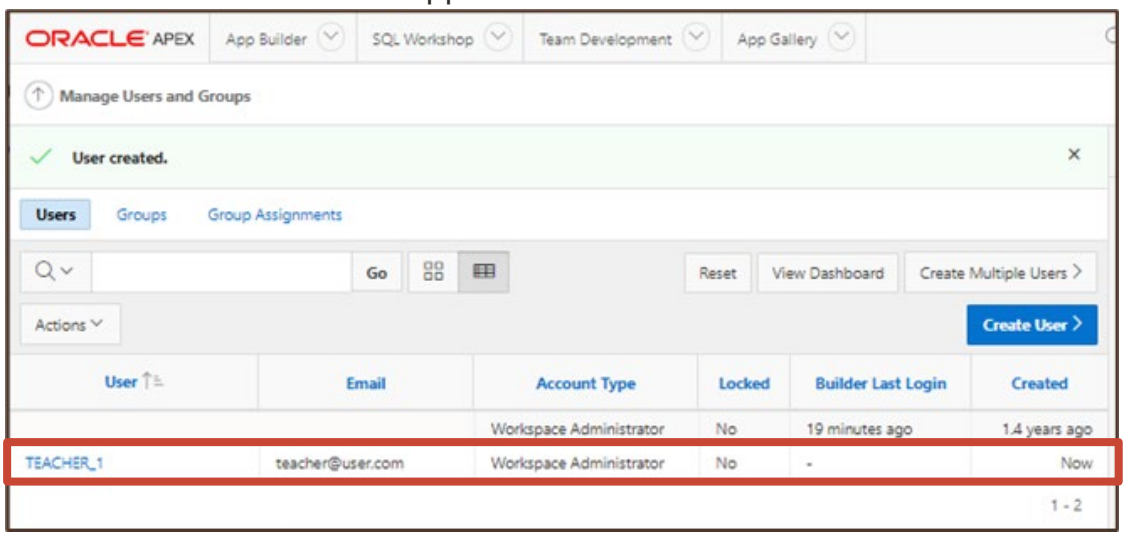


3. Supply a **Username**, **Email Address**, make the account a **workspace administrator** and provide a password.

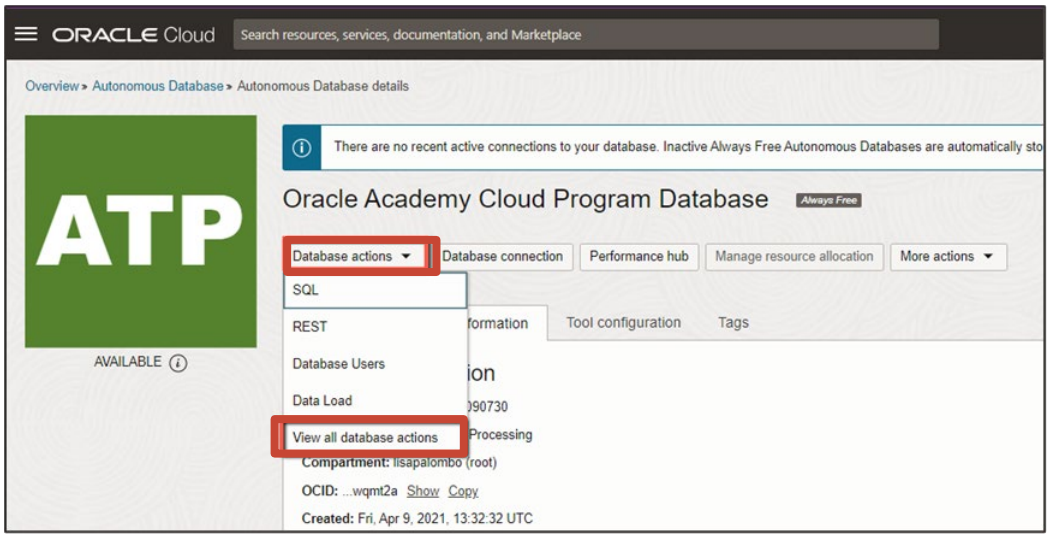
   Note: *It is suggested that for ease of use that the learner use the standard username of teacher_1 and password of "Teacher12345".*



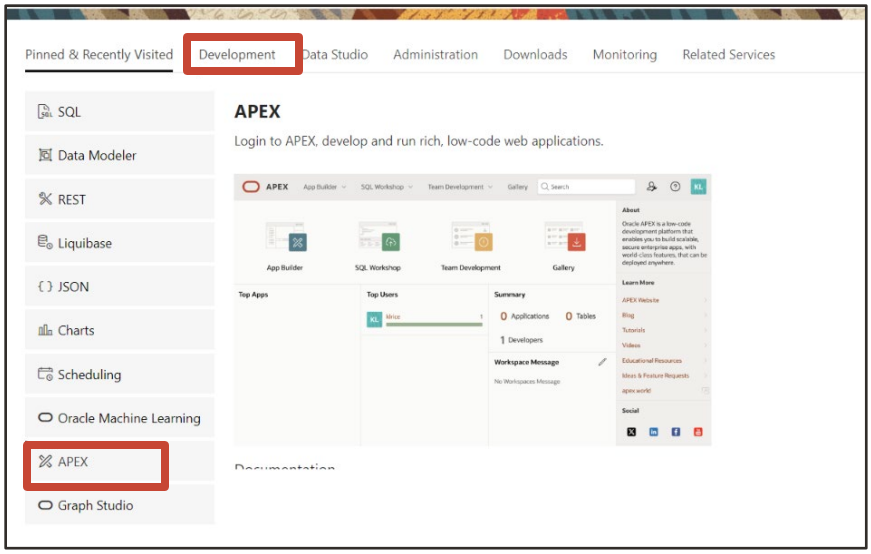
4. The instructor account now appears in the learner's list of Users.



5. You must now provide your instructor with a link to their APEX account.
    a. Go back to the Autonomous Database details page and click **Database actions**, **View all database actions.**



    b. Right click the **APEX** box and select "**copy link address**". Provide this address to your instructor.



Note: The link will look something like this:
https://s999999999-oadb.adb.us-city-1.oraclecloudapps.com/ords/apex

6. Your instructor can now use this link to access your Autonomous Database APEX instance.

    Provide your instructor with your workspace name as well as the instructor account username and password you created for them. They will then be able to log on to your workspace to view saved queries and procedures, scripts and database objects.

Using Oracle Academy APEX

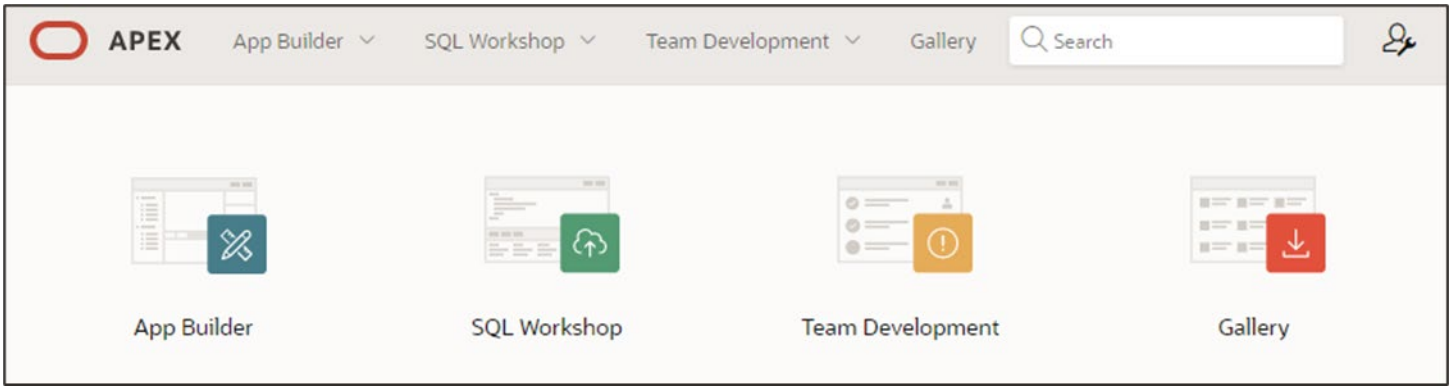
1. Logging in to Oracle Academy APEX

Please check with your instructor for APEX logon instructions and account information.

Content for all APEX environments:

1. Oracle APEX Components

Once you log into Oracle APEX you will see the Oracle APEX home page. This page displays all of the components of Oracle APEX: Application Builder, SQL Workshop, Team Development and Gallery.



- **App Builder**: Allows you to create, view or monitor applications.
- **SQL Workshop**: You can create, manage, and view the database objects from a Web browser using SQL Workshop.
- **Team Development**: facilitates the management of the application development process.
- **Gallery**: a suite of business productivity applications.

SQL Workshop is the main component that is used with the Database Programming with SQL and PL/SQL course curriculum. Note that the tabs at the top of the page provide quick access to these components.

2. How to add tables and data to APEX accounts

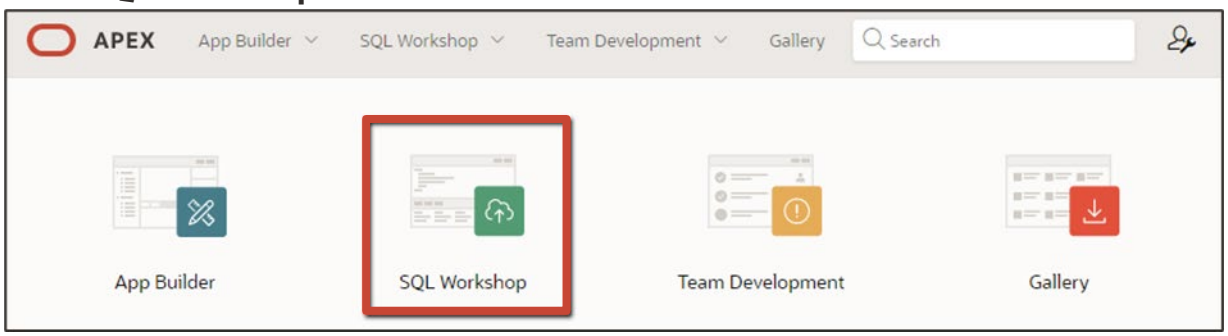
In order to have access to the tables and data used throughout the course a Script file, that can be accessed in the member hub, must be run in the instructor account and all learner accounts.

The instructor should do this as a “run-through” with the class following the instructions below. This method ensures that learners understand and can download and run the scripts in their own schemas.

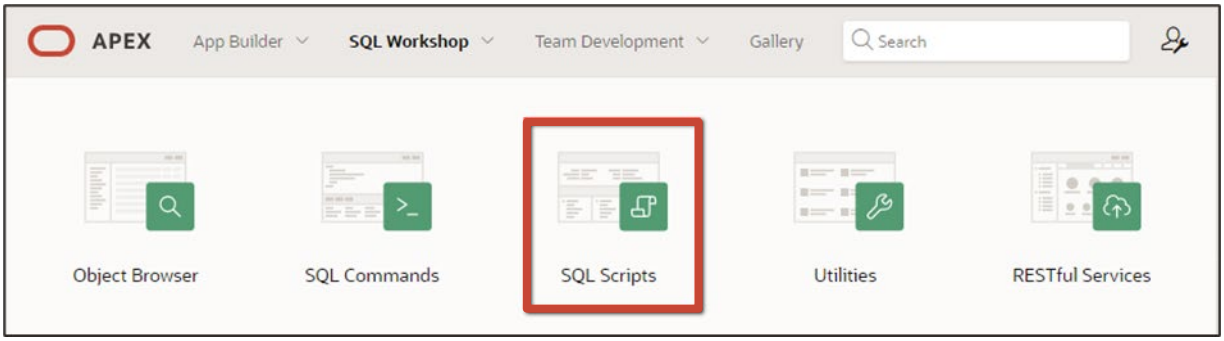
1. To obtain the script file consult your instructor. Save the file on your computer.

2. Open APEX in your browser and login.

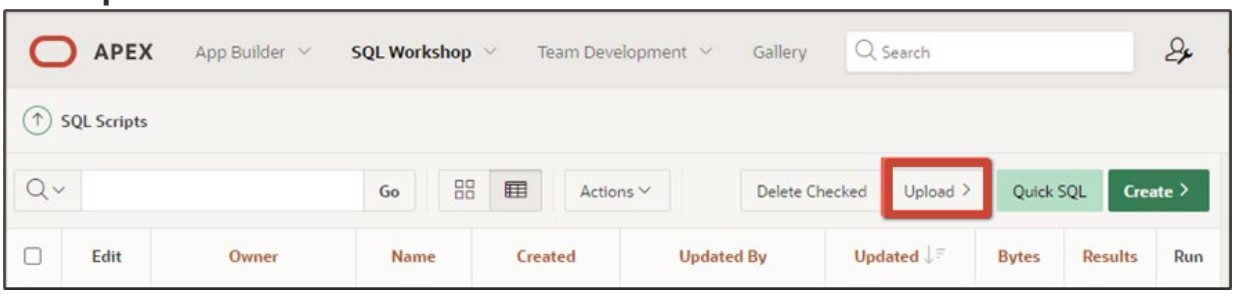
3. Select **SQL Workshop**.



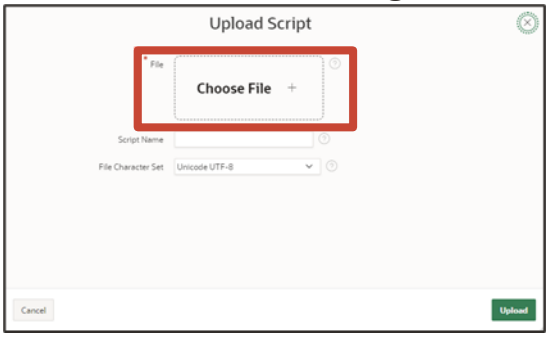
4. Select **SQL Scripts**.



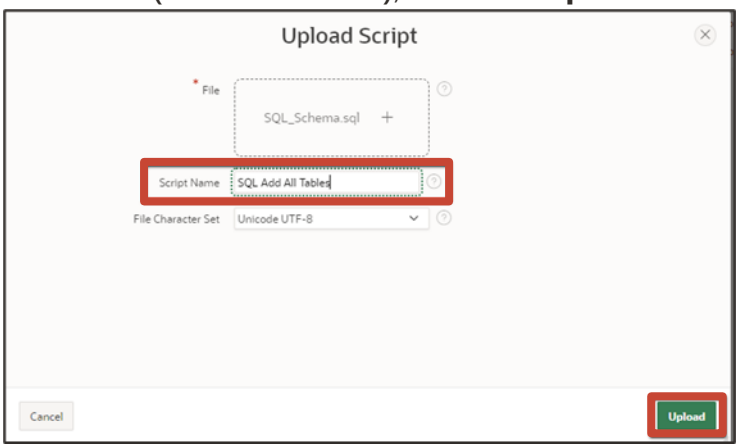
5. Click **Upload**.



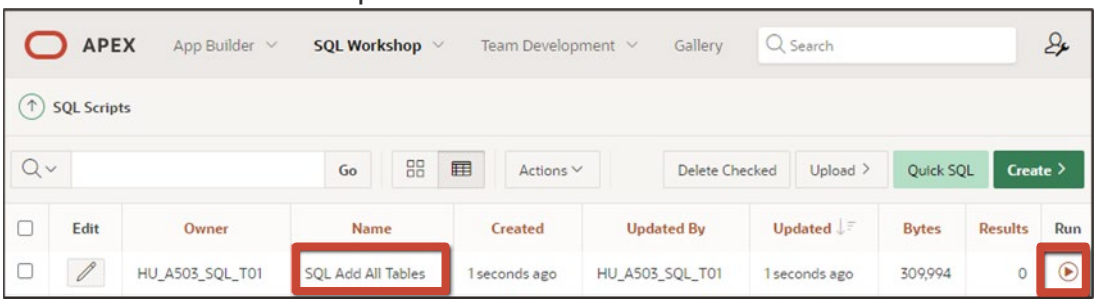
6. Click **Choose File** and navigate to the file you obtained in Step 1.



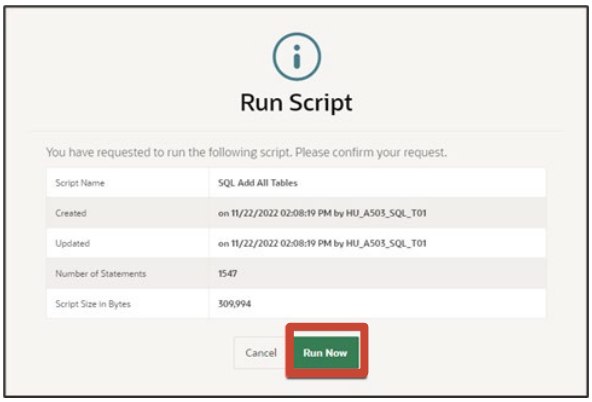
7. Add a Script Name - **SQL Add All Tables** or **PLSQL Add All Tables**, leave File Character Set as default (Unicode UTF-8), and click **Upload**.



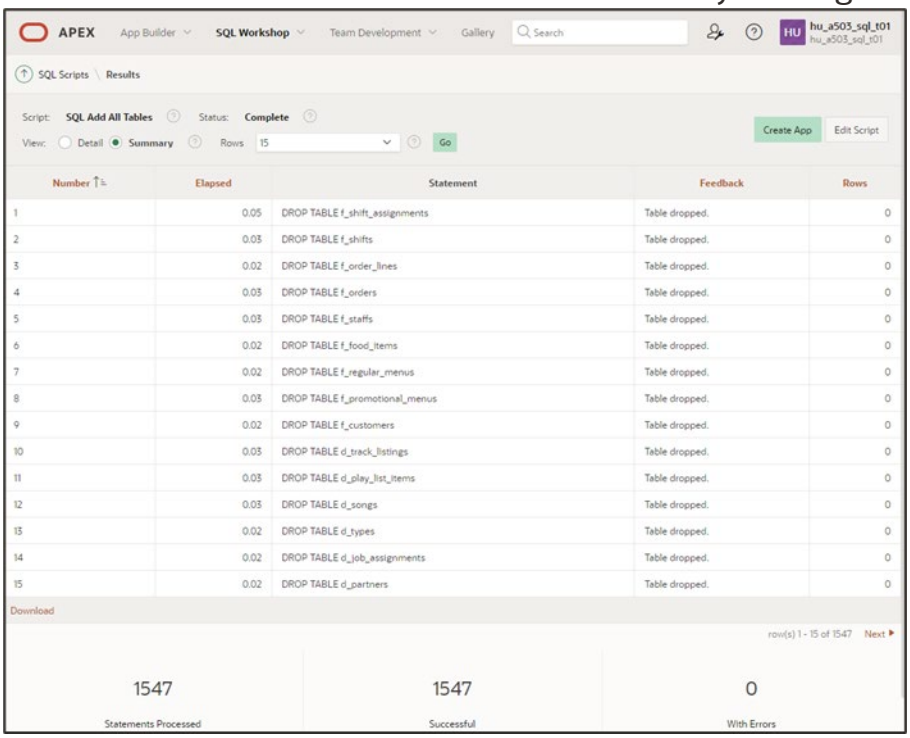
8. You will now see the Script listed. Click the **Run** icon.



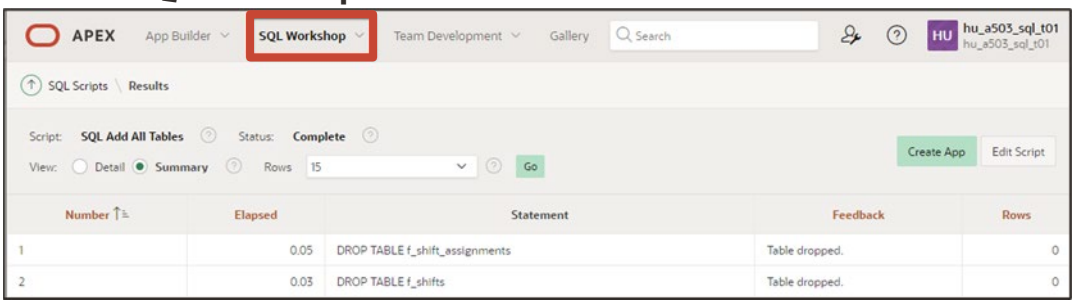
9. Click **Run Now**.



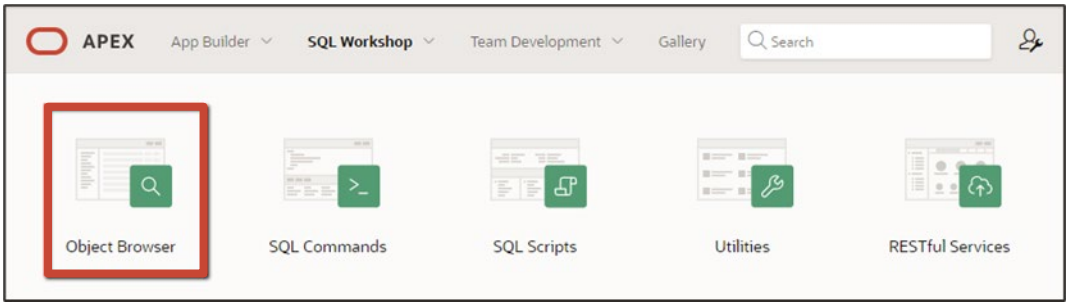
10. You can view the results, however, your first attempt to run the script will generate errors on the DROP statements due to the tables not already existing in the schema.



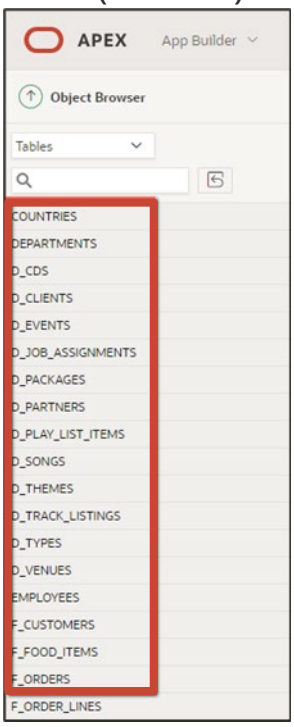
11. Click the **SQL Workshop** tab.



12. Click **Object Browser**.



13. You should now see the tables listed on the left of the **Object Browser** page. These are the tables (and data) that will be used in the curriculum for your course(s).

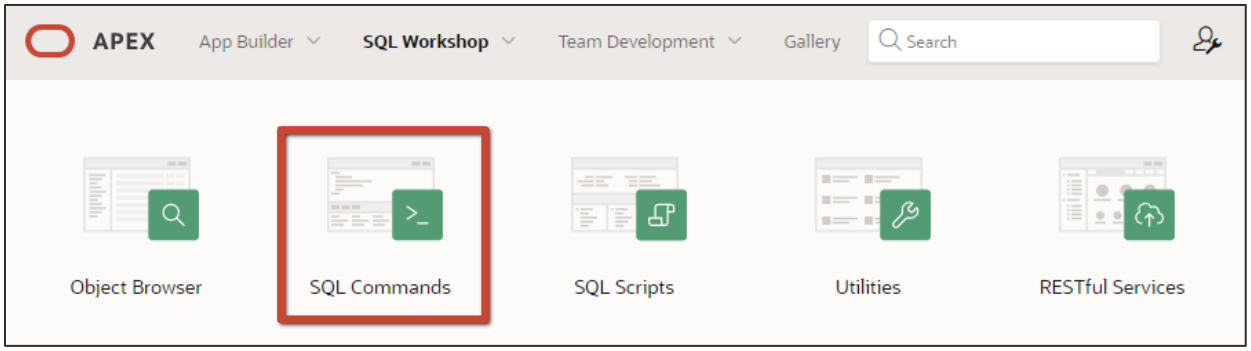


NOTE: The Script can be run again at a later date to revert the schema to its original state in the event of accidently modifying or deleting data.

3. Using SQL Commands from the SQL Workshop Component

Click on the SQL Workshop icon. On the SQL Workshop home page you will see the five tools available from SQL Workshop:

- Object Browser
- SQL Commands
- SQL Scripts
- Utilities
- RESTful Services



The **SQL Commands** icon will link to where you will enter and practice SQL and PL/SQL coding in the Database Programming with SQL or PL/SQL course. You can use the SQL Commands tool to run SQL or PL/SQL statements on any Oracle database schema to which you have access privileges.

4. General Overview SQL Commands Window

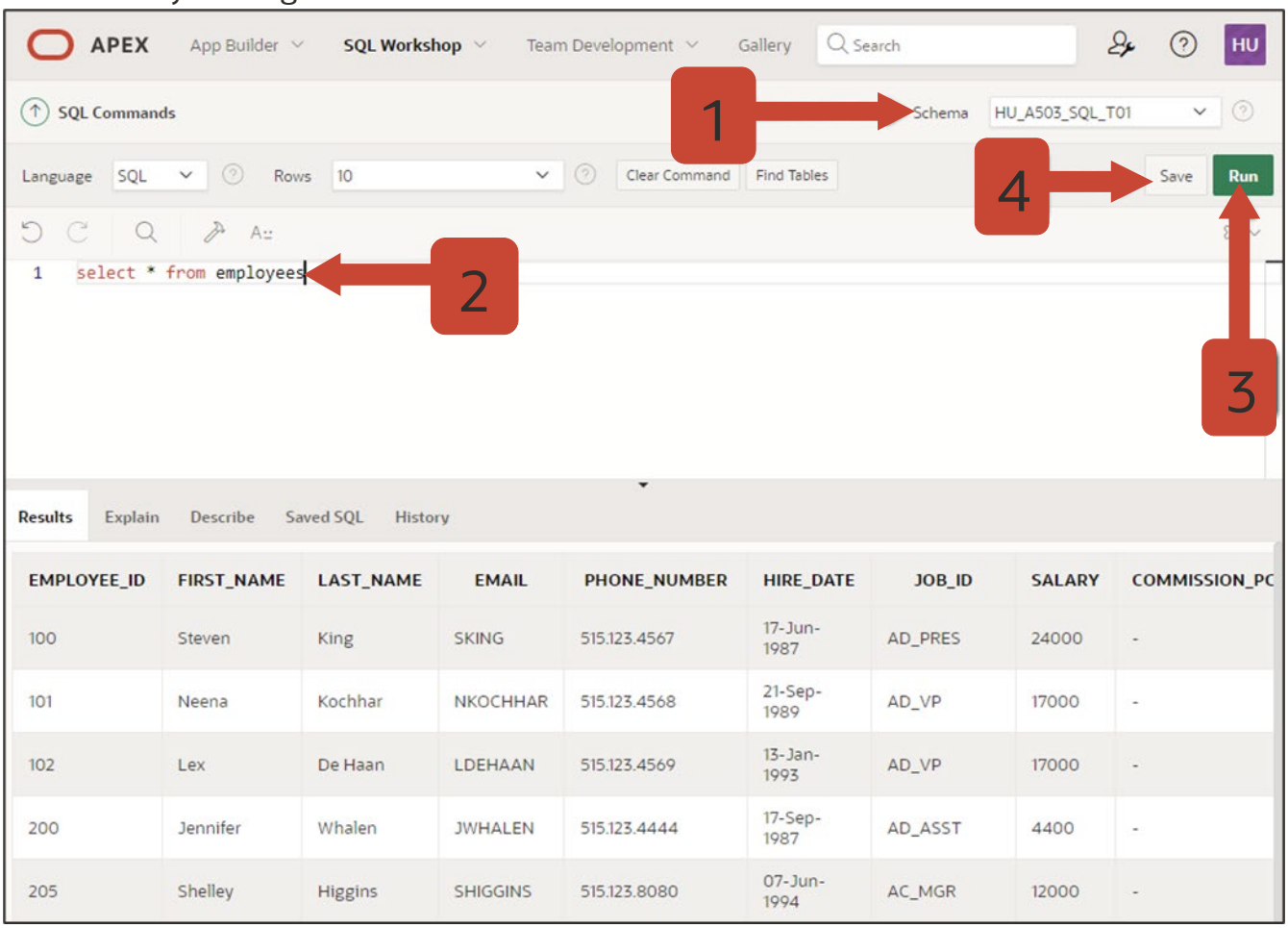
Refer to the graphics below for information about the SQL Commands window:

1. Schema: The drop down menu only displays the schemas to which you have been granted access.

2. Statement window: Type SQL or PL/SQL commands in this window.

3. **Run** button: Click this button to execute the SQL or PL/SQL statement.

4. **Save** button: You have the ability to run your SQL or PL/SQL statement or save it for future use. To limit the number of times you enter a common SQL or PL/SQL statement, save the statement by clicking the Save button.



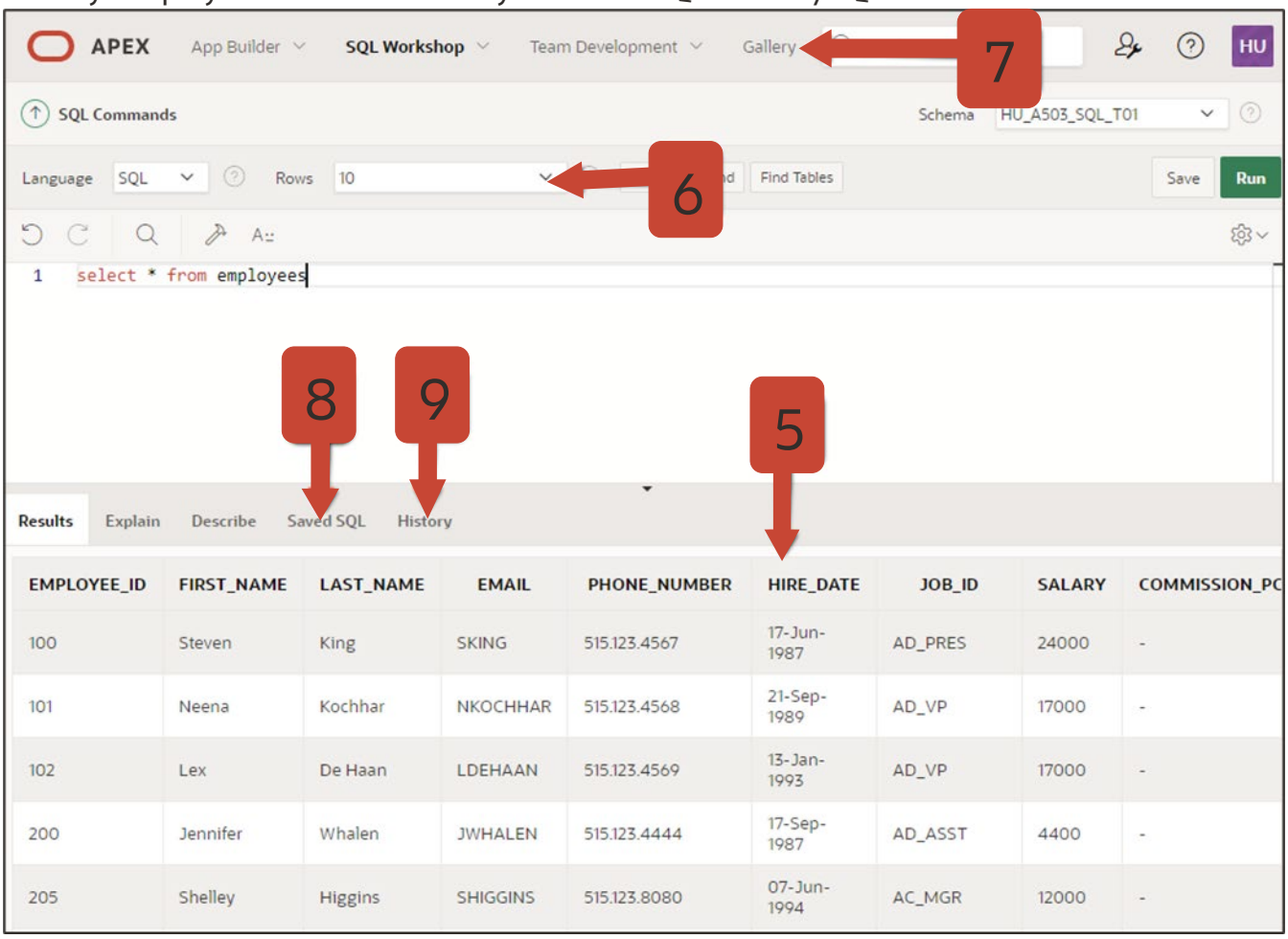
5. After a SQL or PL/SQL statement is executed, the results are displayed in the Results window. An error message displays if there is a problem with the SQL or PL/SQL command.

6. Rows: The Rows drop down menu lets you select the number of rows you would wish to display.

7. Gallery: The Gallery can quickly take you back to any of the 4 main components of the Oracle Application Express.

8. Saved SQL: Click on this tab to display your list of saved SQL and PL/SQL commands.

9. History: Displays a list of the recently executed SQL and PL/SQL commands.



Additional features to note about the Results window (see graphic below):

1. If you want to create a file of the output results:

    a. Click on the **Download** link.

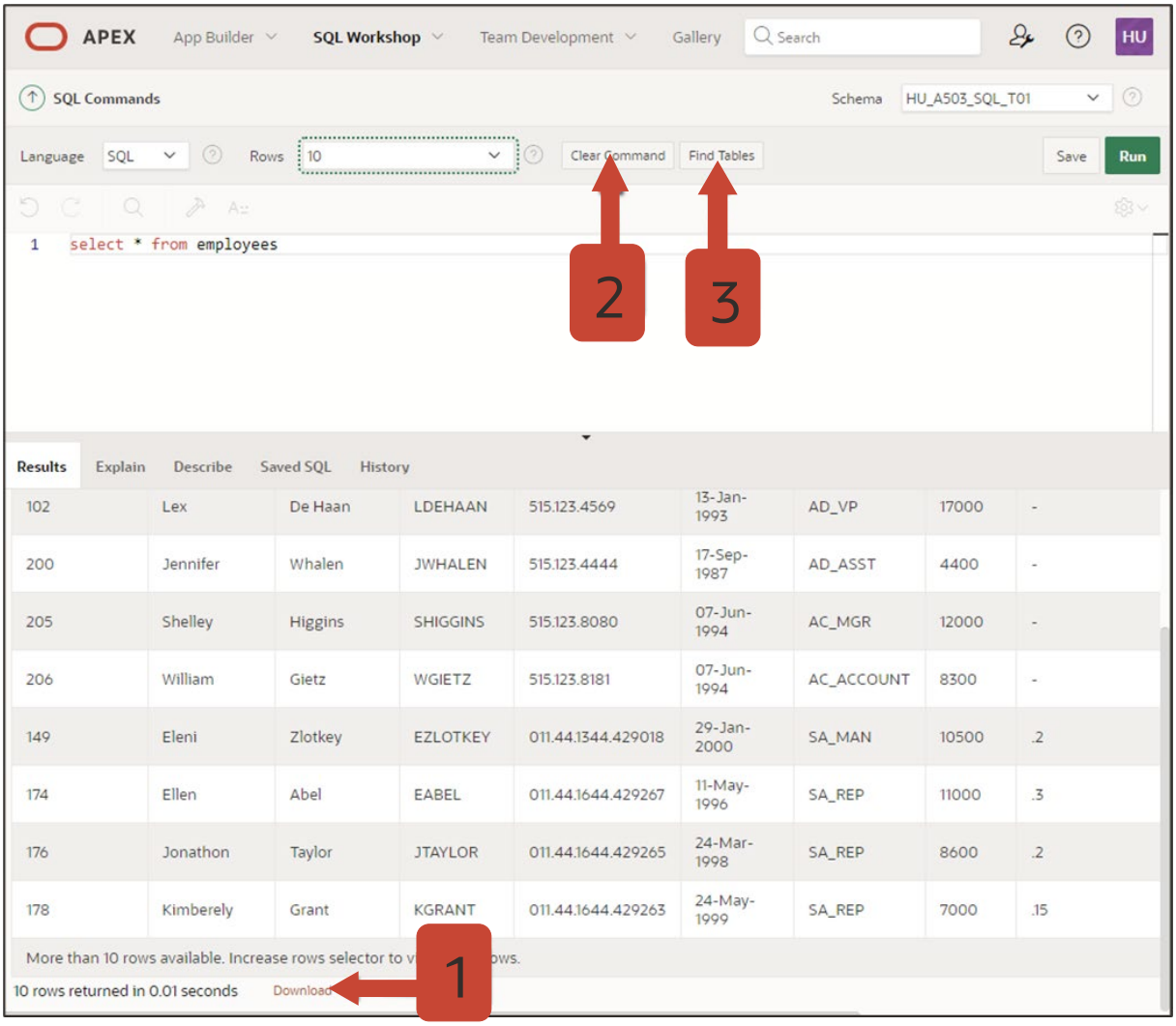
    b. A Pop-up window will appear. Select from **Open or Save this file**.

    c. If you select **Open** then it will open the results in a Microsoft Excel spreadsheet. From Microsoft Excel you can then do a **Save As** to save the file in this format.

    d. If you select **Save** then it will save it as a .csv (comma separated value) file. A pop-up will allow you to select the saved filename and location.

2. Click on the **Clear Command** button to clear the Statement Window.

3. Click on the **Find Tables** button to see a list of table names.



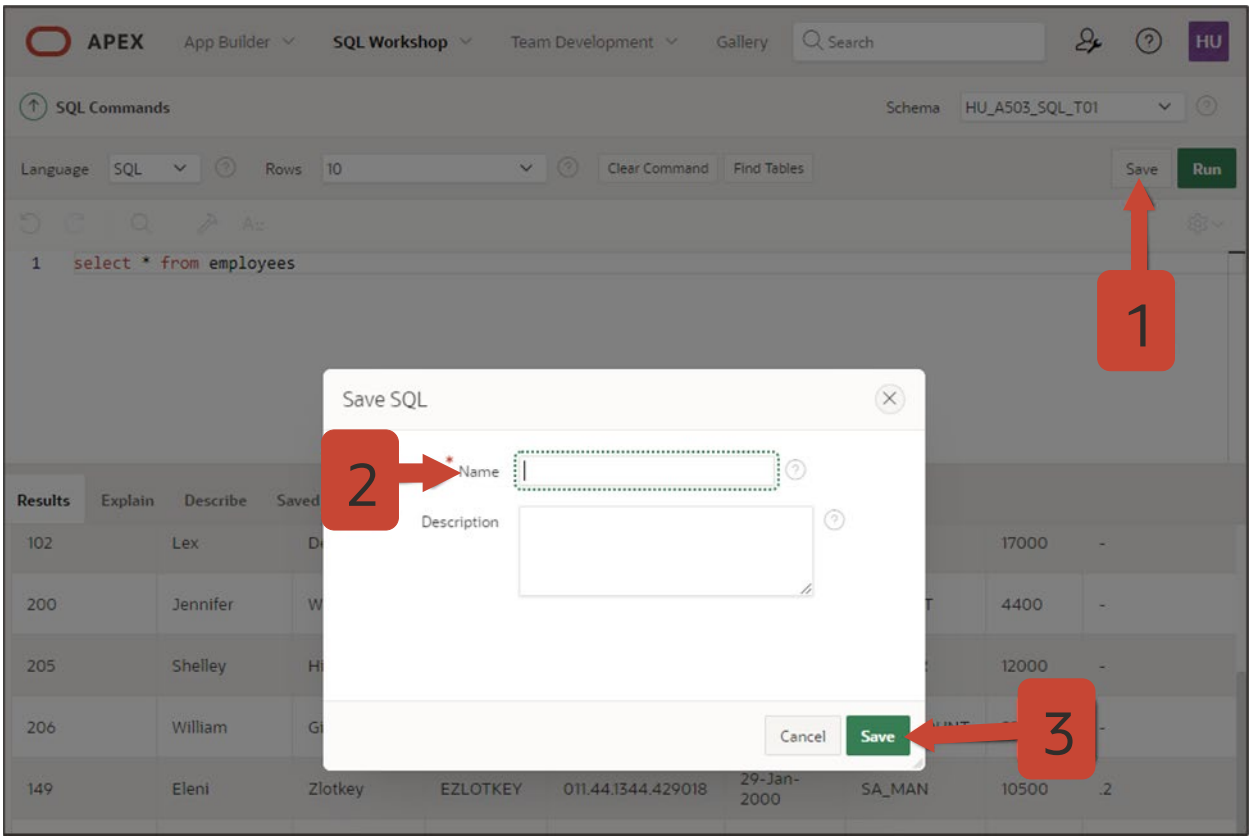
5. Saving a SQL or PL/SQL Statement

To limit the number of times you enter a common SQL or PL/SQL statement, save the statement by clicking the Save button. To save the SQL commands:

1. Click on the **Save** button in the SQL command window.

2. A pop-up window will appear where you can enter the name (mandatory) and description (optional) of the file.

3. Click the **Save** button when done.



6. Accessing a Saved SQL or PL/SQL Statement

The saved SQL or PL/SQL commands can be accessed, executed, modified and deleted (see graphic below).

1. To display the list of saved SQL or PL/SQL commands: click on the **Saved SQL** tab.

2. To execute a saved SQL or PL/SQL command: click on the **Name** of the saved SQL or PL/SQL command. You will see it displayed in the statement window. You can now click on the **Run** button to execute these commands.

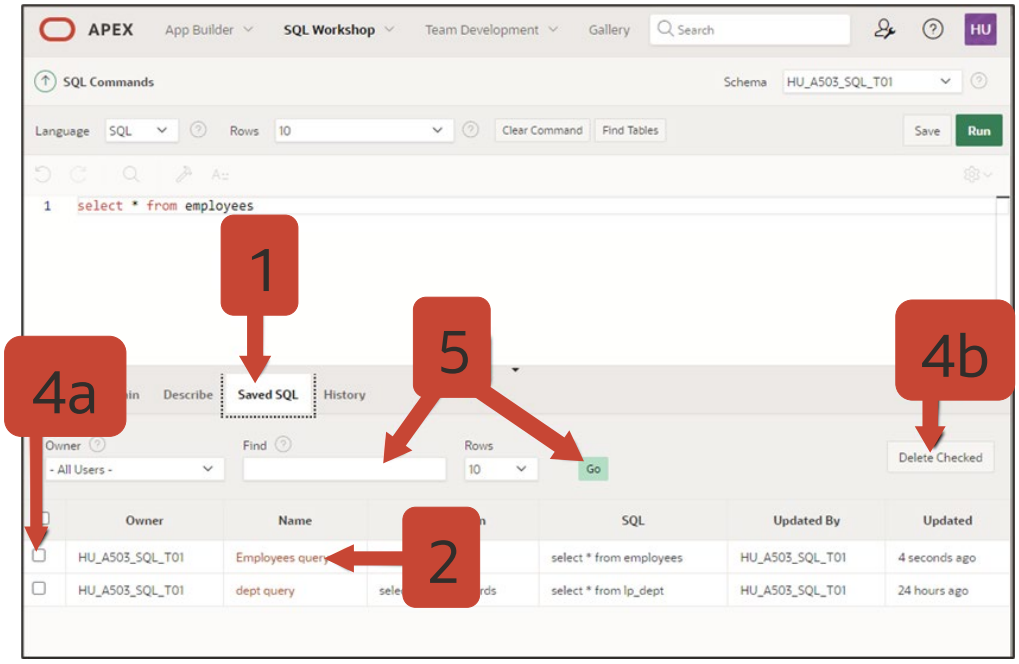
3. To edit a saved SQL or PL/SQL command: click on the **Name** of the saved SQL or PL/SQL command. You will see it displayed in the statement window. Edit the command, as needed then click on the **Save** button. The pop-up window will contain the original information. You can either keep it or edit the information or save to a new filename.

4. To delete a saved SQL or PL/SQL command:

    a. Click on the box in front of the name of the saved command you wish to delete.

    b. Click on the **Delete Checked** button.

5. To search for a SQL or PL/SQL command: enter a key word in the **Find** box, then click on the **Go** Button.



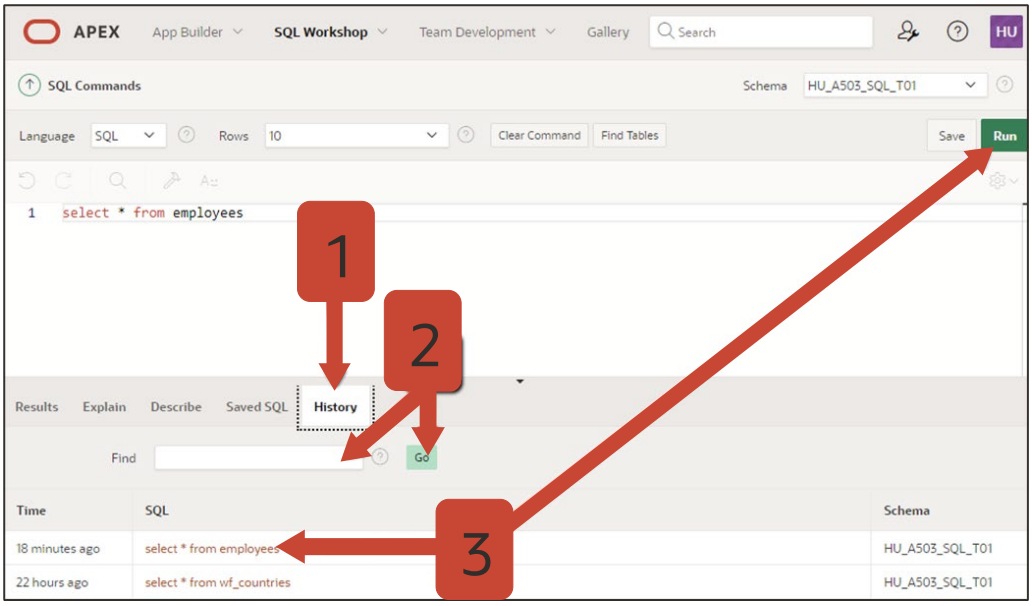
7. Using the History Option

A list of the latest run SQL or PL/SQL commands are kept in History. By default they are listed the most recently run commands. There are different options to note in the History window.

1. Click on the **History** tab.

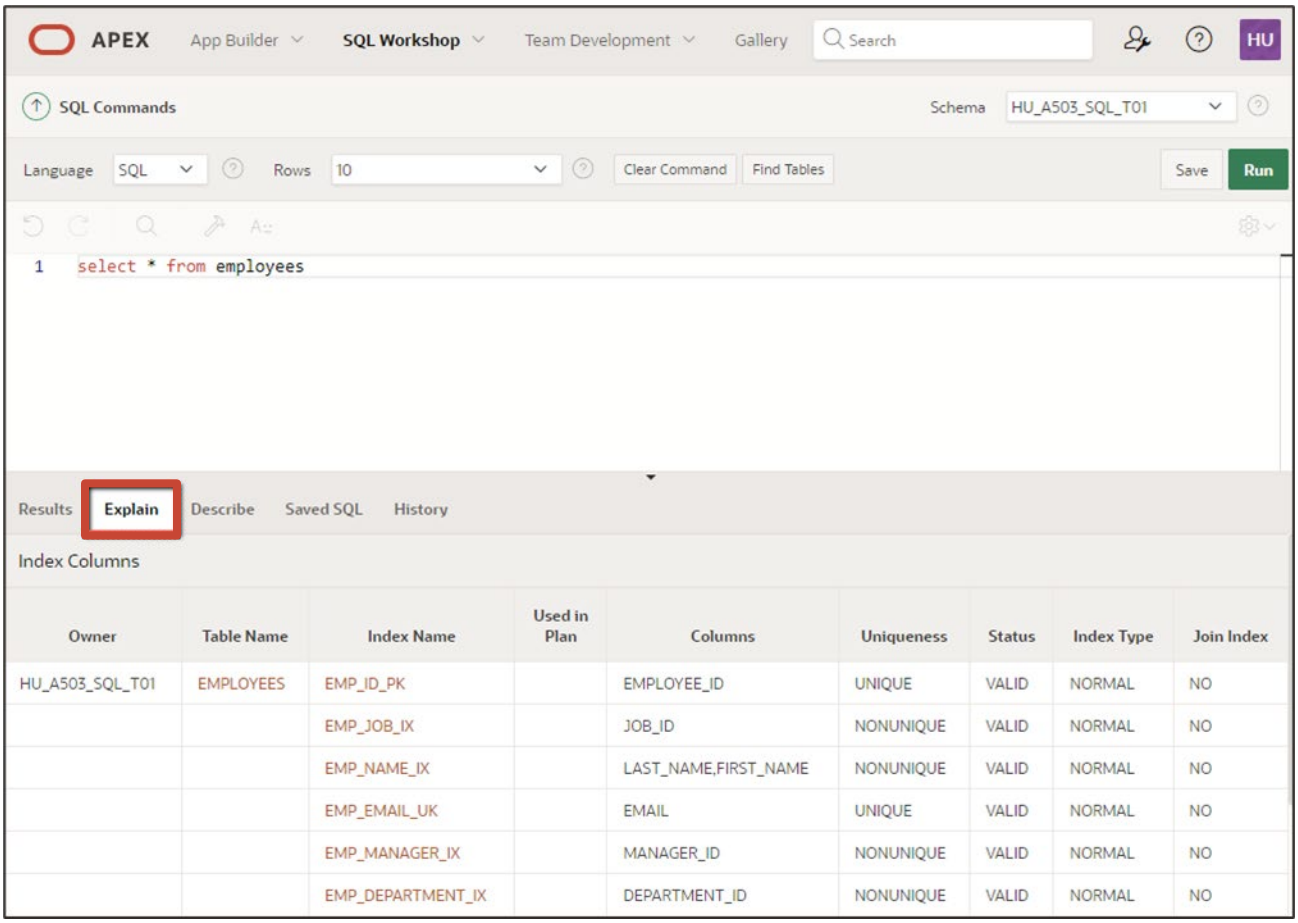
2. To search for a previously used command: Enter a key search word in the **Find** box then click on the **Go** button.

3. To re-execute the SQL or PL/SQL command: Click on the SQL or PL/SQL you wish to execute. You will see it displayed in the Statement Window. Click on the **Run** button to execute the SQL commands.



8. Using the Explain Option

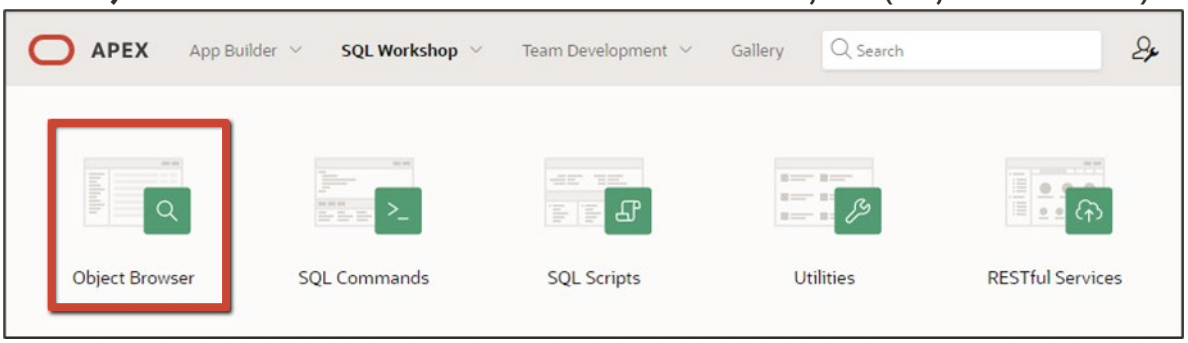
Either type in a SQL or PL/SQL command in the Statement window or select a command from History or Saved SQL, then click on the **Explain** tab to see a graphic explanation of SQL or PL/SQL command in the Results window.



Owner	Table Name	Index Name	Used in Plan	Columns	Uniqueness	Status	Index Type	Join Index
HU_A503_SQL_T01	EMPLOYEES	EMP_ID_PK		EMPLOYEE_ID	UNIQUE	VALID	NORMAL	NO
		EMP_JOB_IX		JOB_ID	NONUNIQUE	VALID	NORMAL	NO
		EMP_NAME_IX		LAST_NAME,FIRST_NAME	NONUNIQUE	VALID	NORMAL	NO
		EMP_EMAIL_UK		EMAIL	UNIQUE	VALID	NORMAL	NO
		EMP_MANAGER_IX		MANAGER_ID	NONUNIQUE	VALID	NORMAL	NO
		EMP_DEPARTMENT_IX		DEPARTMENT_ID	NONUNIQUE	VALID	NORMAL	NO

9. Using the Object Browser tool from the SQL Workshop Component

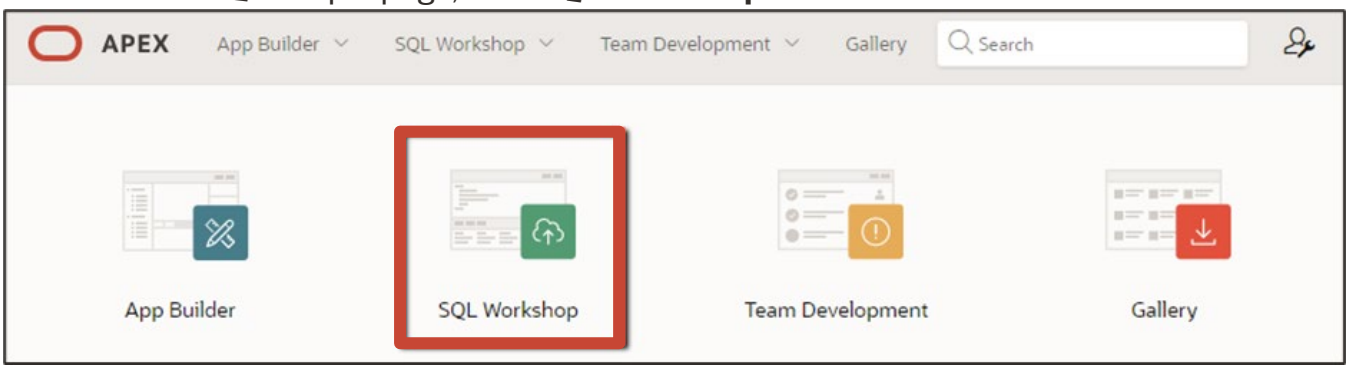
The **Object Browser** can be used to create or browse objects (Objects and Data) in your schema.



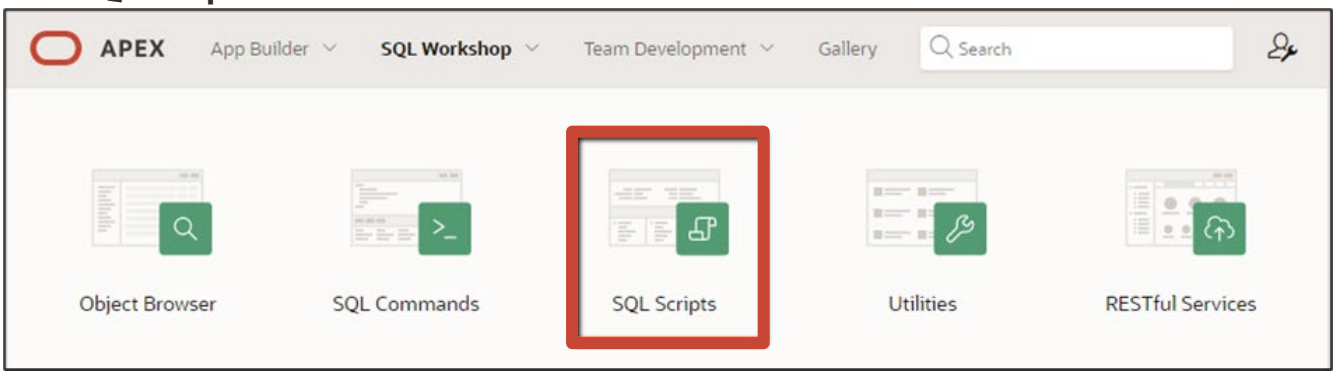
10. Using SQL Scripts tool from the SQL Workshop Component

The SQL Scripts tool can be used to view, create or upload SQL or PL/SQL scripts. A SQL or PL/SQL script is one or more SQL or PL/SQL statements that are executed sequentially. Each statement must have a semi-colon at the end of the statement.

1. To access the SQL Scripts page, click **SQL Workshop**.

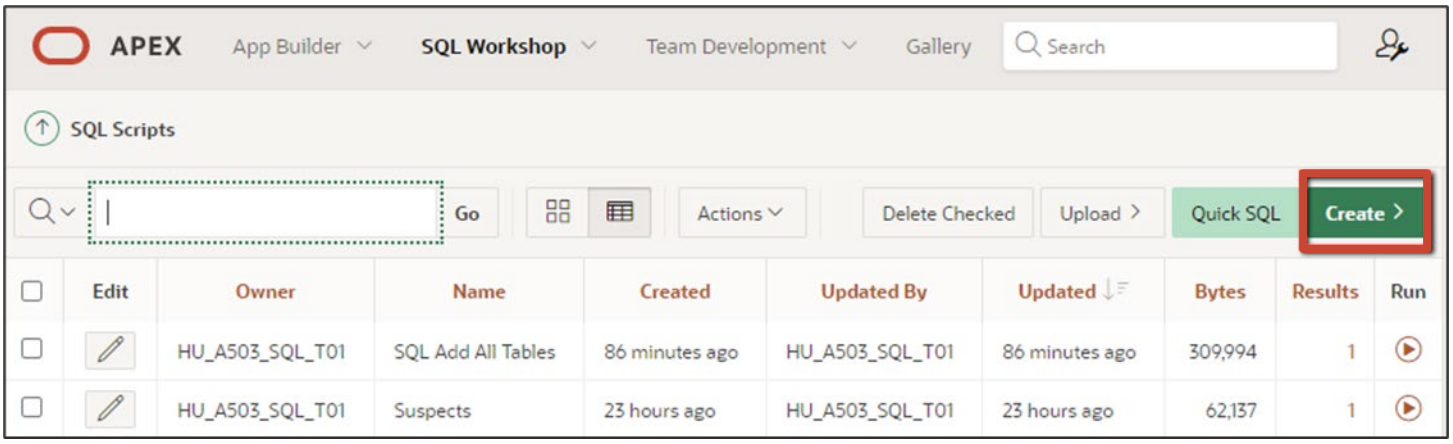


2. Click **SQL Scripts**.



11. Creating Scripts

To access the script editor window you click the **Create** button from the SQL Scripts page.

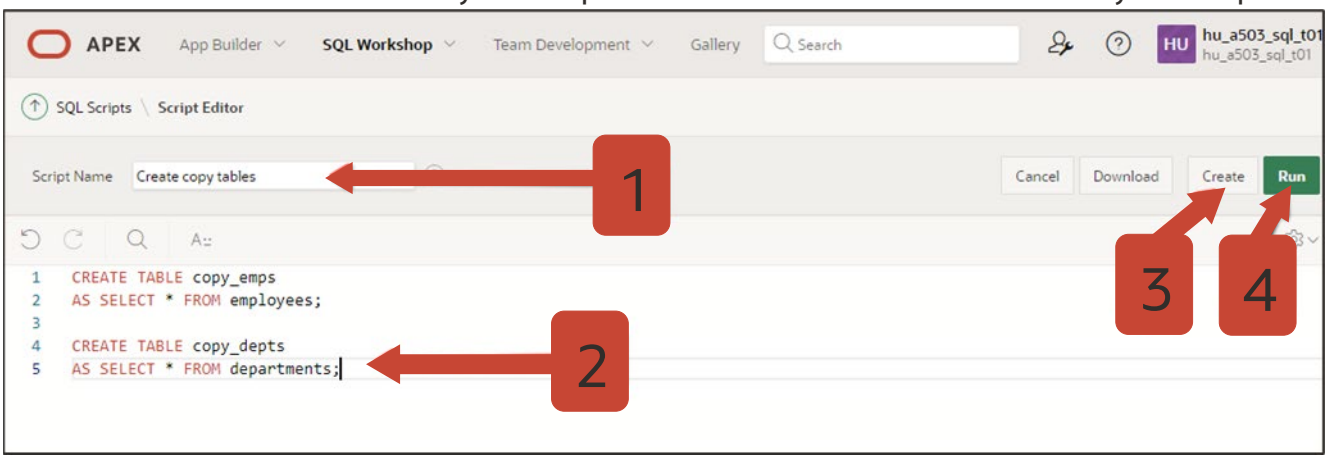


To create a new script:

1. Give your script a name.

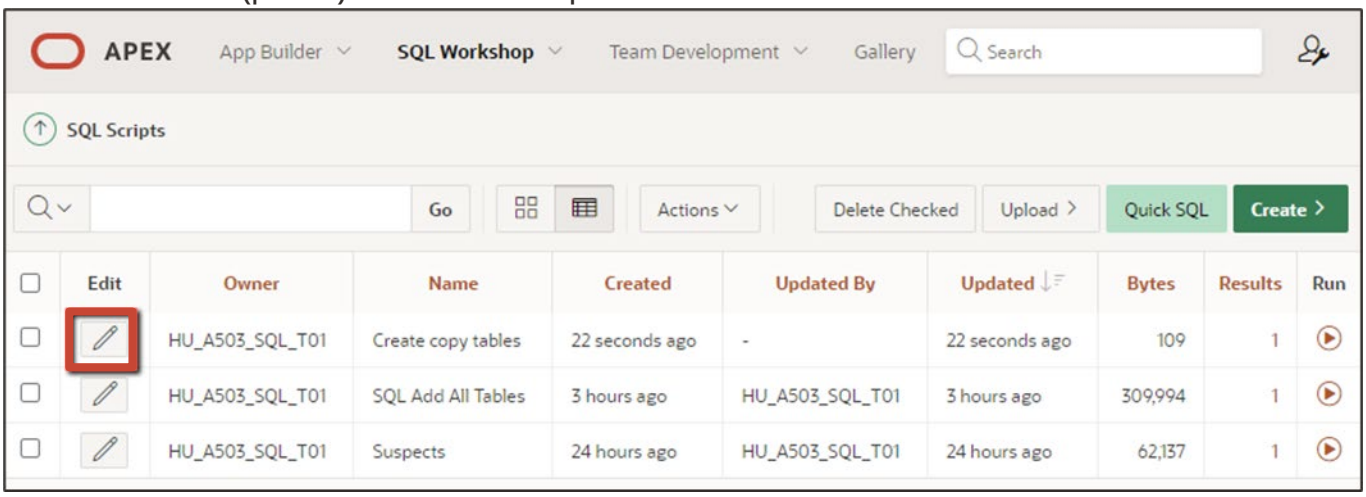
2. Enter in the SQL or PL/SQL commands.

3. Click the **Create** button to save your script or click the **Run** button to execute your script.

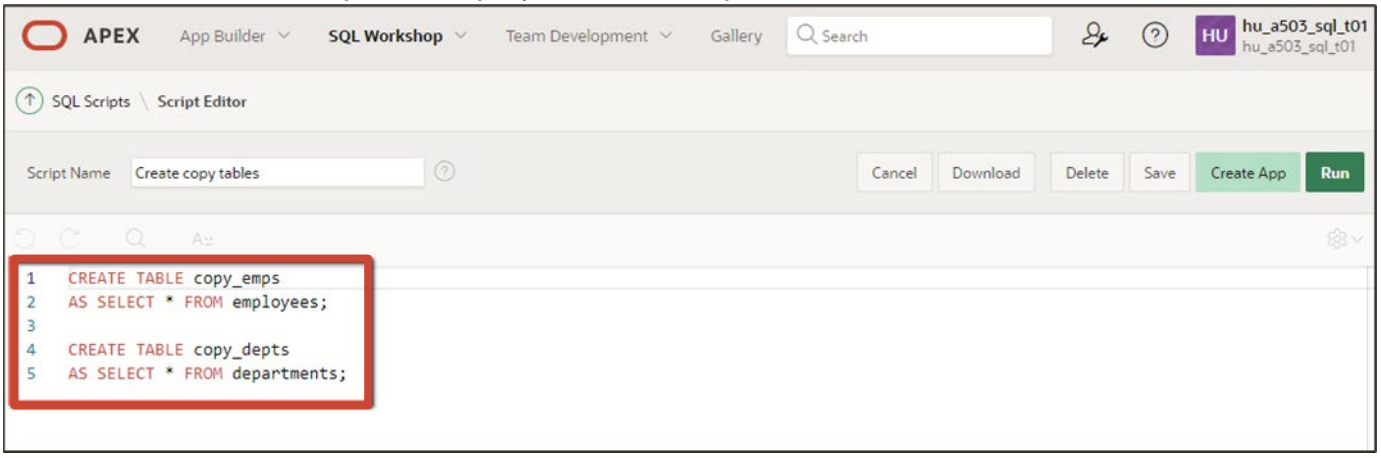


12. Viewing Scripts

1. To view scripts loaded into the SQL Script tool, select **SQL Workshop**, **SQL Scripts** and click on the **Edit** icon (pencil) next to the script to be viewed.

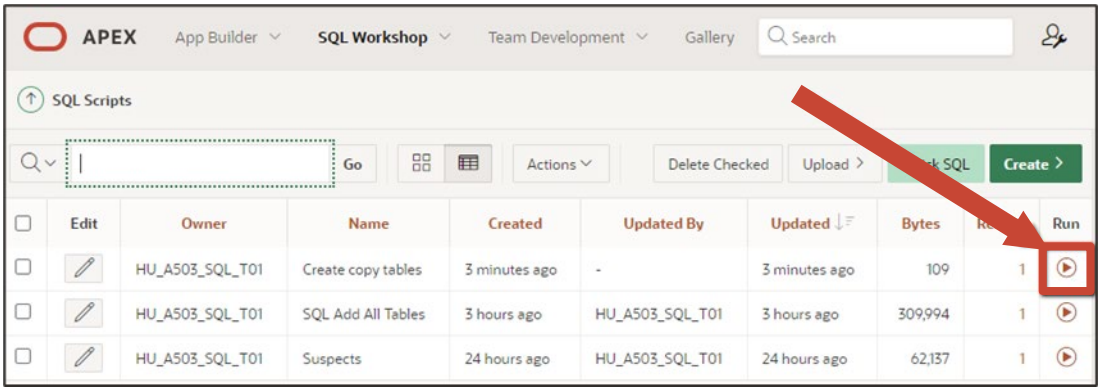


2. The contents of the script are displayed in the Script Editor window.

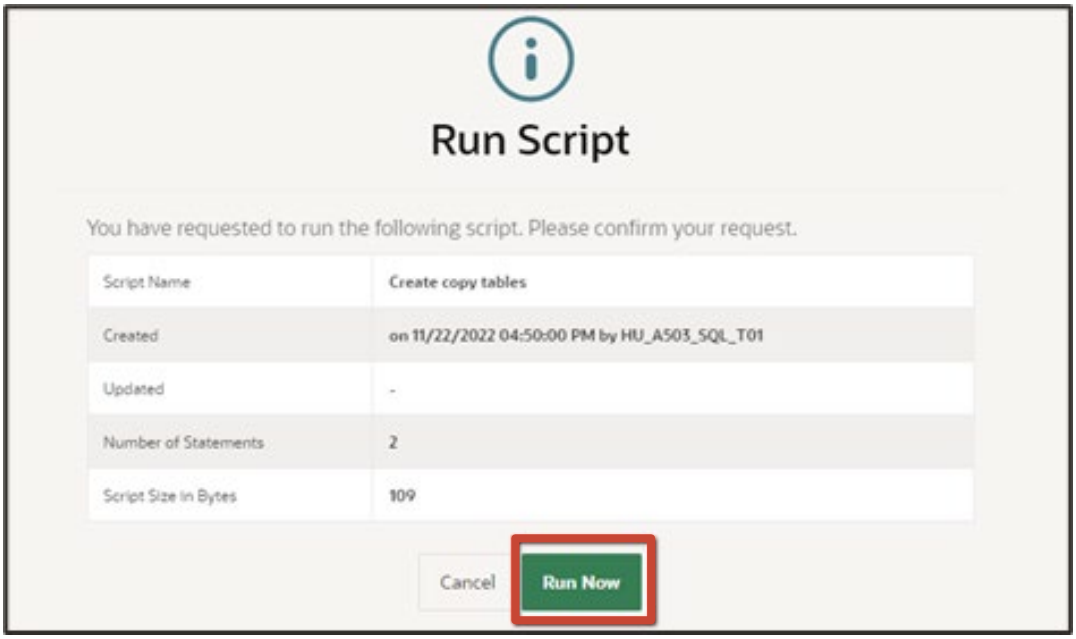


13. Running Scripts

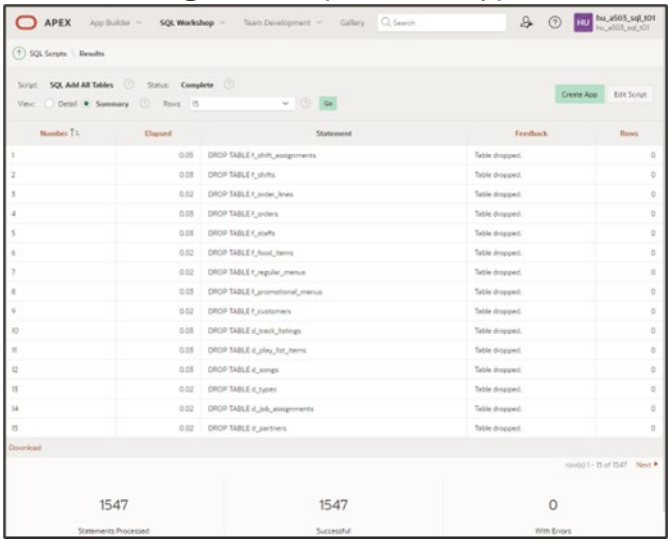
1. To run a script, click the **Run** icon next to the script you wish to execute.



2. Click the **Run Now** button.



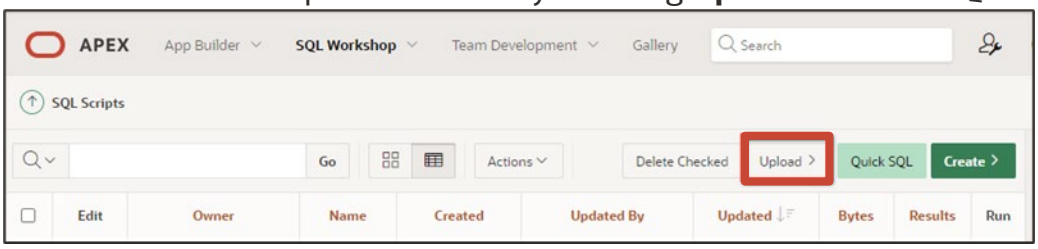
3. The following is a sample of the type of detailed results information you might see.



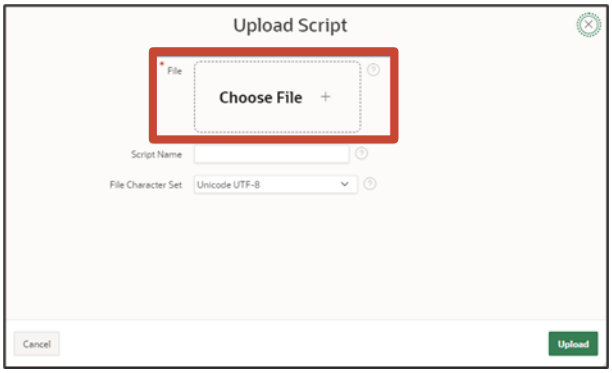
14. Upload Scripts

Before you upload a script into the Script Repository, you must first create it in a text editor on your desktop. When saving your script, make sure to save it as a `.sql` file. Sometimes programs will add an extension to your `.sql` and cause problems. For example, `cre_dept.sql` may sometimes be saved as `cre_dept.sql.doc`. If this is a problem, place double quotes around the title of the script when saving – "`cre_dept.sql`".

1. You can access the upload window by selecting **Upload** from the SQL Scripts page.



2. Click **Choose File** and navigate to the file on your PC.



3. Add a Script Name, leave File Character Set as default (Unicode UTF-8), and click **Upload**.

4. You will see the uploaded Script listed on the **SQL Scripts** page in addition to any Scripts that you created in APEX using the Script Editor.