

# Sharing an Autonomous Database Instance with Learners Using Oracle APEX Guide:

Topic	Details
Overview	In this tutorial, you will create users and provide them with the rights to access your Cloud Autonomous Database instance from the web.
Key Concepts	Provide APEX access to database users created in ADB workspace
Difficulty	Intermediate
Duration	Approximately 15 minutes
Notes	Completion of the Hands-On Lab – Oracle Cloud: Autonomous Database Startup Guide and access to an active ADB is required.

## Using Application Express to Share Access to an Autonomous Database with Learners

There are 2 options for using Oracle APEX to share access to your ADB with your learners:

1. Create multiple unique workspaces within your workspace, one for each learner.
  - Easier to administer since each learner will have their own copy of tables and objects in their own workspace.
2. Create multiple user accounts, one for each learner, within your workspace.
  - All learner will share the same workspace with you so tables could become compromised.
  - You can create multiple versions of tables, one for each learner, for DML purposes.

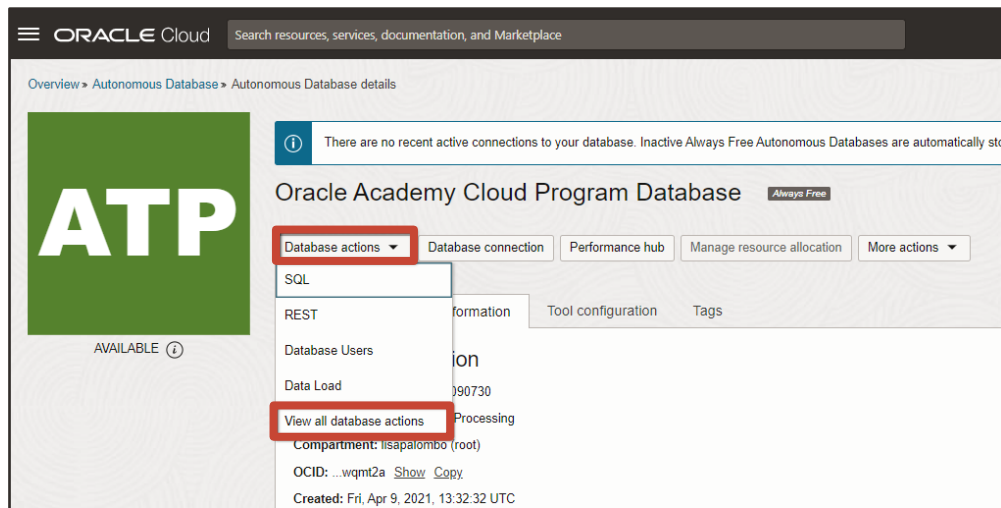
**Important:** There is a Maximum of 20 simultaneous database sessions limit for Always Free and 1 OCPU per Autonomous Database instance. For example, if you are creating more than 20 user accounts per ADB Instance, you have more than 20 simultaneous users and/or many concurrent database client connection and can exceed these limits, thus resulting in errors.

To avoid such errors, it is advised to limit your users to 20 simultaneous sessions or obtain more resources for your Autonomous Database by upgrading to paid service.

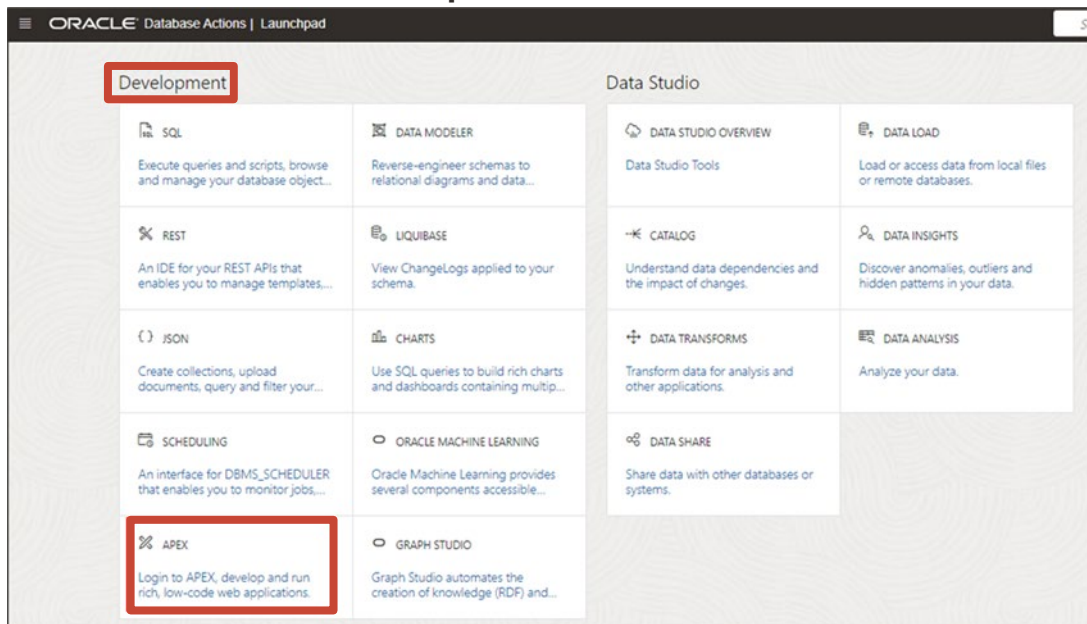
For more information on possible resource restrictions on your Always Free Autonomous Database, please see [Always Free Oracle APEX Application Development](#).

# Instructions for Creating Multiple Workspaces

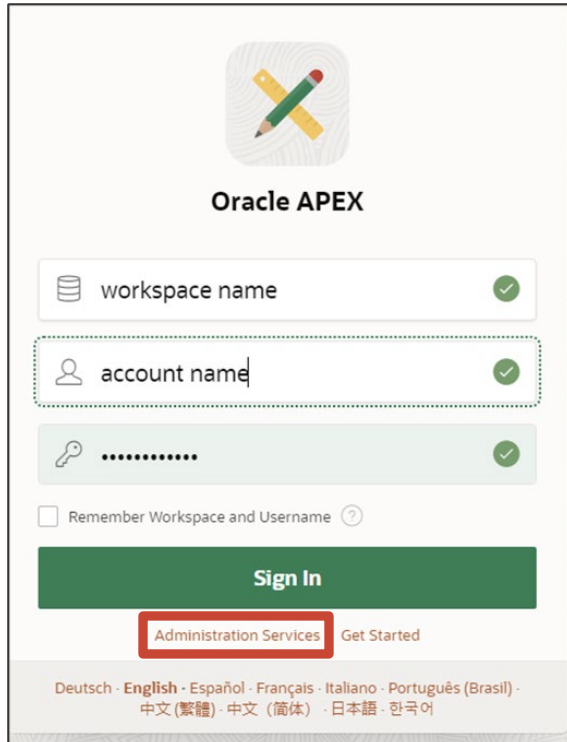
1. From your **Oracle Autonomous Database** dashboard, select **Database actions**, **View all database actions**.



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



3. Select the **Administration Services** option under the Sign In button.



Oracle APEX

workspace name ✓

account name ✓

..... ✓

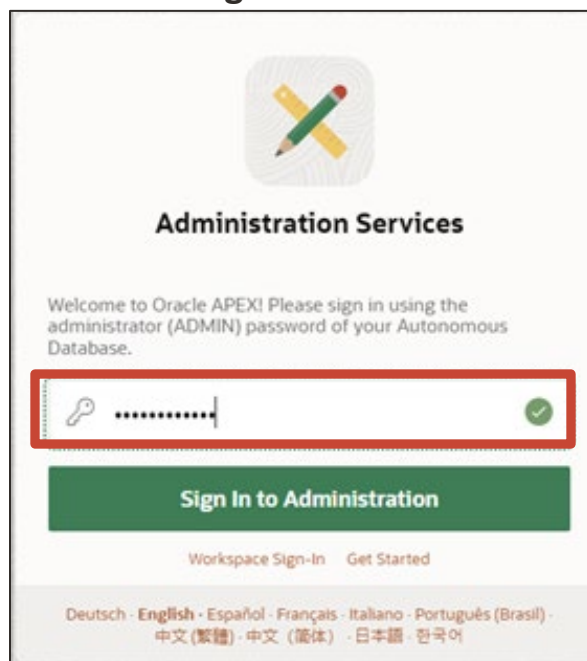
☐ Remember Workspace and Username ?

**Sign In**

**Administration Services** Get Started

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4. Enter the Administrator password that you submitted during the creation of the database and click the **Sign In To Administration** button.



Administration Services

Welcome to Oracle APEX! Please sign in using the administrator (ADMIN) password of your Autonomous Database.

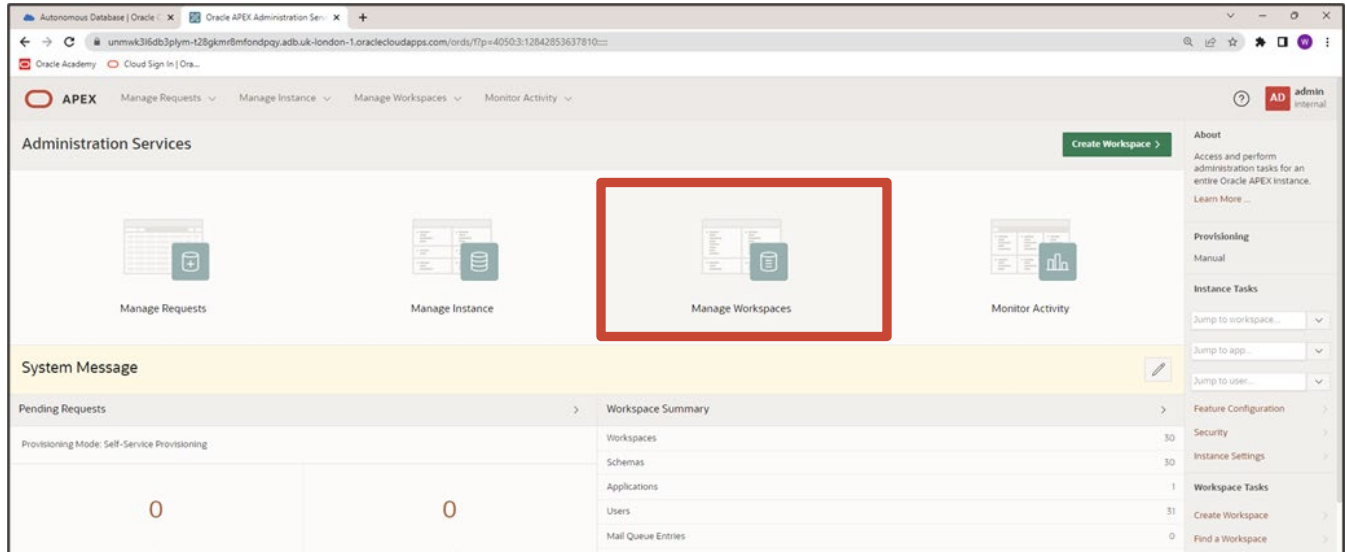
..... ✓

**Sign In to Administration**

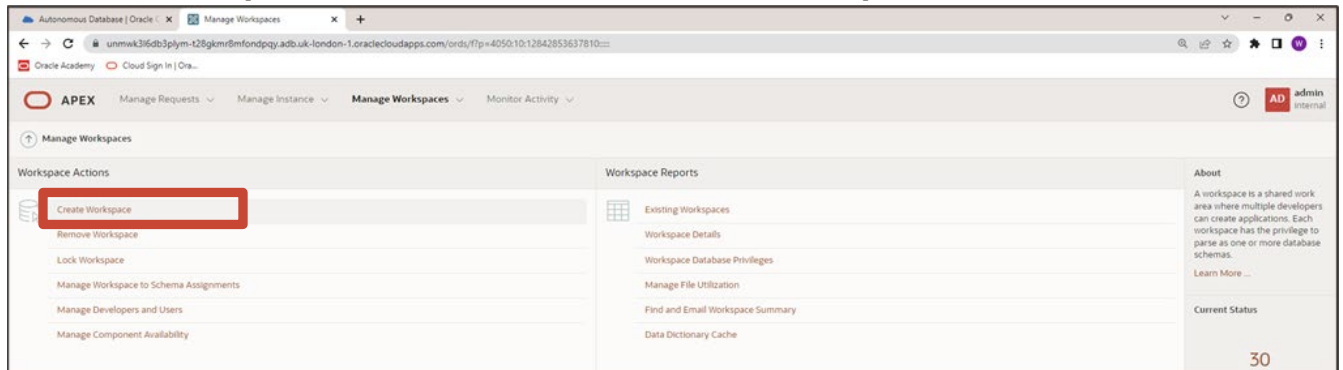
Workspace Sign-In Get Started

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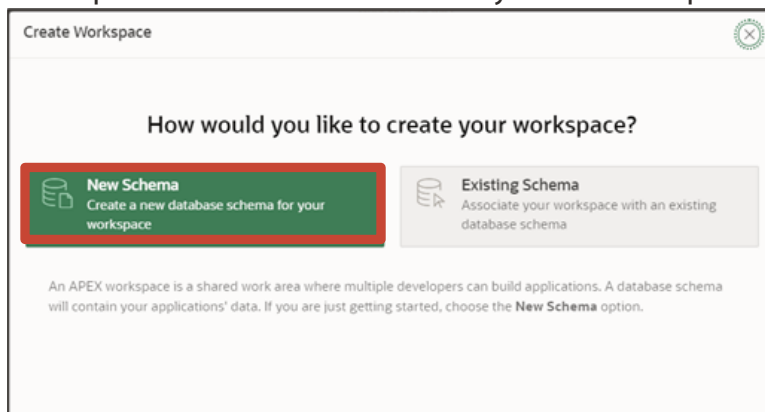
5. From the Administration Services page select the **Manage Workspaces** option.



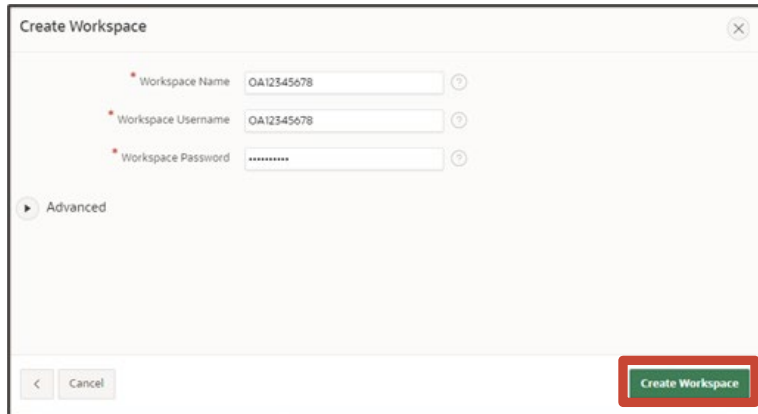
6. From the **Workspace Actions** section, select **Create Workspace**.



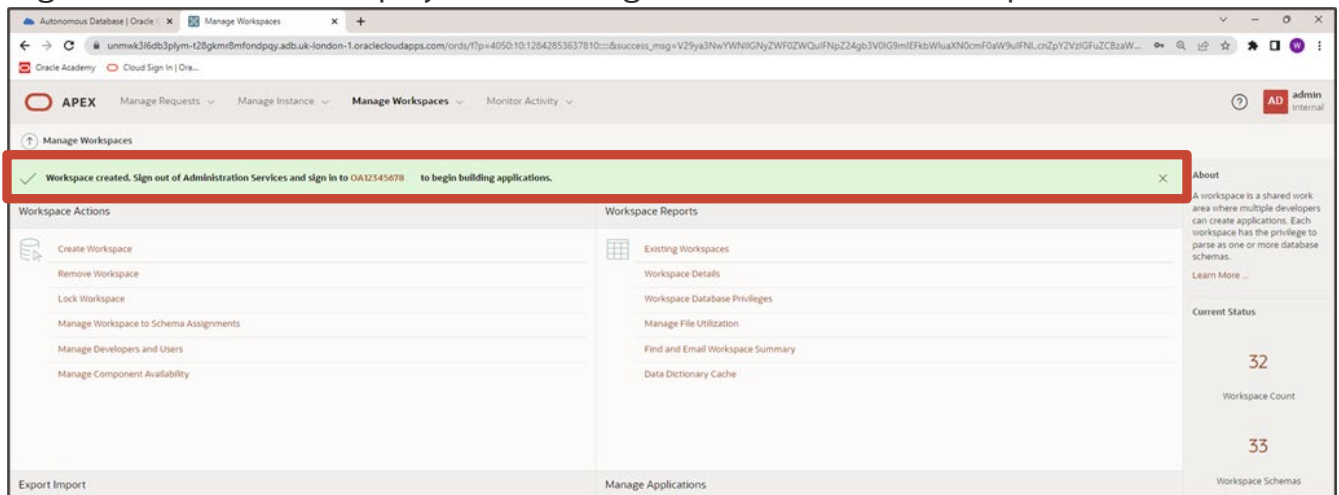
7. Select **New Schema** from the **Create Workspace** options. This will create a unique workspace for each learner so they can work separately from each other.



8. It is recommended to add the same details for the **Workspace Name** and **Workspace Username** as the learner's member hub login, as it will make it easier for the learner to remember. The password provided must conform to the Oracle Password Complexity Rules, therefore it is easier to keep all the initial passwords the same. These are the credentials that the learner will use to login to APEX. Click **Create Workspace** to confirm the details.

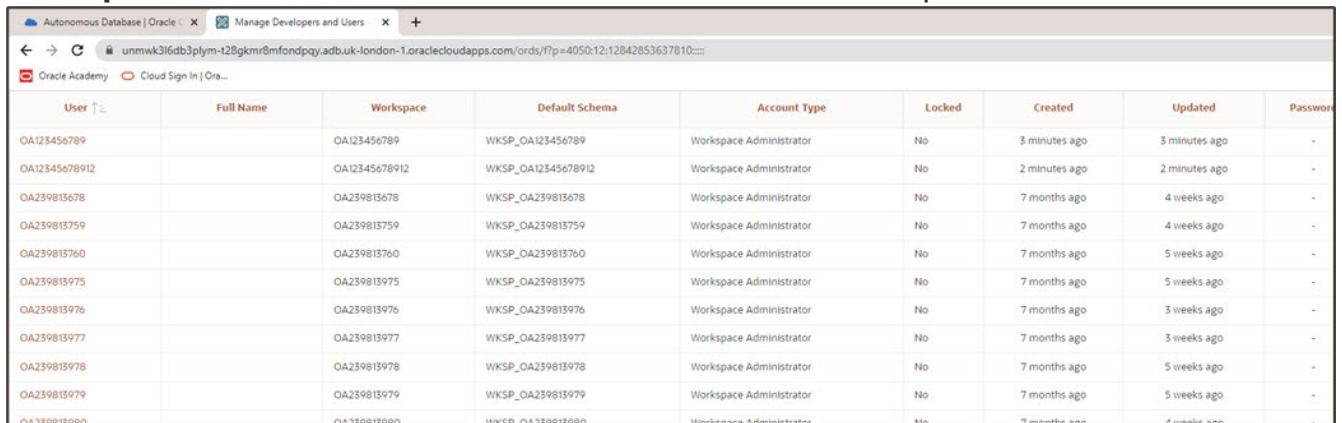


9. A green banner will be displayed confirming the creation of the workspace.



10. Repeat steps 5-8 for each learner that requires a workspace.

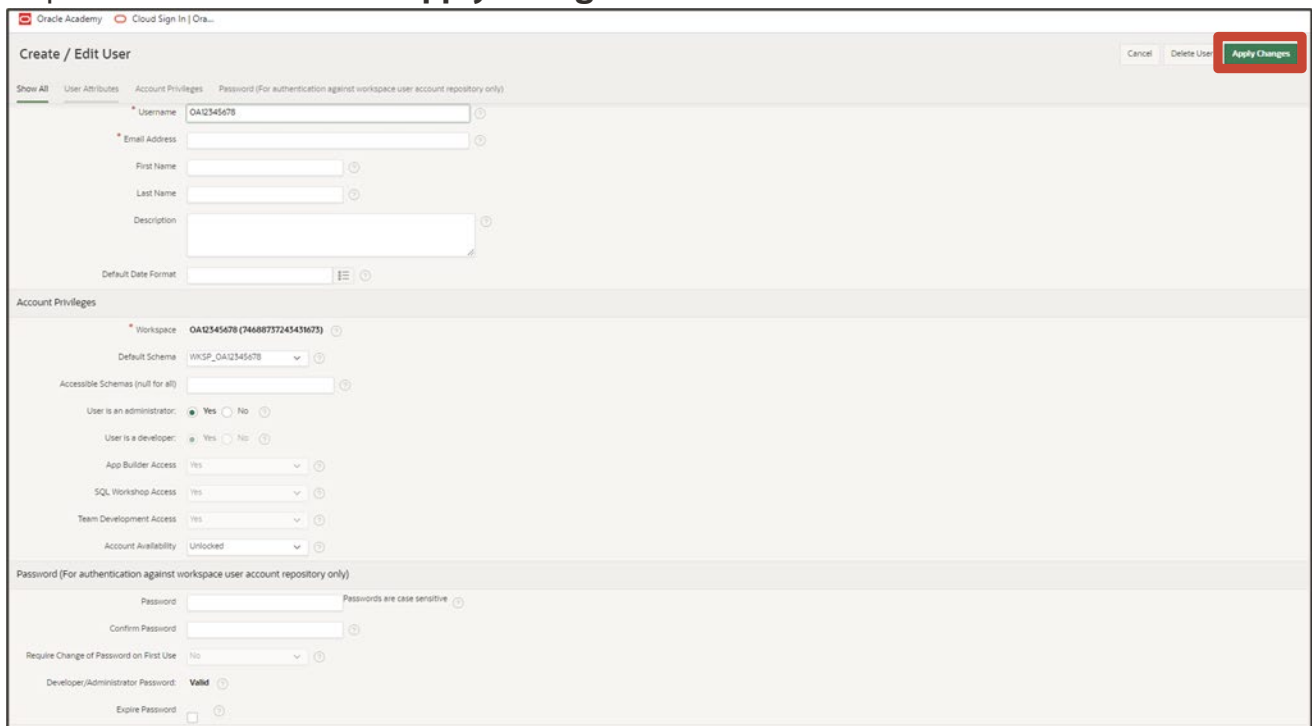
11. To view the created workspaces, select the **Manage Developers and Users** option from the **Workspace Actions** section. You will see a list of created workspace users.



The screenshot shows a web browser window with the URL `unmwk3l6db3plym-t28gkmr8mfondpqy.adb.uk-london-1.oraclecloudapps.com/ords/f?p=4050:12:12842853637810::`. The page title is 'Autonomous Database | Oracle' and the breadcrumb is 'Manage Developers and Users'. The table below lists workspace users.

User	Full Name	Workspace	Default Schema	Account Type	Locked	Created	Updated	Password
OA123456789		OA123456789	WKSP_OA123456789	Workspace Administrator	No	3 minutes ago	3 minutes ago	-
OA12345678912		OA12345678912	WKSP_OA12345678912	Workspace Administrator	No	2 minutes ago	2 minutes ago	-
OA239813678		OA239813678	WKSP_OA239813678	Workspace Administrator	No	7 months ago	4 weeks ago	-
OA239813759		OA239813759	WKSP_OA239813759	Workspace Administrator	No	7 months ago	4 weeks ago	-
OA239813760		OA239813760	WKSP_OA239813760	Workspace Administrator	No	7 months ago	5 weeks ago	-
OA239813975		OA239813975	WKSP_OA239813975	Workspace Administrator	No	7 months ago	5 weeks ago	-
OA239813976		OA239813976	WKSP_OA239813976	Workspace Administrator	No	7 months ago	3 weeks ago	-
OA239813977		OA239813977	WKSP_OA239813977	Workspace Administrator	No	7 months ago	3 weeks ago	-
OA239813978		OA239813978	WKSP_OA239813978	Workspace Administrator	No	7 months ago	5 weeks ago	-
OA239813979		OA239813979	WKSP_OA239813979	Workspace Administrator	No	7 months ago	5 weeks ago	-

12. To reset a Workspace password, click the User information on the list. Make the changes required and then click the **Apply Changes** button.



The screenshot shows the 'Create / Edit User' form for user OA12345678. The form has tabs for 'Show All', 'User Attributes', 'Account Privileges', and 'Password'. The 'User Attributes' tab is active, showing fields for Username, Email Address, First Name, Last Name, Description, and Default Date Format. The 'Account Privileges' tab is also visible, showing fields for Workspace, Default Schema, Accessible Schemas, and various access permissions. The 'Password' tab is also visible, showing fields for Password, Confirm Password, and Require Change of Password on First Use.

**Create / Edit User**

Cancel Delete User **Apply Changes**

Show All User Attributes Account Privileges Password (For authentication against workspace user account repository only)

\* Username OA12345678 ⓘ

\* Email Address ⓘ

First Name ⓘ

Last Name ⓘ

Description ⓘ

Default Date Format ⓘ

**Account Privileges**

\* Workspace OA12345678 (74680737245436073) ⓘ

Default Schema WKSP\_OA12345678 ⓘ

Accessible Schemas (null for all) ⓘ

User is an administrator: ☒ Yes ☐ No ⓘ

User is a developer: ☐ Yes ☐ No ⓘ

App Builder Access Yes ⓘ

SQL Workshop Access Yes ⓘ

Team Development Access Yes ⓘ

Account Availability Unlocked ⓘ

**Password (For authentication against workspace user account repository only)**

Password Passwords are case sensitive ⓘ

Confirm Password ⓘ

Require Change of Password on First Use No ⓘ

Developer/Administrator Password: Valid ⓘ

Expire Password ☐ ⓘ

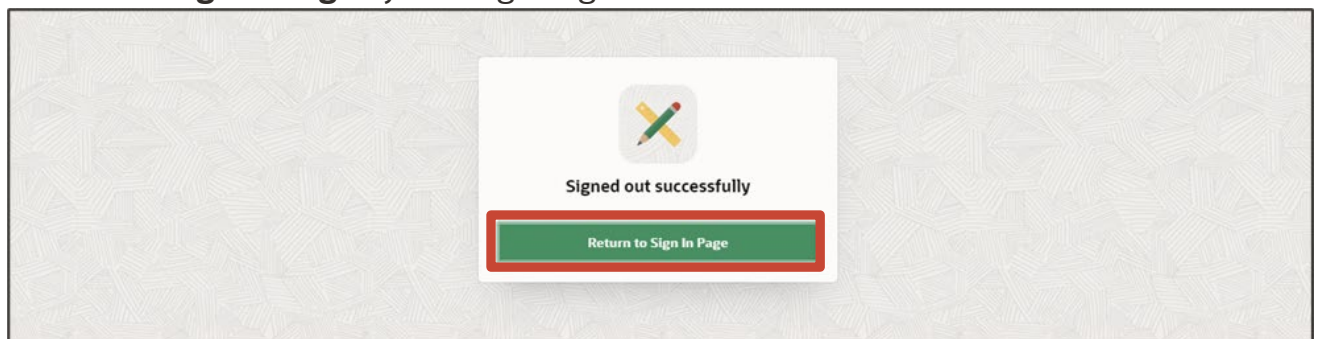


13. When all the Workspaces have been added, click **Sign out** in the **admin information** section at the top right of the screen.

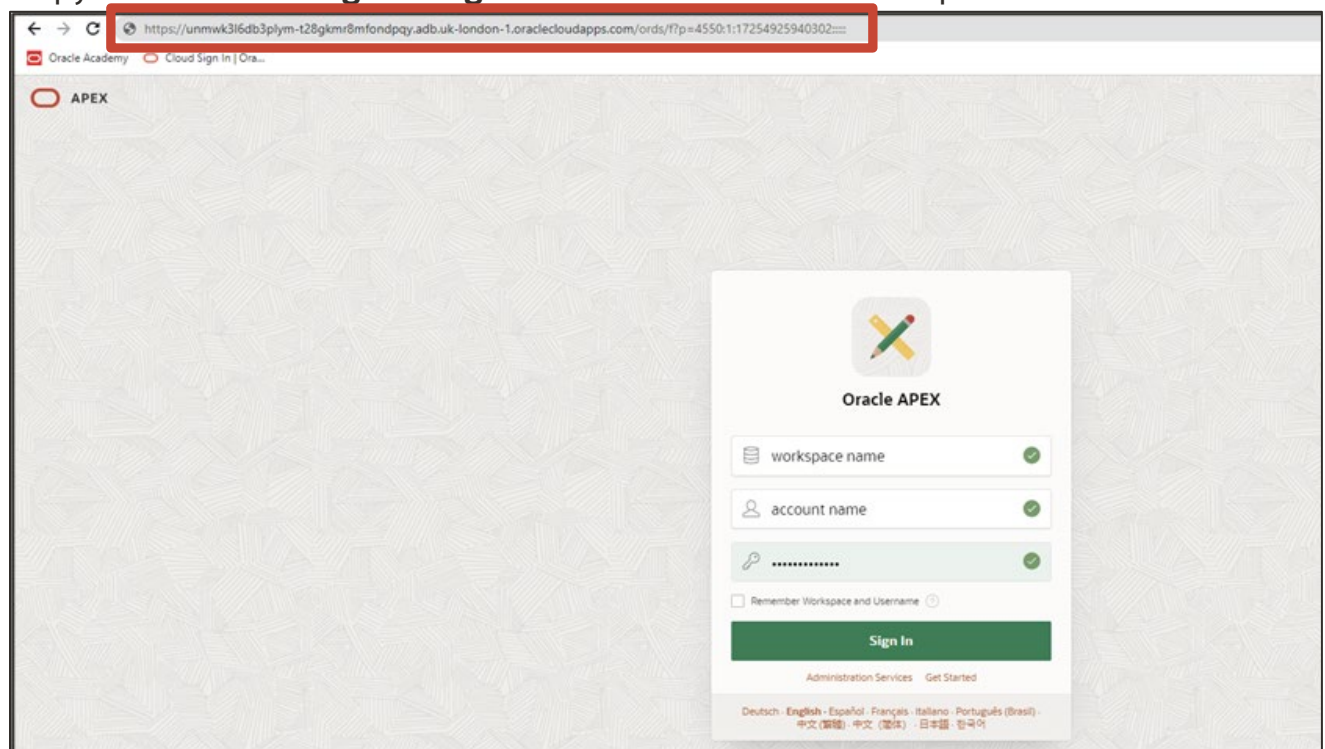
The screenshot shows the Oracle APEX Admin interface. At the top, there's a 'Monitor Activity' dropdown. Below it is a table with columns: Workspace, Default Schema, Account Type, Locked, Created, and Updated. The table lists several workspaces, all with 'Workspace Administrator' as the account type. On the right side, there's an 'ADMIN' sidebar showing the user 'ADMIN' (william.mcorae@fortvalley.ac.uk) with the role 'Administrator'. A 'Sign out' button is highlighted in the sidebar. A 'Reset' button is also visible near the table.

Workspace	Default Schema	Account Type	Locked	Created	Updated
APEX_220200		Workspace Administrator	No	2.5 years ago	9 minutes ago
WKSP_BAL3IT		Workspace Administrator	No	2 months ago	2 months ago
WKSP_FRAPPLES		Workspace Administrator	No	4 months ago	2 months ago
WKSP_FVC		Workspace Administrator	No	7 months ago	4 months ago
WKSP_OA12345678		Workspace Administrator	No	7 days ago	7 days ago
WKSP_OA123456789		Workspace Administrator	No	4 minutes ago	4 minutes ago

14. **Return to Sign In Page** by clicking the green button.



15. Copy the URL of the **Sign In Page** from the address bar at the top of the screen.

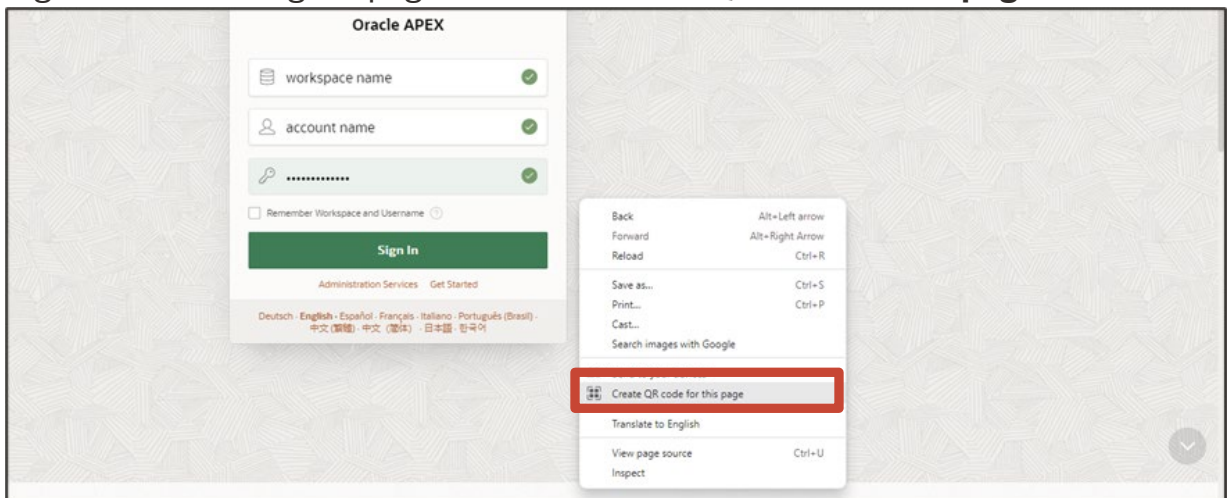


The URL from this example begin with <https://unmwk3l6db3plym-t28gkmr8mfondpqy...>

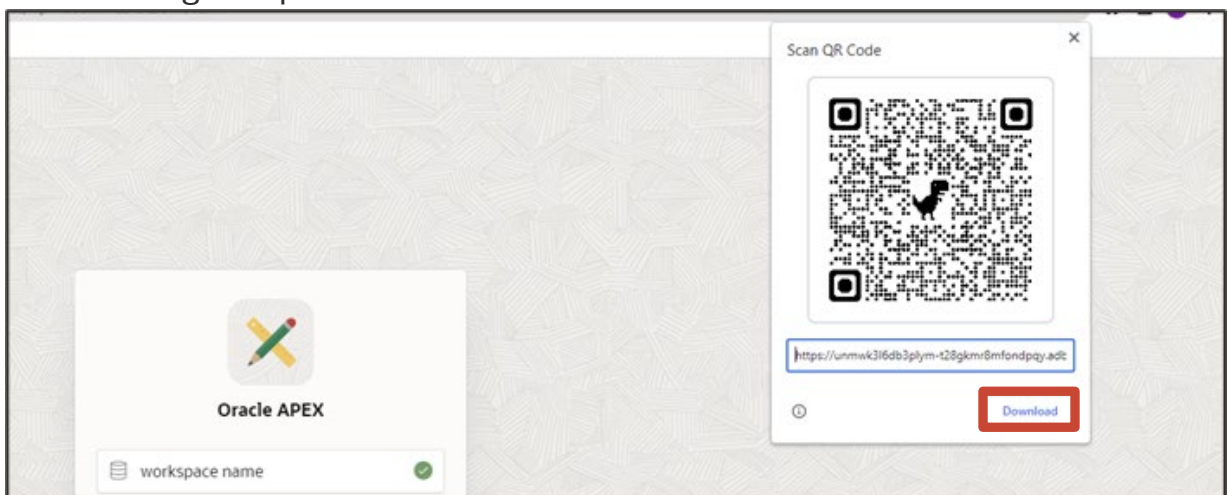
16. Provide your URL to the learner. This is how they will access their database workspace using the credentials you created for them.
17. Once the learners have logged in, they will have access to their own unique empty workspace which can be used to complete their SQL tasks.
18. As an alternative to the URL, if your Operating System or Web Browser allows, you can generate a QR code that will take them to the sign in screen.

The step process to create a QR code is as follows:

- a. Right click on the Sign In page and select **Create QR code for this page.**



- b. Do not change the provided URL and click the **Download** button.



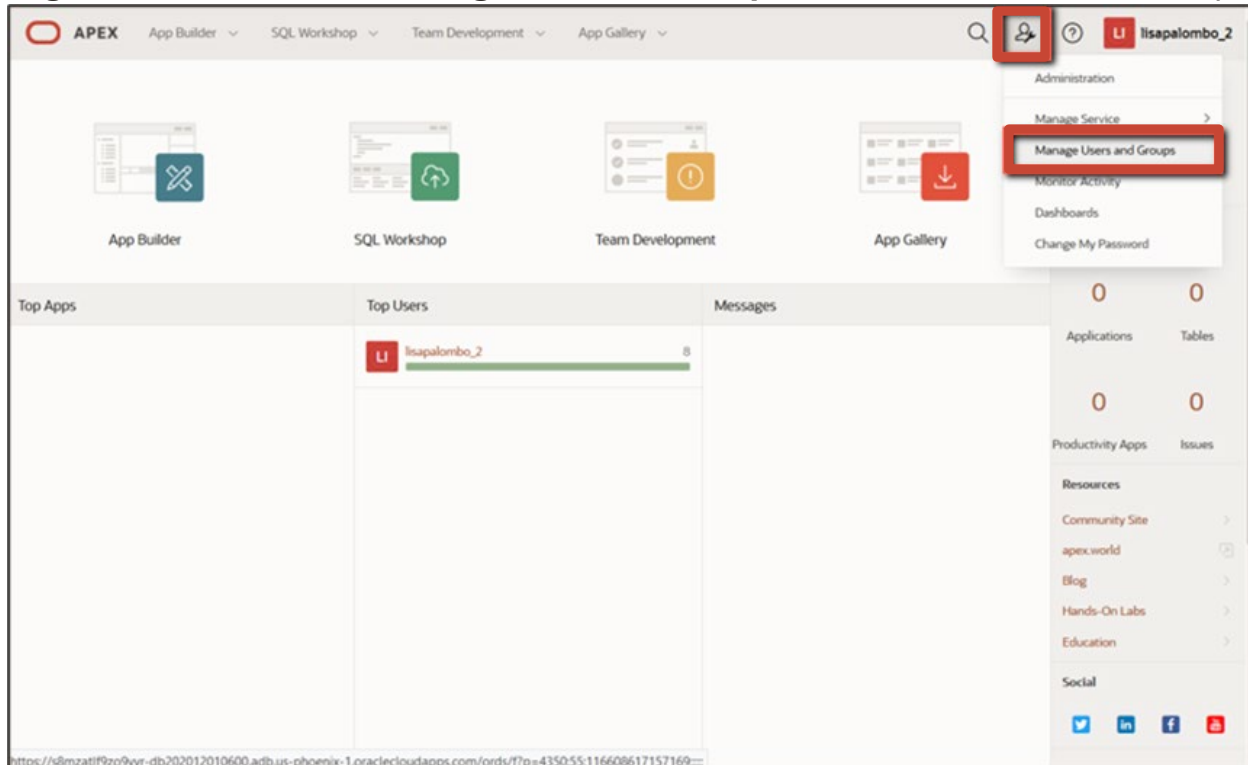
- c. You can now share the QR code with your learners to get them to the Sign In page.

19. You can add, delete or amend any of the workspace details by going through the Administration login option at sign in.

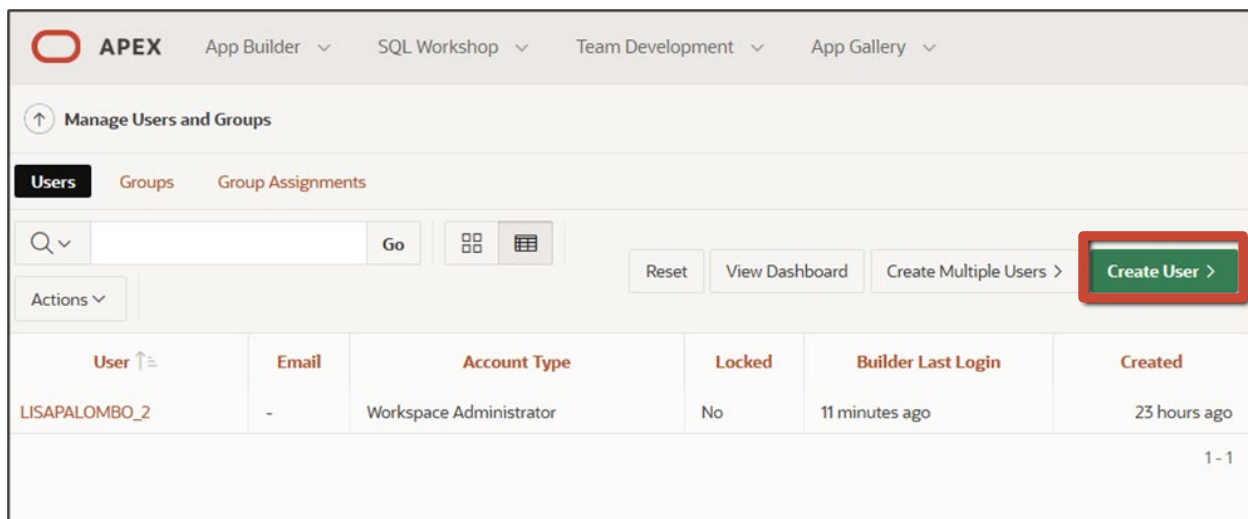


# Instructions for Creating Multiple User Accounts

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



2. Click **Create User**.



3. Enter a **Username** and **Email Address**. Turn **on** (slide to green) the **User is a developer**. Enter and confirm your **Password**.

Manage Users and Groups \ Create User

### Create User

Cancel Create and Create Another **Create User**

**Show All** User Identification Account Privileges Password (For authentication against workspace user account repository only) Group Assignments

#### User Identification

Username student\_1

Email Address student1@user.com

First Name

Last Name

Description

Default Date Format

#### Account Privileges

Default Schema LISAPALOMBO\_2

Accessible Schemas (null for all)

User is a workspace administrator: ☐

**User is a developer: ☒**

App Builder Access ☒

SQL Workshop Access ☒

Team Development Access ☒

Set Account Availability Unlocked

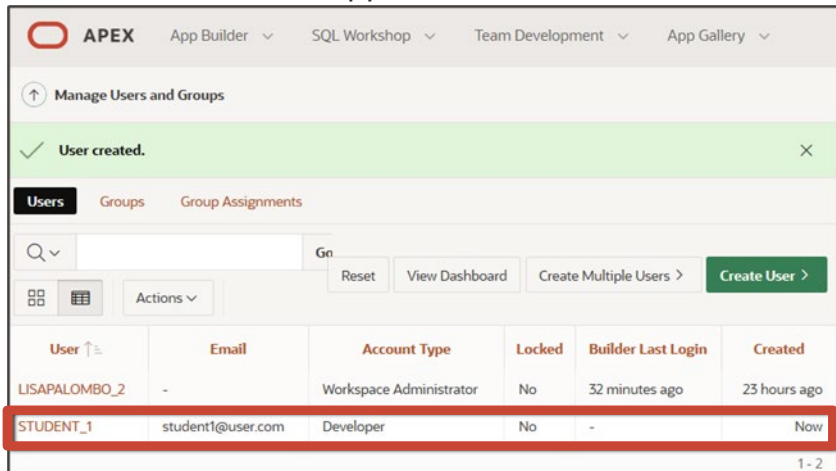
#### Password (For authentication against workspace user account repository only)

\* Password Passwords are case sensitive

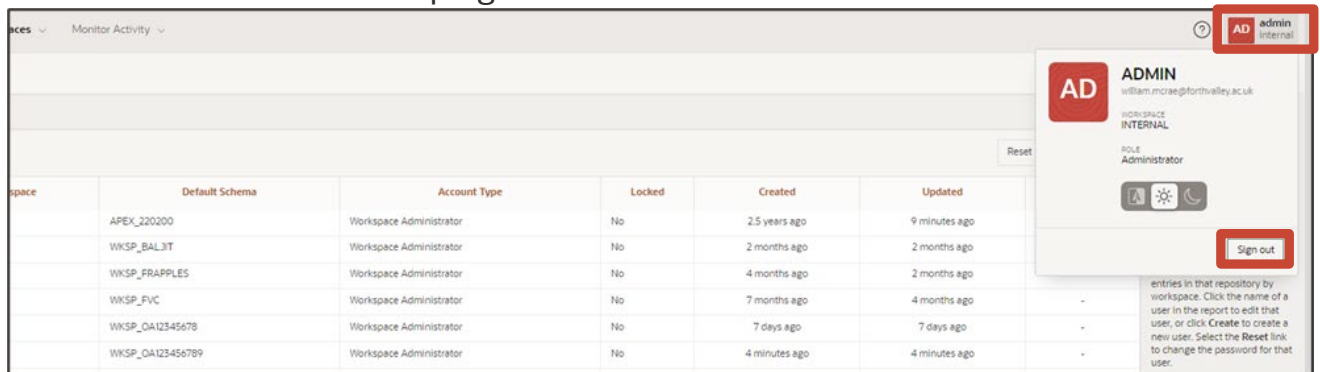
\* Confirm Password

Require Change of Password on First Use ☐

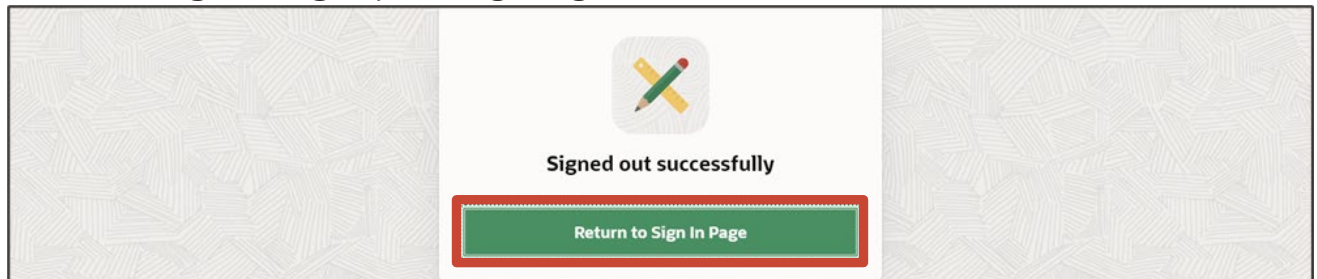
4. The new account now appears in the list of **Users**.



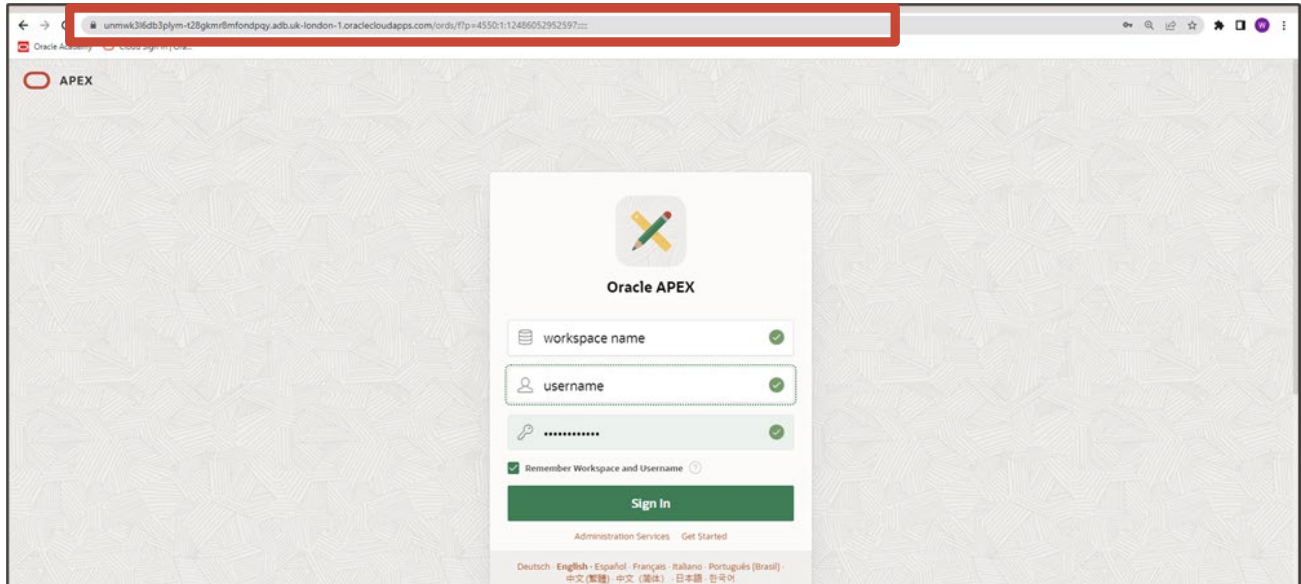
5. When all the Workspaces have been added, click the **Sign out** option of the **admin information** section at the top right of the screen.



6. **Return to Sign In Page** by clicking the green button.



7. Copy the URL of the **Sign In Page** from the address bar at the top of the screen.

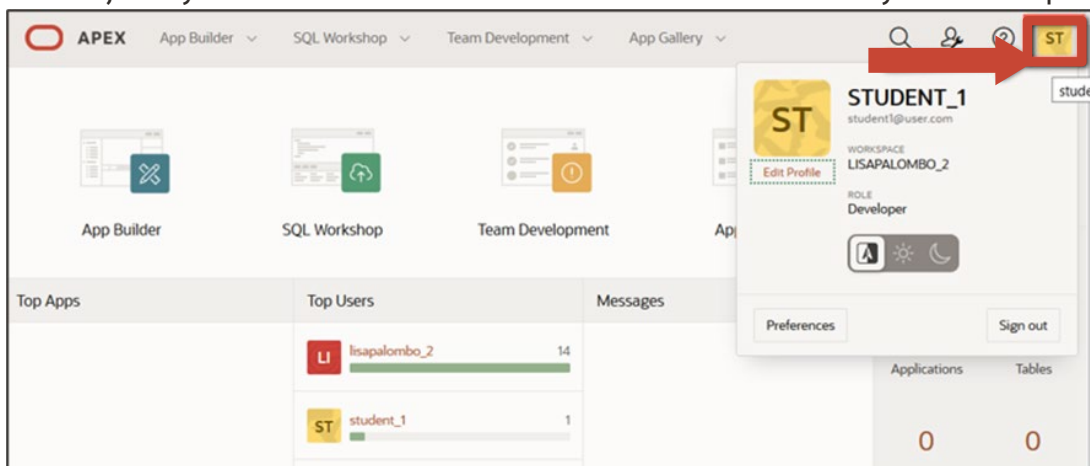


The URL from this example begin with <https://unmwk3l6db3plym-t28gkmr8mfondpqy...>

8. Provide this URL to the learners as this is how they will access their database workspace using the credentials you created for them.
9. The learner can now use this link to the Autonomous Database APEX instance and sign in to your workspace using the username and password created by you.

**Note:** The Workspace will belong to you, the instructor. The Username will be the one created for your learner.

10. The learner is now logged into your Autonomous Database Instance and has access to tables and objects you have established but is not able to see history or saved queries.



**Note:** The learner account will be able to execute DML, which will modify your schema tables!

The screenshot shows the APEX SQL Workshop interface. The user is logged in as 'ST student\_1'. The schema is 'LISAPALOMBO\_2'. The SQL command entered is 'select \* from employees'. The results are displayed in a table with the following columns: EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, EMAIL, PHONE\_NUMBER, HIRE\_DATE, JOB\_ID, SALARY, COMMISSION\_PCT, MANAGER\_ID, and DEPARTMENT\_ID. The table contains 14 rows of data.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	SKING	515.123.4567	06/17/2002	AD_PRES	24000	-	-	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	09/21/2004	AD_VP	17000	-	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	01/13/2008	AD_VP	17000	-	100	90
200	Jennifer	Whalen	JWHALEN	515.123.4444	09/17/2002	AD_ASST	4400	-	101	90
205	Shelley	Higgins	SHIGGINS	515.123.8080	06/07/2009	AC_MGR	12000	-	101	110
206	William	Gietz	WGIEZT	515.123.8181	06/07/2009	AC_ACCOUNT	8300	-	205	110
149	Eleni	Zlotkey	EZLOTKEY	011.44.1344.429018	01/29/2015	SA_MAN	10500	.2	100	80
174	Ellen	Abel	EABEL	011.44.1644.429267	05/11/2011	SA_REP	11000	.3	149	80
176	Matthew	Taylor	MTAYLOR	011.44.1644.429765	03/24/2015	SA_REP	9600	.2	149	80

11. To execute DML queries, learner should create their own copy of the table.

For example:

The screenshot shows the APEX SQL Workshop interface. The user is logged in as 'ST student\_1'. The schema is 'LISAPALOMBO\_2'. The SQL command entered is 'create table student1\_employees as select \* from employees'. The results show 'Table created.' and '0.11 seconds'.

12. Once the learner have logged in, they will have access to their own unique empty workspace which can be used to complete their SQL tasks.