

Lab 3

Creating Profiles, Users and Roles

Brian Prost

SDEV350 6380: Database Security

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1. Create a Unique Profile

```
CREATE PROFILE PBrianProst LIMIT  
    PASSWORD_VERIFY_FUNCTION ora12c_verify_function  
    SESSIONS_PER_USER 3  
    FAILED_LOGIN_ATTEMPTS 4  
    PASSWORD_LIFE_TIME 120  
    PASSWORD_LOCK_TIME 1 / 24;
```

2. Verify Profile was Created

```
SELECT  
    PROFILE, RESOURCE_NAME, RESOURCE_TYPE, LIMIT  
FROM  
    DBA_PROFILES  
WHERE  
    PROFILE = 'PBRIANPROST';
```

3. Create 2 Users

```
CREATE USER U1BrianProst  
    IDENTIFIED by "razHkXCVVXQ3eV!"  
    DEFAULT TABLESPACE USERS  
    QUOTA 30M on USERS  
    PROFILE "PBRIANPROST"  
    PASSWORD EXPIRE;
```

```
CREATE USER U2BrianProst  
    IDENTIFIED by "n4i-98Ctjo@7jYf"  
    DEFAULT TABLESPACE USERS  
    QUOTA 30M on USERS  
    PROFILE "PBRIANPROST"  
    PASSWORD EXPIRE;
```

4. Create a Role

```
CREATE ROLE R1BrianProst;
```

```
GRANT CONNECT, CREATE TABLE TO R1BrianProst;
```

5. Create 2 Tables

```
CREATE TABLE User1Data (  
    album_record NUMBER(10) GENERATED ALWAYS as  
IDENTITY(START with 1 INCREMENT by 1) NOT NULL,  
    album_name VARCHAR2(128) NOT NULL,  
    album_artist VARCHAR2(128) NOT NULL,  
    release_date DATE NOT NULL,  
    PRIMARY KEY(album_record)  
);
```

```
CREATE TABLE User2Data (  
    movie_record NUMBER(10) GENERATED ALWAYS as  
IDENTITY(START with 1 INCREMENT by 1) NOT NULL,  
    video_name VARCHAR2(128) NOT NULL,  
    video_type VARCHAR2(64) NOT NULL,  
    director_name VARCHAR2(128) NOT NULL,  
    release_date DATE NOT NULL,  
    PRIMARY KEY(movie_record)  
);
```

5b. Insert Records

```
INSERT INTO User1Data (album_name, album_artist, release_date) VALUES  
('1984', 'Van Halen', '09-JAN-84');  
INSERT INTO User1Data (album_name, album_artist, release_date) VALUES ('Gone  
Now', 'Bleachers', '02-JUN-17');
```

```
INSERT INTO User1Data (album_name, album_artist, release_date) VALUES ('The
Rise and Fall of Ziggy Stardust and the Spiders From Mars', 'David Bowie',
'06-JUN-72');
```

```
INSERT INTO User2Data (video_name, video_type, director_name, release_date)
VALUES ('Free Churro - Bojack Horseman', 'TV Show', 'Amy Winfrey', '14-
SEP,18');
```

```
INSERT INTO User2Data (video_name, video_type, director_name, release_date)
VALUES ('Tommy Boy', 'Movie', 'Peter Segal', '31-MAR-95');
```

```
INSERT INTO User2Data (video_name, video_type, director_name, release_date)
VALUES ('Deadpool', 'Movie', 'Tim Miller', '12-FEB-16');
```

6. Provide Privileges

```
GRANT R1BrianProst TO U1BrianProst, U2BrianProst;
```

```
GRANT SELECT ON User1Data TO U1BrianProst;
GRANT INSERT ON User1Data TO U1BrianProst;
```

```
GRANT SELECT ON User1Data TO U2BrianProst;
GRANT SELECT ON User2Data TO U2BrianProst;
```

7. Test Table

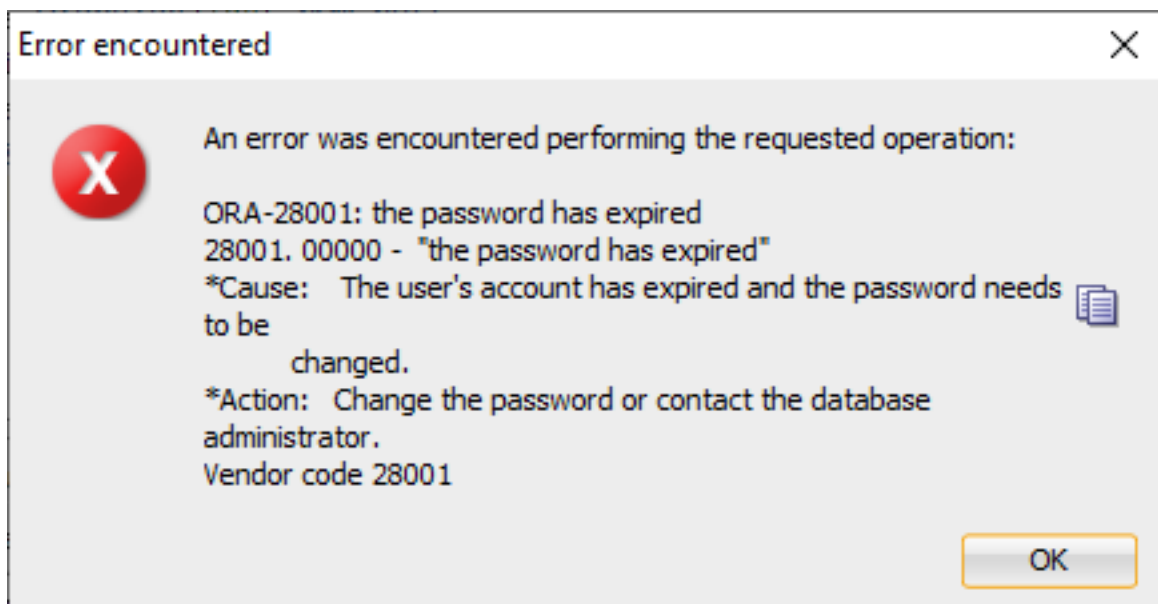
Test Number	Description	Expected Results	Pass
1	U1 initial login	Dialog box notifying of expired password	Yes (see screenshot)
2	U1 change password, and connect after	Successful change of password, and able to successfully connect	Yes
3	U1 create a table	A table created	Yes

Test Number	Description	Expected Results	Pass
4	U1 insert an entry into User1Data	A successful addition of another row to User1Data	Yes
5	U1 select all entries from User1Data	A selection of all entries from the User1Data table including the entry from the previous test	Yes
6	U1 insert an entry into User2Data	A failure to insert in the table since we don't have permission	Yes...as in we were not allowed to pass, though I was expecting to get an insufficient privileges error code but instead got a "table does not exist view" with no mention of the limited privileges.
7	U1 select all entries from User2Data	A selection of all entries from the User2Data table	Yes
8	U2 initial login	Dialog box notifying of expired password	Yes
9	U2 change password, and connect after	Successful change of password, and able to successfully connect	Yes
10	U2 create a table	A table created	Yes
11	U2 select all entries from User1Data	A selection of all entries from the User1Data table	Yes
12	U2 select all entries from User2Data	A selection of all entries from the User2Data table	Yes

Test Number	Description	Expected Results	Pass
13	U2 insert an entry into User1Data	A failure to insert in the table since we don't have permission	Yes, as in not allowed to pass, but this time we did get an appropriate error code about insufficient privileges. I'm guessing it has something to do with U1 not having any permissions whatsoever to User2Table?
14	Verify that only the permissions created in this process are the permissions for these users, and nothing else.	A selection of privileges where U1 has SELECT and INSERT for User1Data; and U2 only has SELECT privilege for both User1Data and User2Data	Yes

Screenshots

Test 1



Enter New Password

Username:

Current Password:

New Password:

Confirm Password:

Test 2

New / Select Database Connection

Connection Name	Connection Details
AWSsdev350	madmin@//datab...
lab3_u1	U1BrianProst@//...
lab3_u2	U2BrianProst@//...

Name:

Database Type:

User Info Proxy User

Authentication Type:

Username: Role:

Password: ☒ Save Password

Connection Type:

Details Advanced

Hostname:

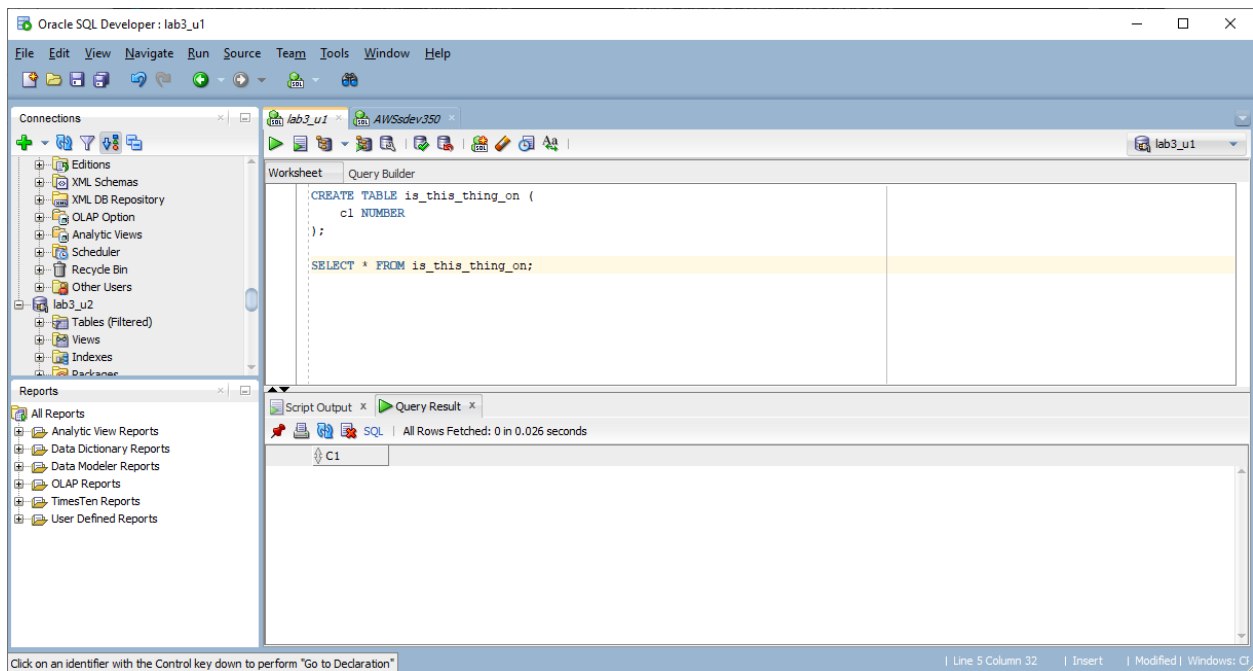
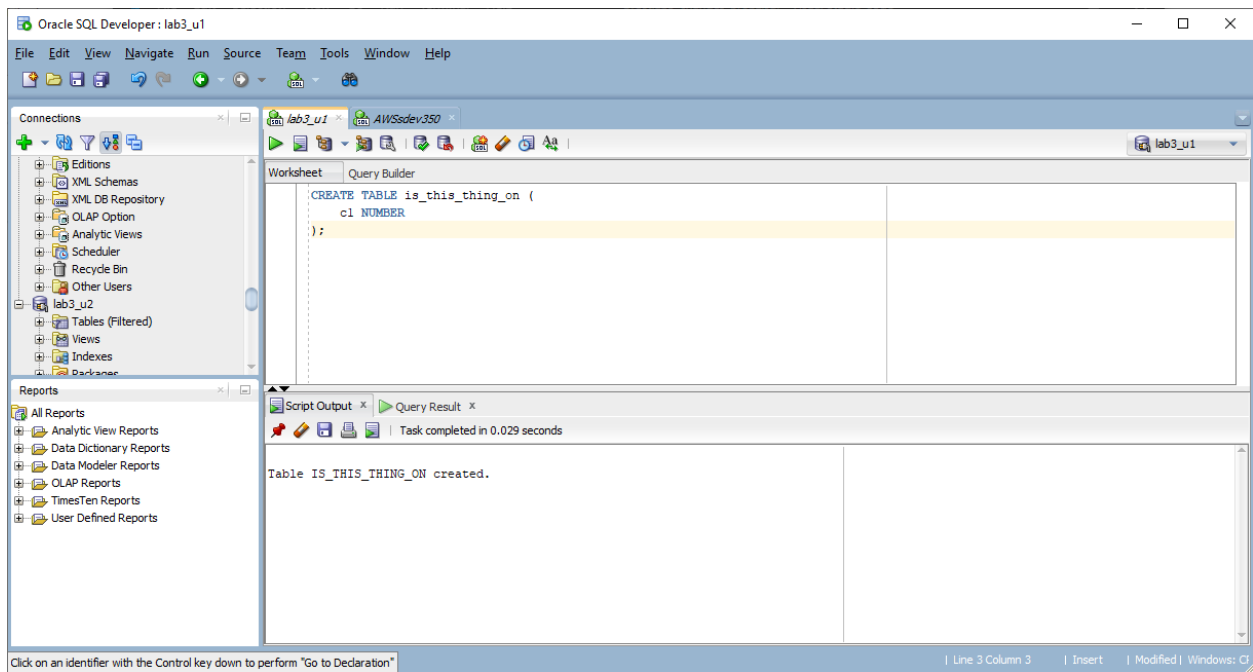
Port:

☒ SID

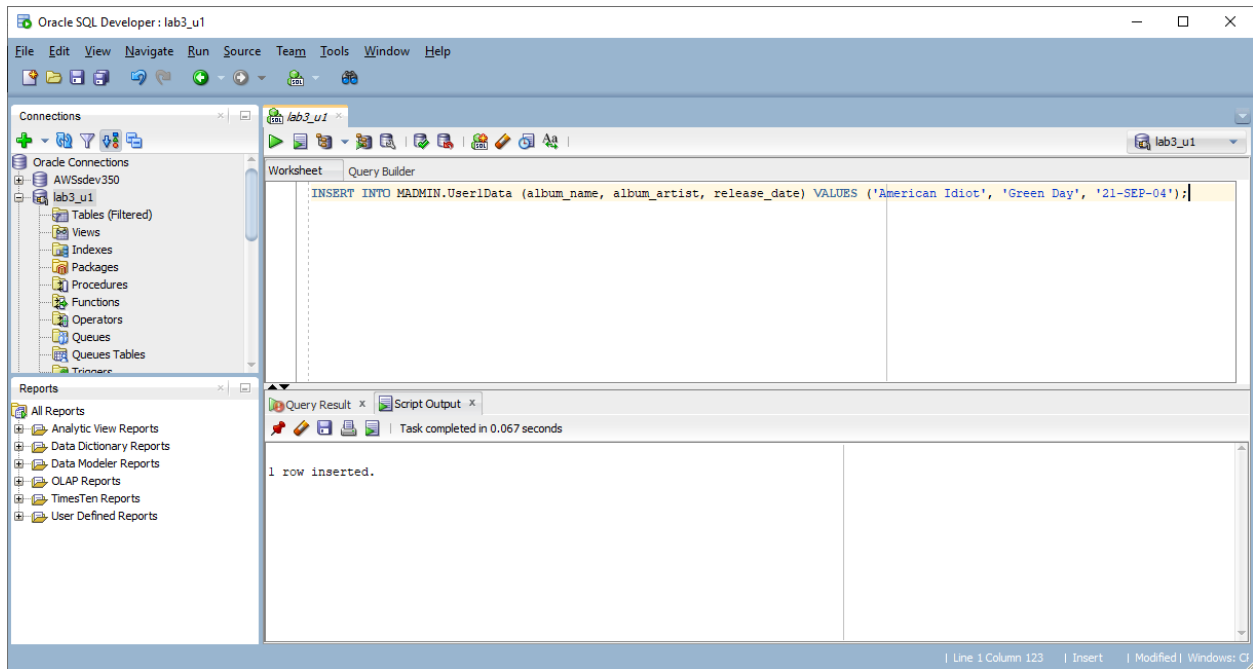
☐ Service name

Status: Success

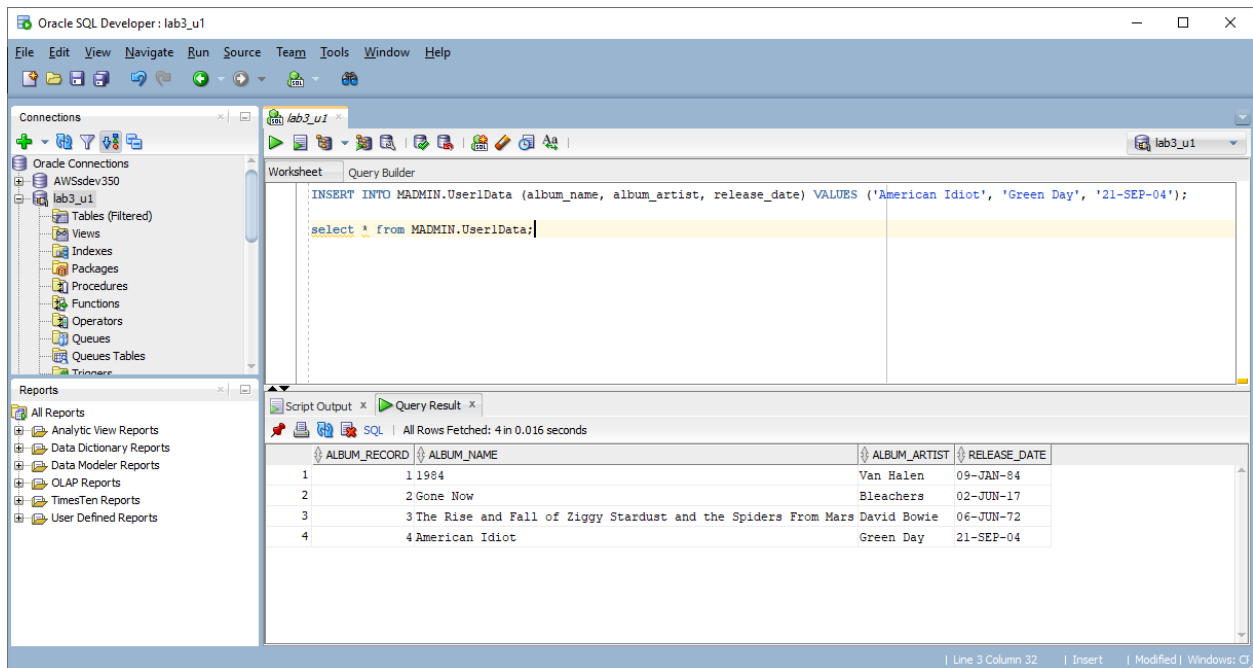
Test 3



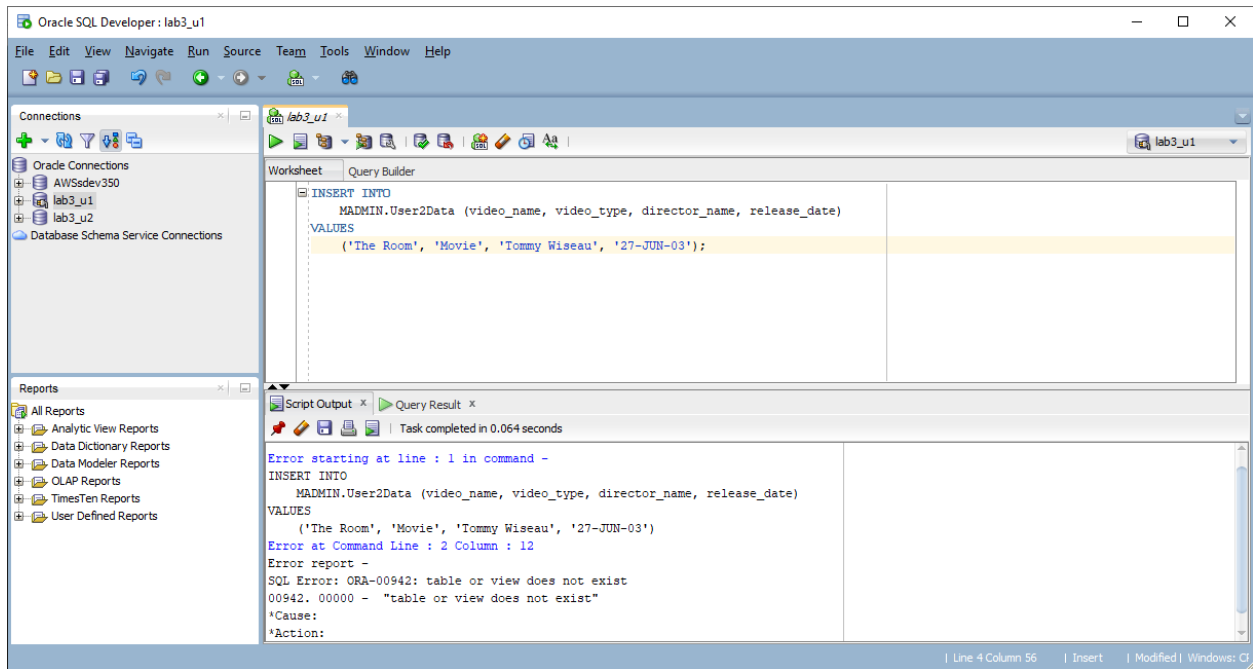
Test 4



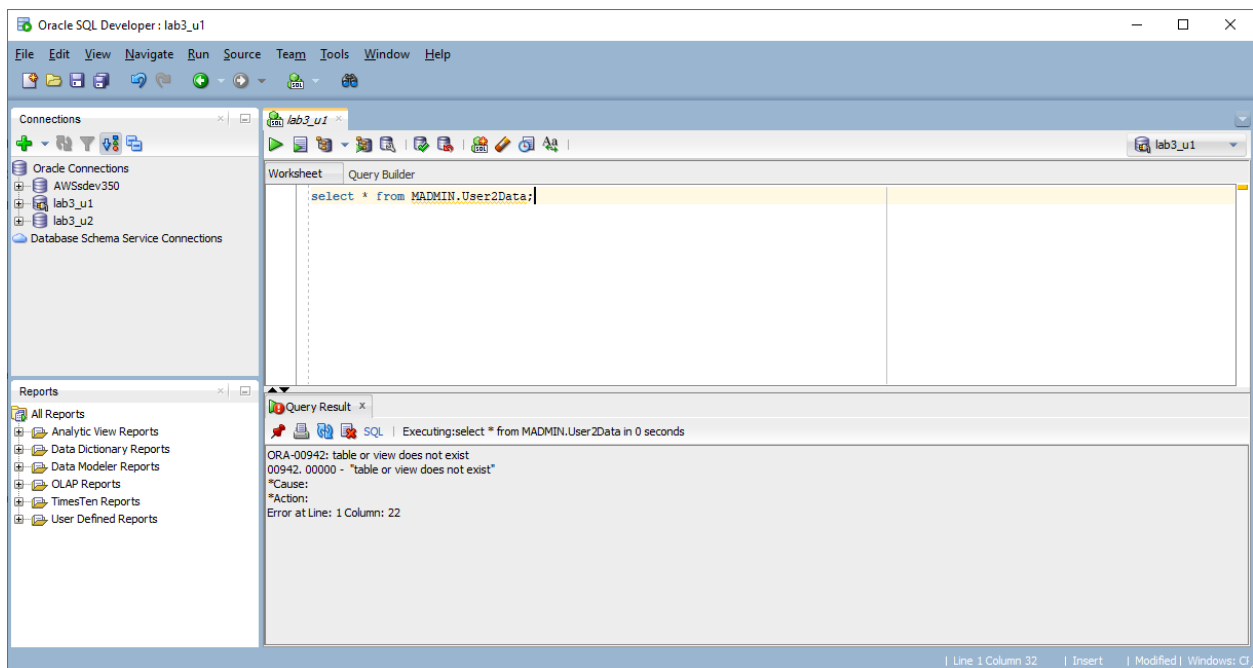
Test 5



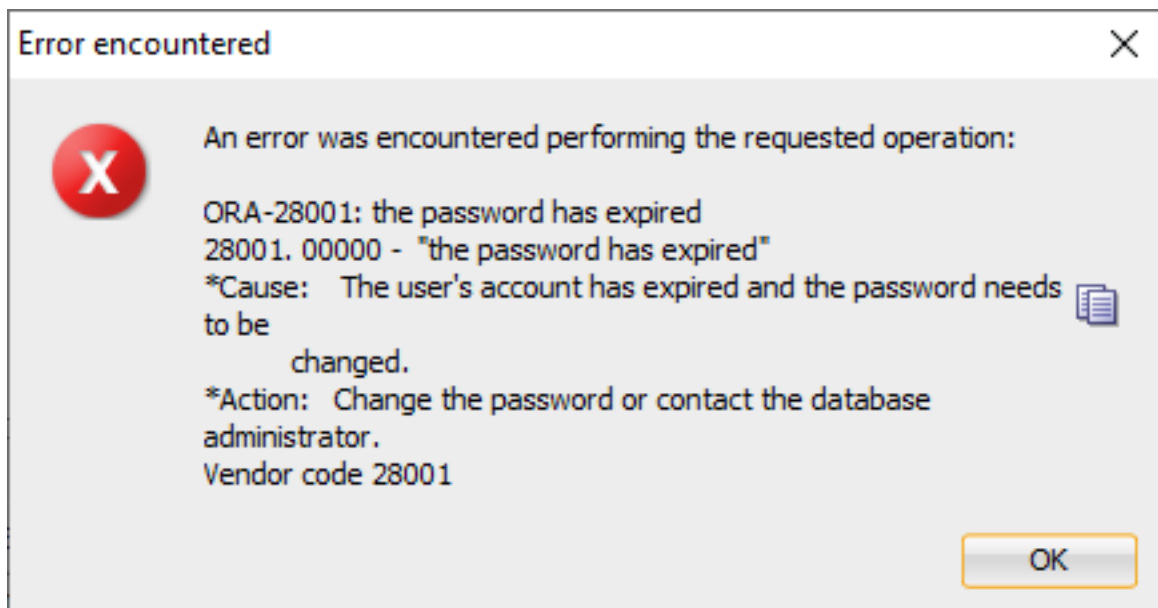
Test 6



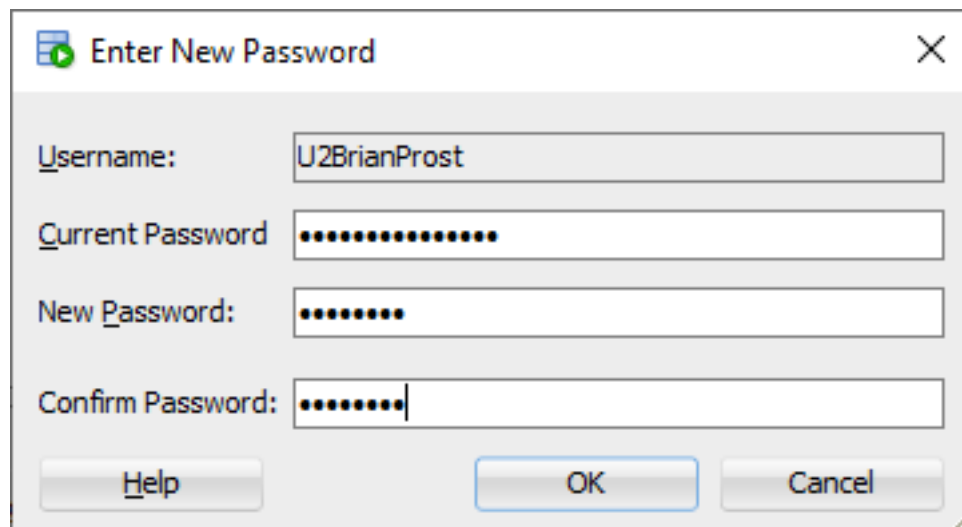
Test 7



Test 8



Test 9



New / Select Database Connection

Connection Name	Connection Details
AWSsdev350	madmin@//datab...
lab3_u1	U1BrianProst@//...
lab3_u2	U2BrianProst@//...

Name: lab3_u2

Database Type: Oracle

User Info: Proxy User

Authentication Type: Default

Username: U2BrianProst

Password:

Role: default

Save Password: ☒

Connection Type: Basic

Details: Advanced

Hostname: database-1.cmqbh7ogcw5e.us-east-1.rds.amazonaws.com

Port: 1521

☒ SID: ORCL

☐ Service name:

Status: Success

Help Save Clear Test Connect Cancel

Test 10

Oracle SQL Developer: lab3_u2~1

File Edit View Navigate Run Source Team Tools Window Help

Connections

- Oracle Connections
 - AWSsdev350
 - lab3_u1
 - lab3_u2
- Database Schema Service Connections

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

```
CREATE TABLE what_do_you_mean_is_this_thing_on (
  c1 NUMBER
);
```

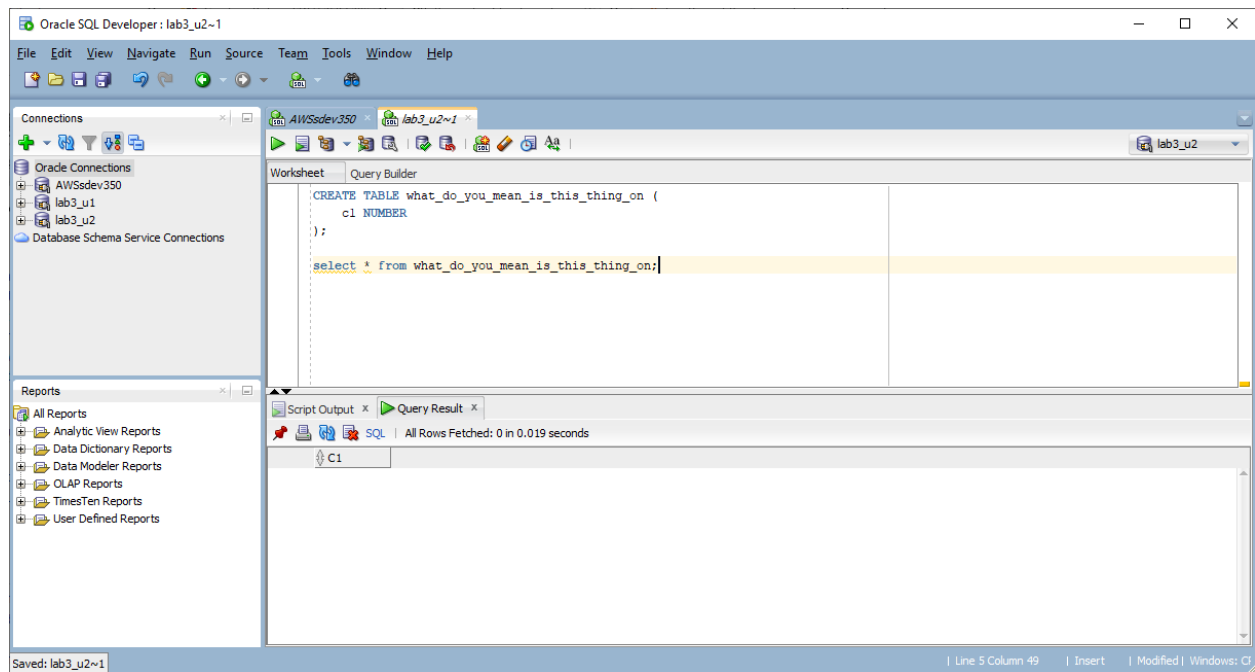
Script Output

Task completed in 0.045 seconds

Table WHAT_DO_YOU_MEAN_IS_THIS_THING_ON created.

Click on an identifier with the Control key down to perform "Go to Declaration"

Line 3 Column 3 | Insert | Modified | Windows: C



Next picture was *just* too big, so keep on 'scrollin...

Test 11

The screenshot shows the Oracle SQL Developer interface with the following details:

- Connections:** Includes Oracle Connections (AWSdev350, lab3_u1, lab3_u2) and Database Schema Service Connections.
- Worksheet:** Contains the SQL query: `SELECT * FROM MADMIN.user1data;`
- Query Result:** Displays 4 rows of data. The status bar indicates "All Rows Fetched: 4 in 0.016 seconds".

	ALBUM_RECORD	ALBUM_NAME	ALBUM_ARTIST	RELEASE_DATE
1	1	1984	Van Halen	09-JAN-84
2	2	Gone Now	Bleachers	02-JUN-17
3	3	The Rise and Fall of Ziggy Stardust and the Spiders From Mars	David Bowie	06-JUN-72
4	4	American Idiot	Green Day	21-SEP-04

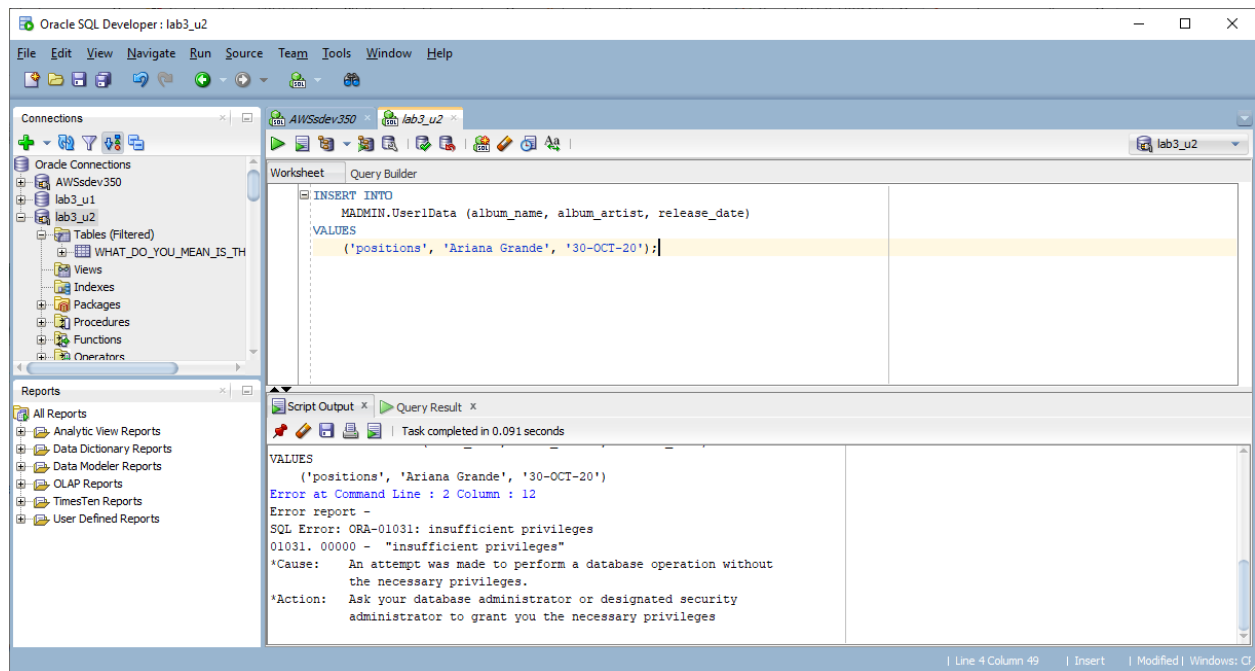
Test 12

The screenshot shows the Oracle SQL Developer interface with the following details:

- Connections:** Includes Oracle Connections (AWSdev350, lab3_u1, lab3_u2) and Database Schema Service Connections. The left pane shows a tree view of the database schema with "Tables (Filtered)" expanded, showing "WHAT_DO_YOU_MEAN_IS_TH".
- Worksheet:** Contains the SQL query: `select * from MADMIN.user2data;`
- Query Result:** Displays 3 rows of data. The status bar indicates "All Rows Fetched: 3 in 0.033 seconds".

	MOVIE_RECORD	VIDEO_NAME	VIDEO_TYPE	DIRECTOR_NAME	RELEASE_DATE
1	1	Free Churro - Bojack Horseman TV Show		Amy Winfrey	14-SEP-18
2	2	Tommy Boy	Movie	Peter Segal	31-MAR-95
3	3	Deadpool	Movie	Tim Miller	12-FEB-16

Test 13



Test 14

