



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

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**SEMESTER 1, SESSION 2023/2024**

**LAB 2 – DML 1 PART 2**

**SECD2523: DATABASE**

**SECTION 10**

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**MATRIC NUMBER: A23CS5008**

**LECTURER'S NAME: Mrs. ROZILAWATI BINTI DOLLAH**

## Section 6 Lesson 4 Exercise 2: Data Manipulation Language

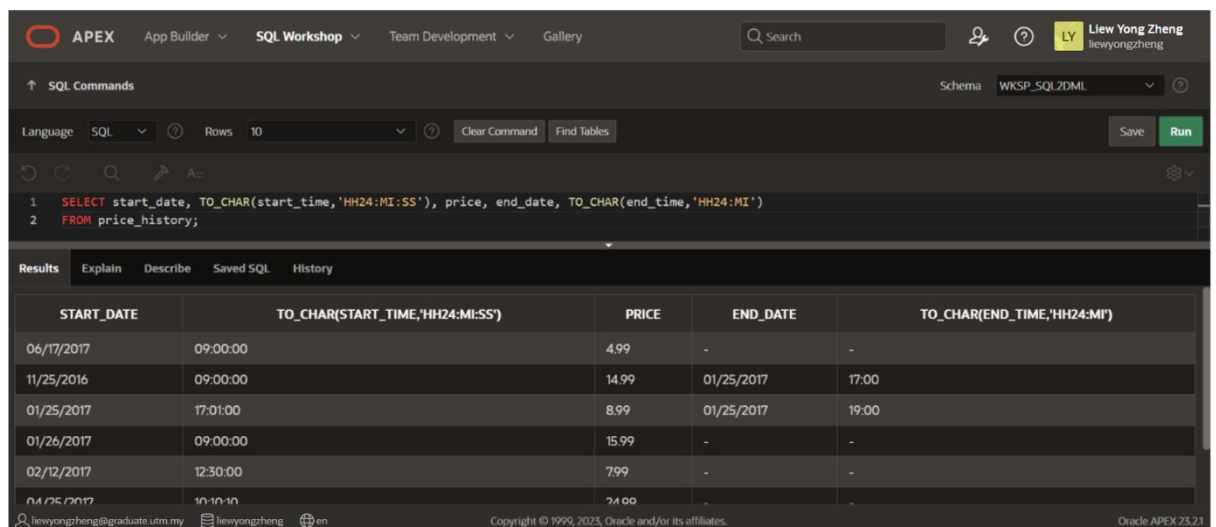
Use DML operations to manage database tables (S6L4 Objective 2)

In this exercise you will populate and work with the data that is stored in the database system.

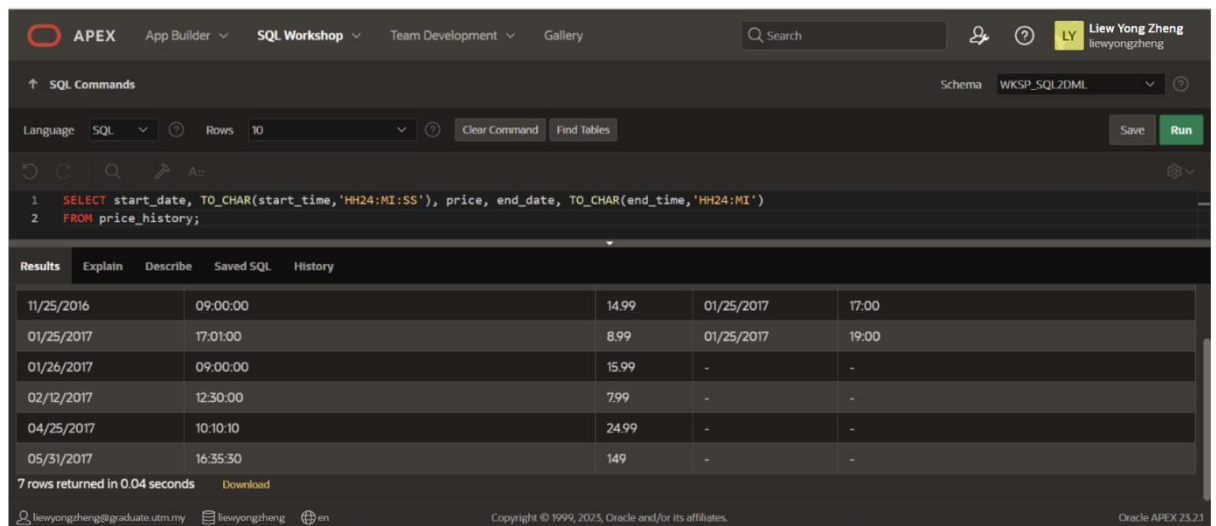
### Part 1- Updating rows to the system

1. Run the following query to view the content of the price\_history table:

```
SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price,  
end_date, TO_CHAR (end_time, 'HH24:MI') FROM price_history;
```



START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI')
06/17/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-



START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI')
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	149	-	-

7 rows returned in 0.04 seconds

2. Obl is going to update the price of the premium bat so you will need to write a query that will close off the current price by adding the system date values to the end\_date and end\_time fields. To run this query you will need to both match the item number and identify that the end date is null. This ensures that you are updating the latest price.

Ans: UPDATE price\_history

SET end\_date = CURRENT\_DATE, end\_time = CURRENT\_TIMESTAMP

WHERE itm\_number = 'tm01101048' AND end\_date IS NULL;

The screenshot shows the Oracle APEX SQL Workshop interface. The 'SQL Commands' tab is active, displaying the following SQL query:

```
1 UPDATE price_history
2 SET end_date = CURRENT_DATE, end_time = CURRENT_TIMESTAMP
3 WHERE itm_number = 'tm01101048' AND end_date IS NULL;
```

The 'Results' tab shows the execution outcome: '1 row(s) updated.' and '0.03 seconds'.

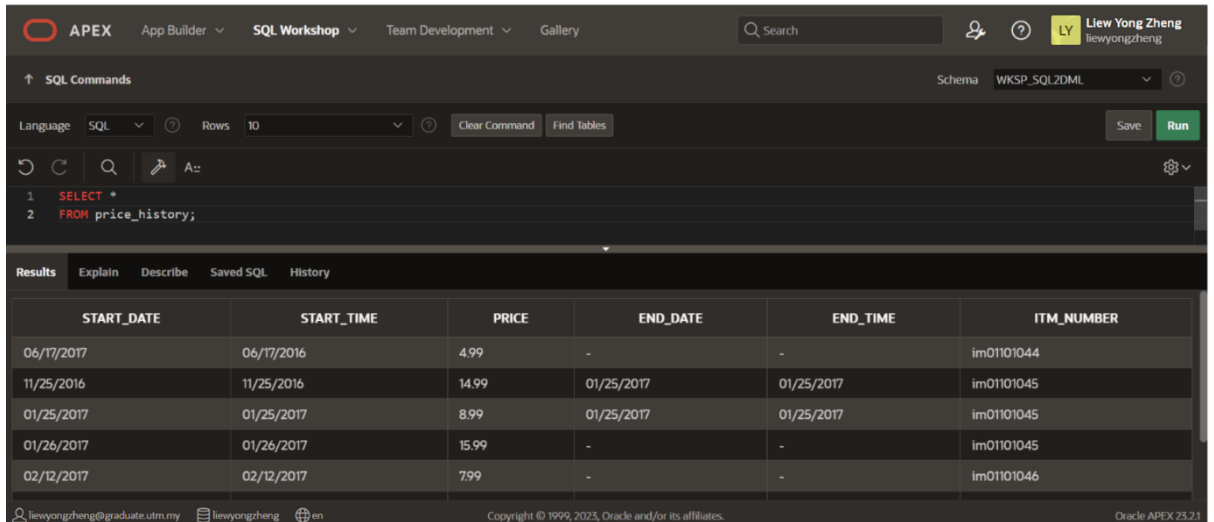
The screenshot shows the Oracle APEX Object Browser interface. The 'PRICE\_HISTORY' table is selected, and the 'Data' tab is active, displaying the following data:

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
06/17/2017	06/17/2016	4.99			tm01101044
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	tm01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	tm01101045
01/26/2017	01/26/2017	15.99			tm01101045
02/12/2017	02/12/2017	7.99			tm01101046
04/25/2017	04/25/2017	24.99			tm01101047
05/31/2017	05/31/2017	149	12/06/2023	12/06/2023	tm01101048

1 cells selected

3. Rerun the select statement on the price\_history table to ensure that the statement has been executed.

Ans: SELECT \*  
FROM price\_history;

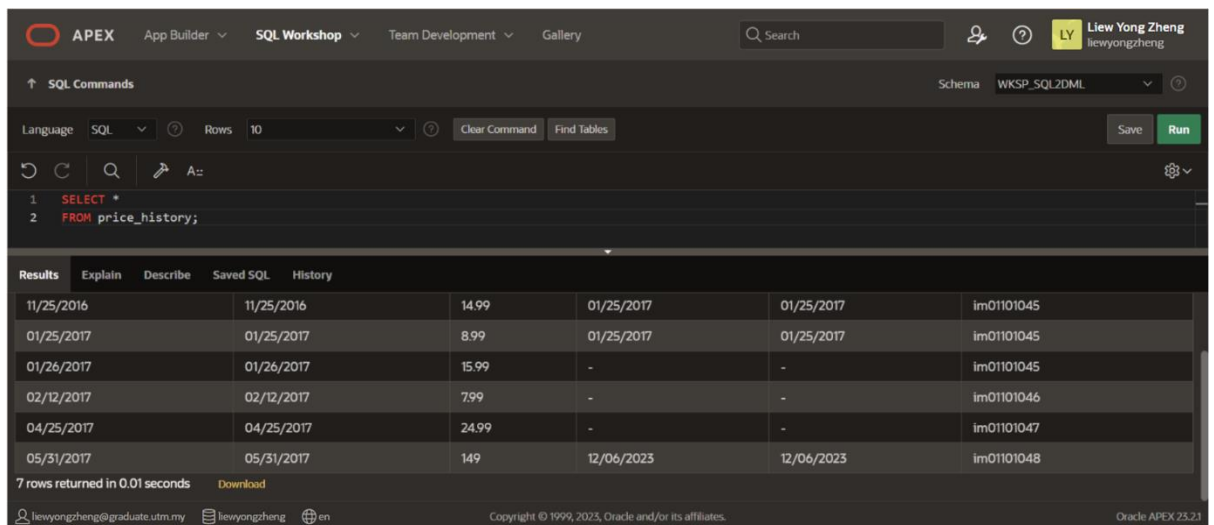


The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command entered is:

```
1 SELECT *  
2 FROM price_history;
```

The results are displayed in a table with the following columns: START\_DATE, START\_TIME, PRICE, END\_DATE, END\_TIME, and ITM\_NUMBER. The table contains 5 rows of data.

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
06/17/2017	06/17/2016	4.99	-	-	im01101044
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99	-	-	im01101045
02/12/2017	02/12/2017	7.99	-	-	im01101046



The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command entered is:

```
1 SELECT *  
2 FROM price_history;
```

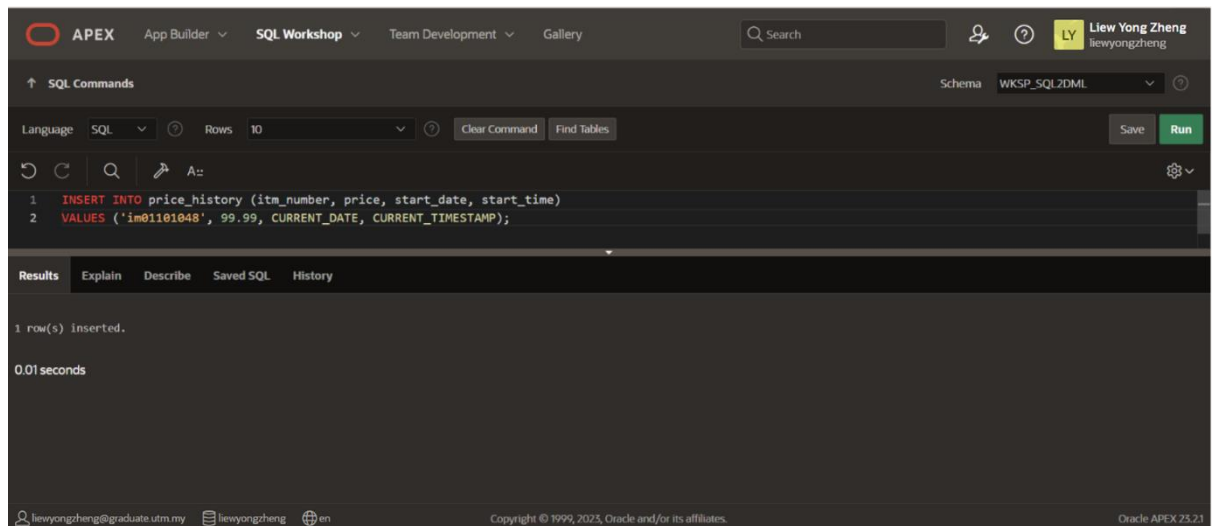
The results are displayed in a table with the following columns: START\_DATE, START\_TIME, PRICE, END\_DATE, END\_TIME, and ITM\_NUMBER. The table contains 7 rows of data.

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99	-	-	im01101045
02/12/2017	02/12/2017	7.99	-	-	im01101046
04/25/2017	04/25/2017	24.99	-	-	im01101047
05/31/2017	05/31/2017	14.99	12/06/2023	12/06/2023	im01101048

7 rows returned in 0.01 seconds

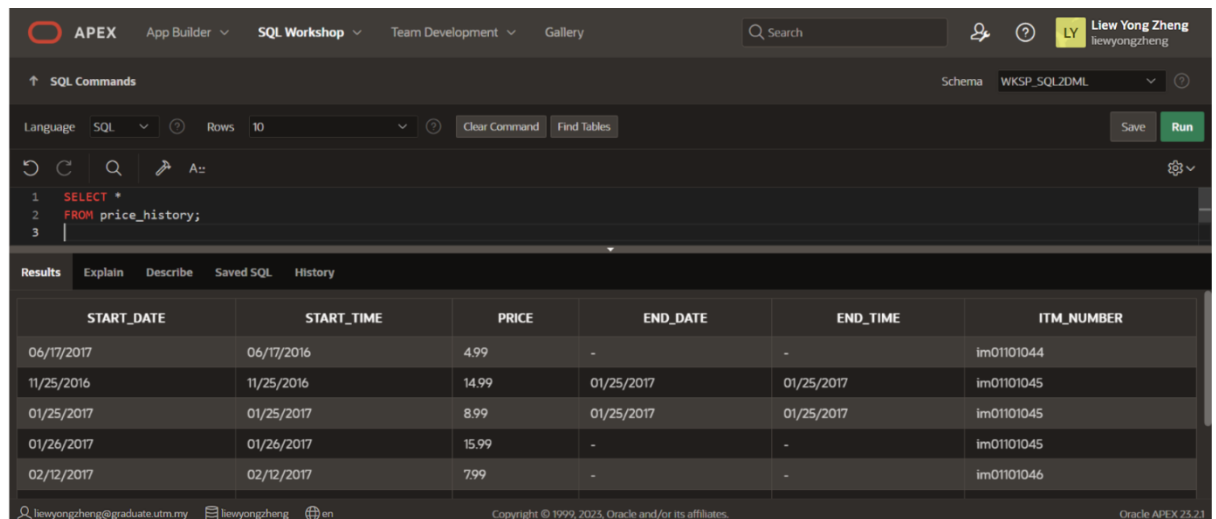
4. Insert a new row that will use the current date and time to set the new price of the premium bat to be 99.99.

Ans: INSERT INTO price\_history (itm\_number, price, start\_date, start\_time)  
VALUE ('im01101048', 99.99, CURRENT\_DATE, CURRENT\_TIMESTAMP);



5. Retrun the select statement on the price\_history table to ensure that the statement has been executed.

Ans: SELECT \*  
FROM price\_history;



APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

LY

Liew Yong Zheng

liewyongzheng

SQL Commands

Schema WKSP\_SQL2DML

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

SQL

1 SELECT \*

2 FROM price\_history;

3

Results

Explain

Describe

Saved SQL

History

01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99	-	-	im01101045
02/12/2017	02/12/2017	7.99	-	-	im01101046
04/25/2017	04/25/2017	24.99	-	-	im01101047
05/31/2017	05/31/2017	149	12/06/2023	12/06/2023	im01101048
12/06/2023	12/06/2023	99.99	-	-	im01101048

8 rows returned in 0.00 seconds

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Oracle APEX 23.21

APEX

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SQL Workshop

Team Development

Gallery

Search

LY

Liew Yong Zheng

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Object Browser

Schema WKSP\_SQL2DML

Type to filter...

+ v

Tables

CUSTOMERS

CUSTOMERS\_ADDRESSES

INVENTORY\_LIST

ITEMS

ORDERED\_ITEMS

ORDERS

PRICE\_HISTORY

SALES\_REPRESENTATIVES

SALES\_REP\_ADDRESSES

TEAMS

Views

Indexes

PRICE\_HISTORY

Columns

Data

Indexes

Constraints

Grants

Statistics

Triggers

Dependencies

DDL

Sample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

Download

Refresh

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
06/17/2017	06/17/2016	4.99			im01101044
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99			im01101045
02/12/2017	02/12/2017	7.99			im01101046
04/25/2017	04/25/2017	24.99			im01101047
05/31/2017	05/31/2017	149	12/06/2023	12/06/2023	im01101048

1 cells selected

1 - 8

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en

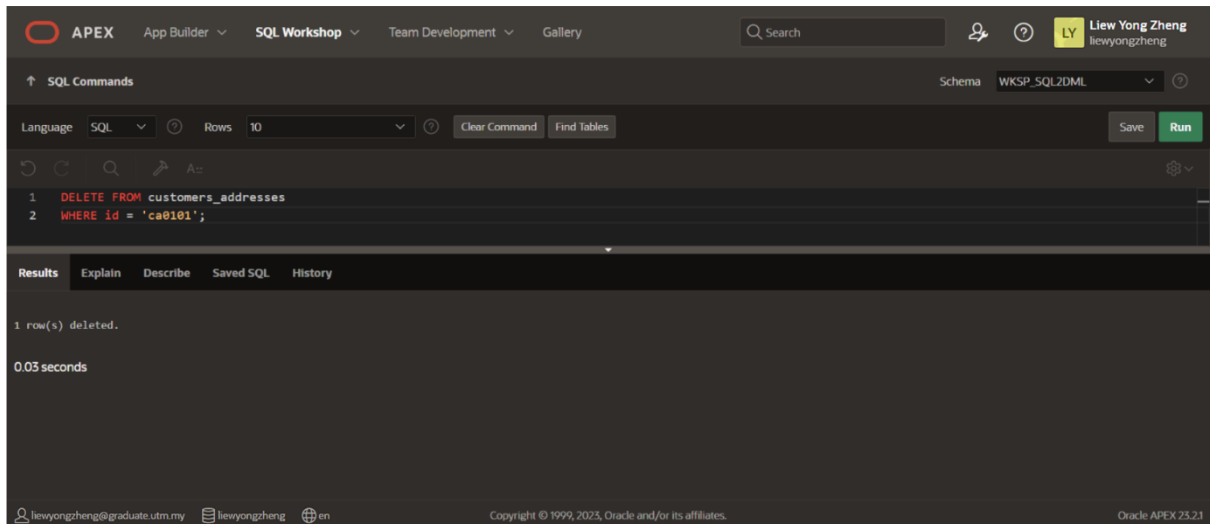
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Oracle APEX 23.21

## Part 2: Deleting rows from the system

1. Bob Thornberry has contacted Obl to ask that the 83 Barrhill Drive address be removed from the system as he can no longer receive parcels at this address. Write a SQL statement that will remove this address from the system.

Ans: DELETE FROM customers\_addresses  
WHERE id = 'ca0101';



The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the following code:

```
1 DELETE FROM customers_addresses
2 WHERE id = 'ca0101';
```

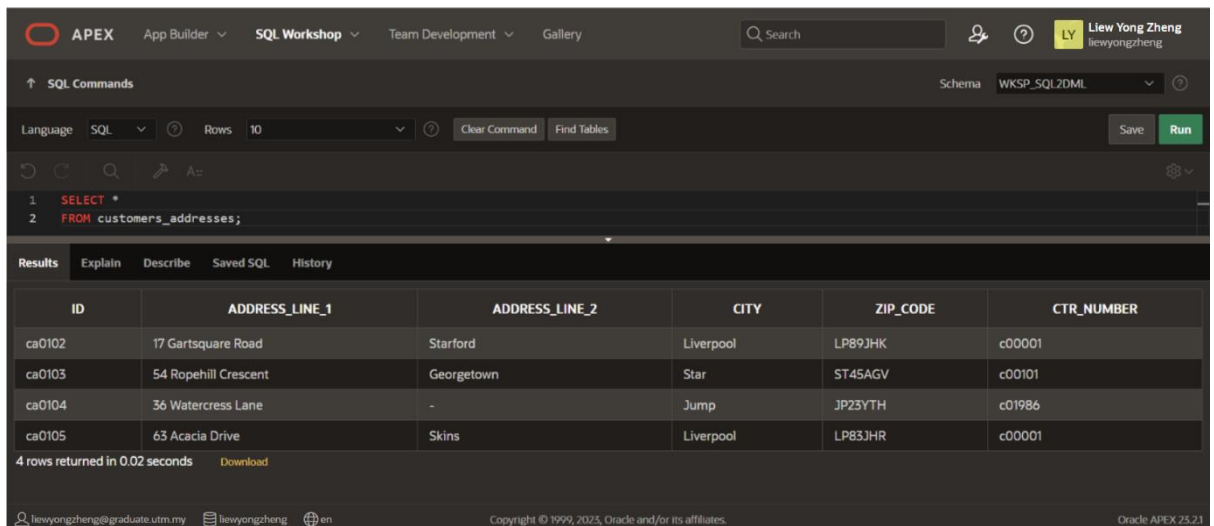
The Results pane shows the execution outcome:

```
1 row(s) deleted.
0.03 seconds
```

The interface includes a top navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Liew Yong Zheng' are also visible. The Schema dropdown is set to 'WKSP\_SQL2DML'.

2. Run a select statement on the customers\_addresses table to ensure that the statement has been executed.

Ans: SELECT \*  
FROM customers\_addresses;



The screenshot shows the APEX SQL Workshop interface. The SQL Commands pane contains the following code:

```
1 SELECT *
2 FROM customers_addresses;
```

The Results pane shows the execution outcome:

```
4 rows returned in 0.02 seconds
```

The resulting data is displayed in a table with the following columns: ID, ADDRESS\_LINE\_1, ADDRESS\_LINE\_2, CITY, ZIP\_CODE, and CTR\_NUMBER.

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
ca0102	17 Gartsquare Road	Starford	Liverpool	LP89JHK	c00001
ca0103	54 Ropehill Crescent	Georgetown	Star	ST45AGV	c00101
ca0104	36 Watercress Lane	-	Jump	JP23YTH	c01986
ca0105	63 Acacia Drive	Skins	Liverpool	LP83JHR	c00001

The interface includes a top navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Liew Yong Zheng' are also visible. The Schema dropdown is set to 'WKSP\_SQL2DML'.