



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
SESSION 2023/2024, SEMESTER 3
SECD2523 - DATABASE
SECTION 10

SQL LAB 2 - DML1 PART2

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Section 6 Lesson 4 Exercise 2: Data Manipulation Language

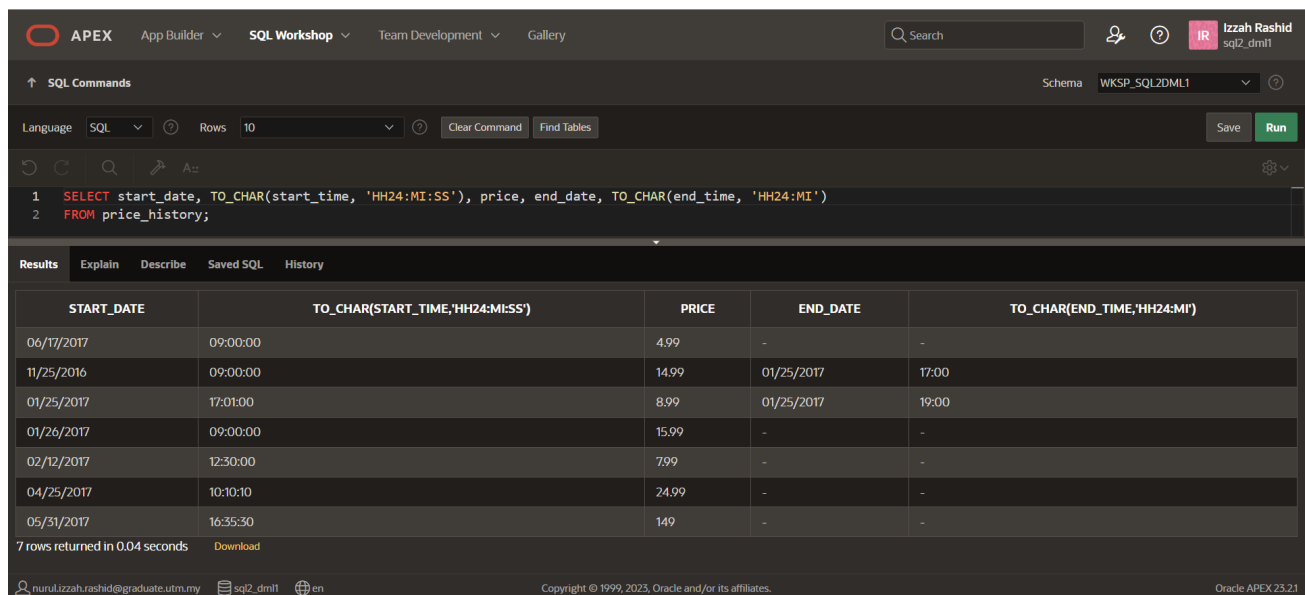
Use DML operations to manage database tables (S6L4 Objective 2)

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;
```

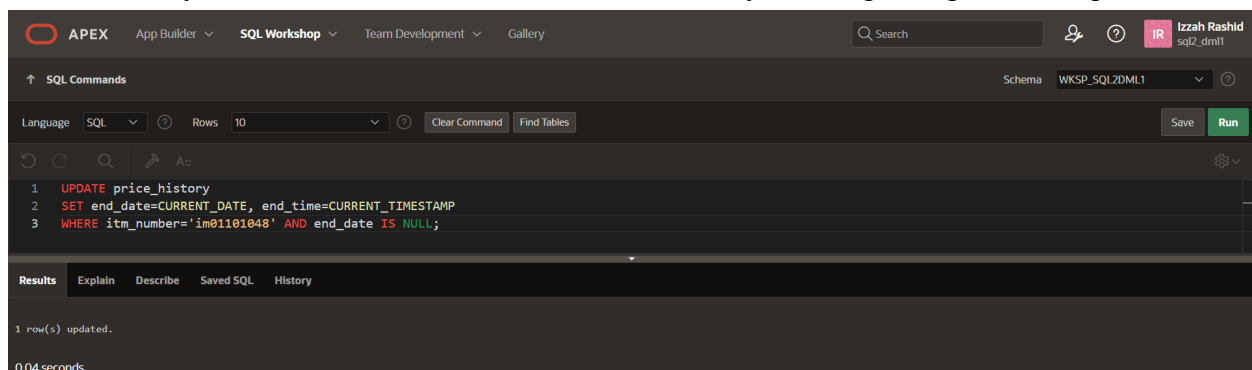


The screenshot shows the APEX SQL Workshop interface. The SQL command entered is: `SELECT start_date, TO_CHAR(start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR(end_time, 'HH24:MI') FROM price_history;`. The results are displayed in a table with 7 rows. The columns are: START_DATE, TO_CHAR(START_TIME, 'HH24:MI:SS'), PRICE, END_DATE, and TO_CHAR(END_TIME, 'HH24:MI').

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	-	-
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.



The screenshot shows the APEX SQL Workshop interface. The SQL command entered is: `UPDATE price_history SET end_date=CURRENT_DATE, end_time=CURRENT_TIMESTAMP WHERE itm_number='im01101048' AND end_date IS NULL;`. The results show: 1 row(s) updated. 0.04 seconds.

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	-	-
05/31/2017	16:35:30	149	-	-

1 row(s) updated.
0.04 seconds

APEX App Builder SQL Workshop Team Development Gallery

Search

Object Browser Schema WKSP_SQL2DML1

Type to filter...

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	12/30/2023	12/30/2023	im01101048

- Rerun the select statement on the price_history table to ensure that the statement has been executed.

APEX App Builder SQL Workshop Team Development Gallery

Search

SQL Commands Schema WKSP_SQL2DML1

Language SQL Rows 10 Clear Command Find Tables Save Run

```

1 SELECT *
2 FROM price_history;

```

Results Explain Describe Saved SQL History

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	12/30/2023	12/30/2023	im01101048

7 rows returned in 0.01 seconds Download

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- 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.

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Search

SQL Commands Schema WKSP_SQL2DML1

Language SQL Rows 10 Clear Command Find Tables Save Run

```

1 INSERT INTO price_history(itm_number, price, start_date, start_time)
2 VALUES ('im01101048', 99.99, CURRENT_DATE, CURRENT_TIMESTAMP);

```

Results Explain Describe Saved SQL History

1 row(s) inserted.

0.00 seconds

5. Rerun the select statement on the price_history table to ensure that the statement has been executed.

APEX App Builder SQL Workshop Team Development Gallery

Search

Schema WKSP_SQL2DML1

Language SQL Rows 10 Clear Command Find Tables Save Run

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

Results Explain Describe Saved SQL History

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	12/30/2023	12/30/2023	im01101048
12/30/2023	12/30/2023	99.99	-	-	im01101048

8 rows returned in 0.01 seconds Download

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APEX App Builder SQL Workshop Team Development Gallery

Search

Schema WKSP_SQL2DML1

Object Browser

Type to filter...

PRICE_HISTORY

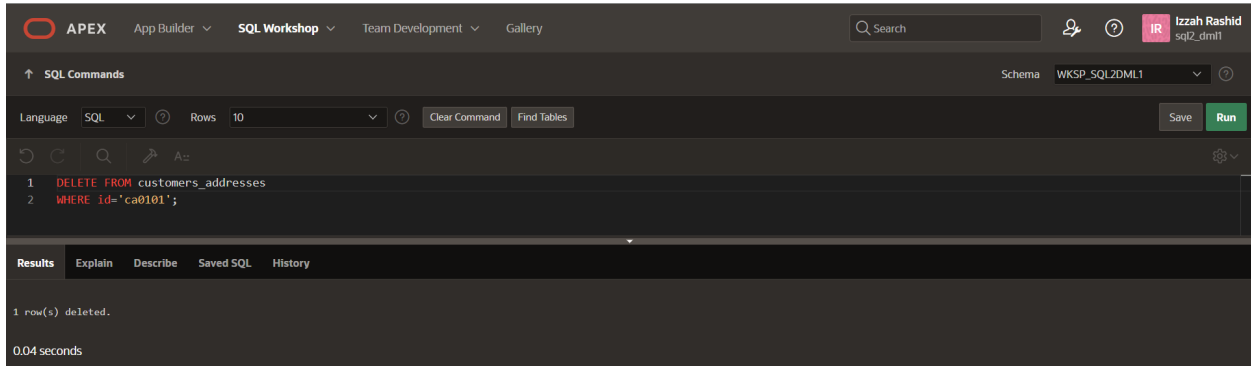
Columns Data Indexes Constraints Grants Statistics Triggers Dependencies DDL Sample Queries

+ 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	12/30/2023	12/30/2023	im01101048
12/30/2023	12/30/2023	99.99			im01101048

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.

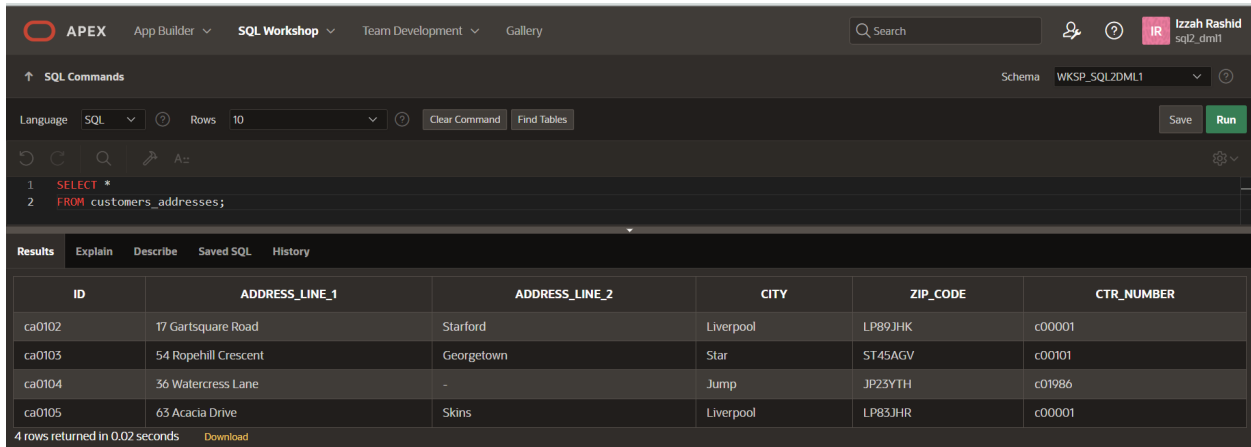


The screenshot shows the APEX SQL Workshop interface. The SQL command entered is:

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

The results pane shows: 1 row(s) deleted. 0.04 seconds.

2. Run a select statement on the customers_addresses table to ensure that the statement has been executed.



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

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

The results pane shows a table with 4 rows returned in 0.02 seconds. The table structure and data are as follows:

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