



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

**SECD2523
DATABASE**

SECTION 10

SQL LAB 2 - DML 1 PART 2

PREPARED FOR:

MADAM ROZILAWATI BINTI DOLLAH @ MD ZAIN

PREPARED BY:

ANN HAZEL SIMON	A22EC0140
------------------------	------------------

Section 6 Lesson 4 Exercise 2: Data Manipulation Language

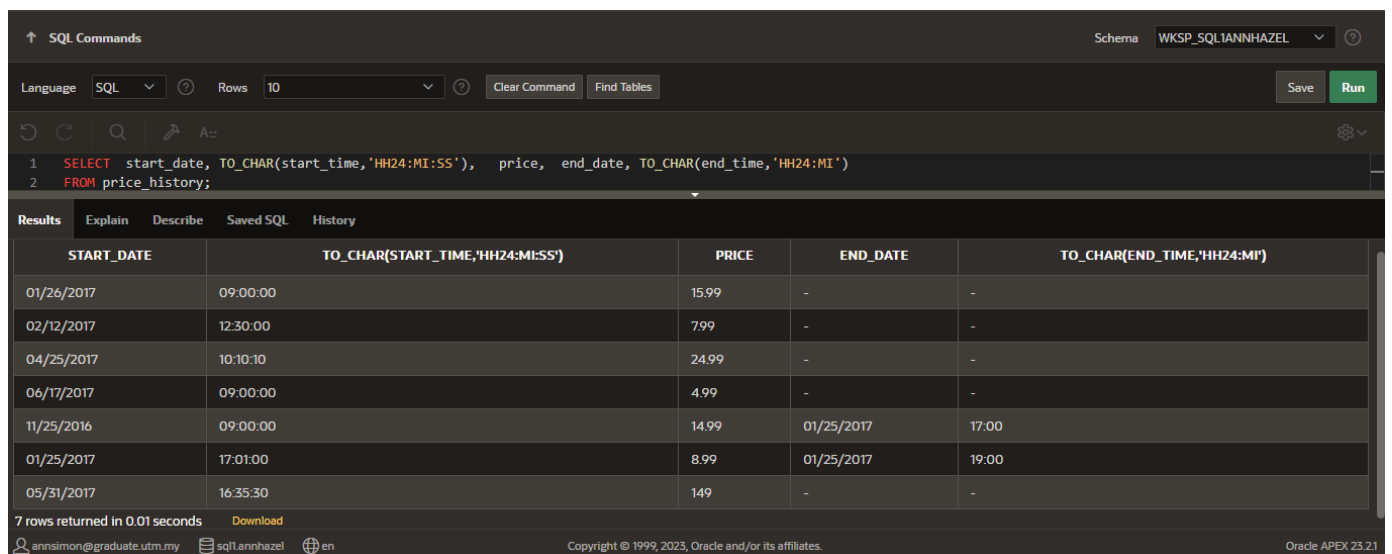
Use DML operations to manage database tables (S6L4 Objective 2)

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 an SQL IDE interface. At the top, the 'SQL Commands' tab is active, displaying the following query:

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

Below the query editor, the 'Results' tab is active, showing a table with 7 rows. The table has the following columns: 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')
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
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
05/31/2017	16:35:30	149	-	-

At the bottom of the results pane, it states '7 rows returned in 0.01 seconds' and provides a 'Download' button. The footer of the IDE shows the user 'annsimon@graduate.utm.my', the database 'sql1.annhazel', and the version 'Oracle APEX 23.21'.

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.

- **UPDATE price_history**
SET end_date = CURRENT_DATE, end_time = CURRENT_TIMESTAMP
WHERE itm_number = 'im01101048' AND end_date IS NULL;

The screenshot shows the 'SQL Commands' window in Oracle APEX. The query entered is:

```
1 UPDATE price_history
2 SET end_date = CURRENT_DATE, end_time = CURRENT_TIMESTAMP
3 WHERE itm_number = 'im01101048' AND end_date IS NULL;
```

The results pane shows: 1 row(s) updated. 0.01 seconds.

Footer: annsimon@graduate.utm.my, sql1.annhazel, Copyright © 1999, 2023, Oracle and/or its affiliates. Oracle APEX 23.21

The screenshot shows the 'Object Browser' window in Oracle APEX. The 'PRICE_HISTORY' table is selected, and the 'Data' tab is active. The table has 7 columns: START_DATE, START_TIME, PRICE, END_DATE, END_TIME, and ITM_NUMBER. The data is as follows:

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
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
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
05/31/2017	05/31/2017	149	12/12/2023	12/12/2023	im01101048

1 cells selected. 1 - 7

Footer: annsimon@graduate.utm.my, sql1.annhazel, Copyright © 1999, 2023, Oracle and/or its affiliates. Oracle APEX 23.21

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

- **SELECT ***
FROM price_history;

SQL Commands

SchemaWKSP_SQLIANNHAZEL

LanguageSQLRows10Clear CommandFind TablesSaveRun

1SELECT *

2FROM price_history;

Results

ExplainDescribeSaved SQLHistory

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
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
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
05/31/2017	05/31/2017	149	12/12/2023	12/12/2023	im01101048

7 rows returned in 0.01 secondsDownload

annsimon@graduate.utm.my

sql.lannhazel

en

Copyright © 1999, 2023, Oracle and/or its affiliates.

Oracle APEX 23.21

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.

```
- INSERT INTO price_history (itm_number, price, start_date, start_time)
  VALUE ('im01101048', 99.99, CURRENT_DATE,
        CURRENT_TIMESTAMP);
```

The screenshot shows the Oracle APEX SQL Commands interface. At the top, the 'Schema' is set to 'WKSP_SQL1ANNHAZEL'. The 'Language' is 'SQL' and 'Rows' are set to 10. The SQL command is entered in the main text area:

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

Below the command area, the 'Results' tab is selected, showing the execution output:

```
1 row(s) inserted.

0.01 seconds
```

The footer of the interface includes the user 'annsimon@graduate.utm.my', the database 'sql1.annhazel', the language 'en', the copyright notice 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.21'.

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

- **SELECT ***
FROM price_history;

SQL Commands

Schema: WKSP_SQL1ANNHAZEL

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
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
12/12/2023	12/12/2023	99.99	-	-	im01101048
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
05/31/2017	05/31/2017	149	12/12/2023	12/12/2023	im01101048

8 rows returned in 0.00 seconds Download

annsimon@graduate.utm.my sql1.annhazel en Copyright © 1999, 2023, Oracle and/or its affiliates. Oracle APEX 23.2.1

Object Browser

Schema: WKSP_SQL1ANNHAZEL

Search: Type to filter... Tables

- CUSTOMERS
- CUSTOMERS_ADDRESSES
- INVENTORY_LIST
- ITEMS
- ORDERED_ITEMS
- ORDERS
- PRICE_HISTORY**
- SALES_REPRESENTATIVES
- SALES_REP_ADDRESSES
- TEAMS

Views Indexes Sequences

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
	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
	12/12/2023	12/12/2023	99.99			im01101048
	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
	05/31/2017	05/31/2017	149	12/12/2023	12/12/2023	im01101048

1 cells selected 1 - 8

annsimon@graduate.utm.my sql1.annhazel en Copyright © 1999, 2023, Oracle and/or its affiliates. Oracle APEX 23.2.1

Part 2: Deleting Rows from the System

1. Bob Thornberry has contacted obl to ask that the 83 Barhill Drive address be removed from the system as he can longer receive parcels at this address. Write a SQL statement that will remove this address from the system.

- **DELETE FROM customers_addresses
WHERE id = 'ca0101';**

The screenshot displays the Oracle APEX SQL Commands interface. At the top, the 'SQL Commands' tab is active, showing the schema 'WKSP_SQL1ANNHAZEL'. The 'Language' is set to 'SQL' and 'Rows' is set to '10'. The SQL command entered is:

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

The 'Run' button is highlighted in green. Below the command editor, the 'Results' tab is selected, showing the output: '1 row(s) deleted.' and '0.00 seconds'. The footer of the interface includes the user 'annsimon@graduate.utm.my', the schema 'sql1.annhazel', the language 'en', the copyright notice 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.21'.

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

- **SELECT ***
FROM customers_addresses;

↑ SQL Commands

Schema WKSP_SQL1ANNHAZEL

Language SQL Rows 10 Clear Command Find Tables Save Run

1 SELECT *

2 FROM customers_addresses;

Results

Explain Describe Saved SQL History

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

4 rows returned in 0.01 seconds Download

annsimon@graduate.utm.my

sql1.annhazel

en

Copyright © 1999, 2023, Oracle and/or its affiliates.

Oracle APEX 23.21