

Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

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. At the top, there's a navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Khalisah Ridzuan' are also visible. Below the navigation bar, the 'SQL Commands' tab is active, showing a query editor with the following SQL code:

```
1 SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR (end_time, 'HH24:MI')
2 FROM price_history;
3
```

The 'Results' tab is selected, displaying 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')
06/11/2017	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	-	-

At the bottom, it indicates '7 rows returned in 0.02 seconds' and provides a 'Download' link.

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 top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Khalisah Ridzuan' are on the right. The 'SQL Commands' section is active, showing a schema of 'WKSP_SQL2DML1PART1'. The SQL command editor contains the following code:

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

Below the editor, the 'Results' tab shows '1 row(s) updated.' and '0.01 seconds'.

The screenshot shows the APEX SQL Workshop interface with the 'Object Browser' on the left and the 'PRICE_HISTORY' table selected. The table data is displayed in a grid view with columns: START_DATE, START_TIME, PRICE, END_DATE, END_TIME, and ITM_NUMBER. The data shows a price history for item 'im01101048' with a price of 149 and end date/time of 11/10/2023.

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	11/10/2023	11/10/2023	im01101048

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

The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Khalisah Ridzuan' are on the right. The 'SQL Commands' section shows a schema dropdown set to 'WKSP_SQL2DML1PART1'. Below this, the 'Language' is set to 'SQL' and 'Rows' to '10'. The SQL command area contains the following code:

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

The 'Results' tab is active, displaying a table with 7 rows. The table has the following columns: START_DATE, START_TIME, PRICE, END_DATE, END_TIME, and ITM_NUMBER.

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	14.99	11/10/2023	11/10/2023	im01101048

7 rows returned in 0.01 seconds

- 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.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar is the same as the previous screenshot. The 'SQL Commands' section shows the schema dropdown set to 'WKSP_SQL2DML1PART1'. The 'Language' is set to 'SQL' and 'Rows' to '10'. The SQL command area contains the following code:

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

The 'Results' tab is active, displaying the message: '1 row(s) inserted.' and '0.01 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

KR

Khalisah Ridzuan

sql2_dml1_part1

SQL Commands

Schema WKSP_SQL2DML1PART1

Language SQL

Rows 10

Clear Command

Find Tables

Save

Run

1 SELECT *

2 FROM price_history;

Results

Explain

Describe

Saved SQL

History

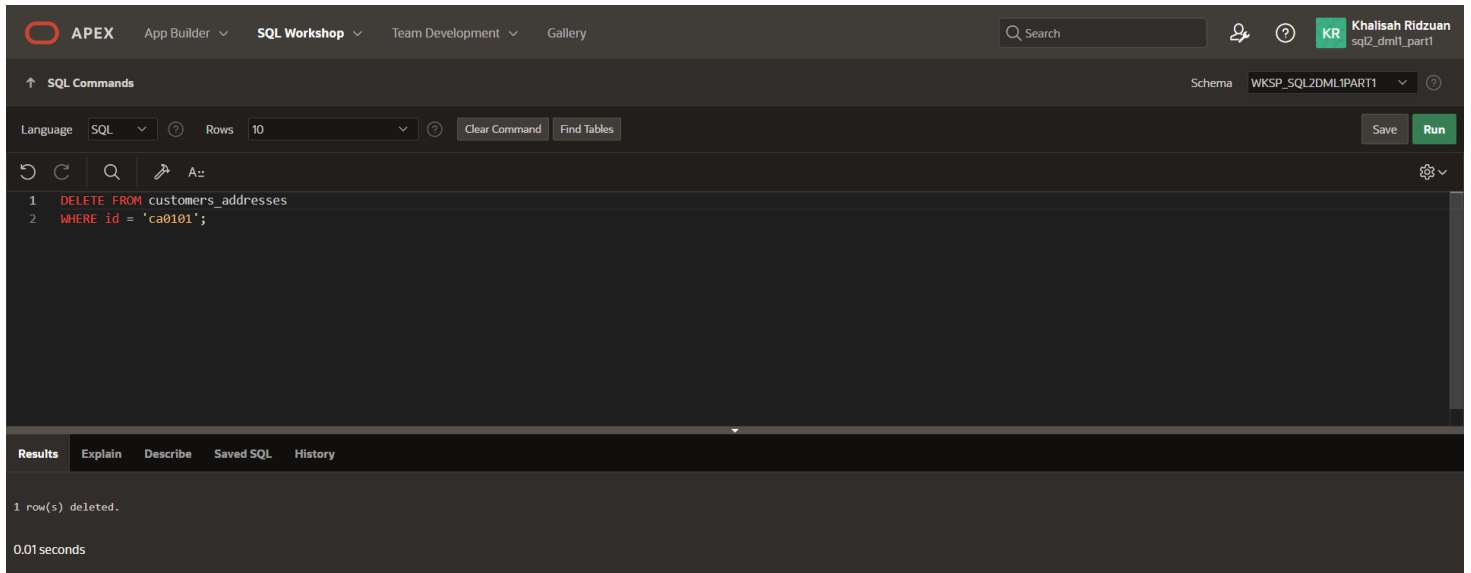
START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
11/10/2023	11/10/2023	99.99	-	-	im01101048
06/17/2017	06/17/2016	4.99	-	-	im01101044
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99	-	-	im01101045
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	11/10/2023	11/10/2023	im01101048

8 rows returned in 0.00 seconds

Download

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.

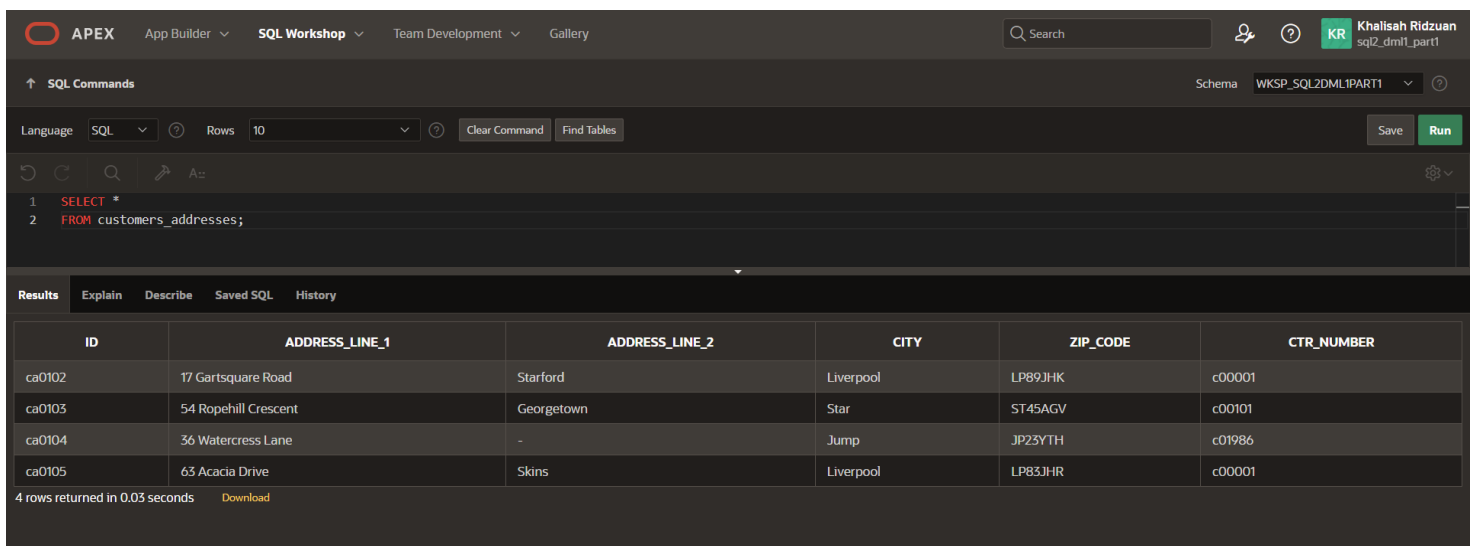


The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Khalisah Ridzuan' are on the right. The 'SQL Commands' section is active, showing a schema of 'WKSP_SQL2DML1PART1'. The command area contains the following SQL statement:

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

The 'Results' tab is selected, displaying the message '1 row(s) deleted.' and a duration of '0.01 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 with the same top navigation bar. The 'SQL Commands' section shows the following SQL statement:

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

The 'Results' tab is selected, displaying a table with 4 rows. The table has 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

At the bottom, it states '4 rows returned in 0.03 seconds' with a 'Download' link.

