



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

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

SQL LAB 3 - DML2 PART2

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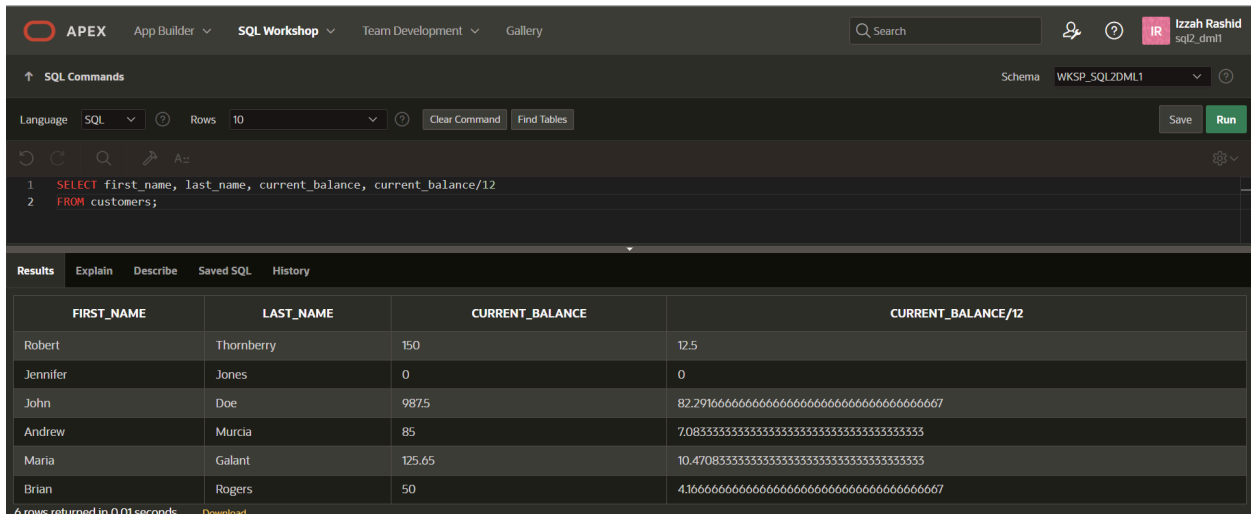
Section 6 Lesson 6 Exercise 2: Retrieving Data Using SELECT

Write and Execute SELECT statements (S6L6 Objective 2)

In this exercise you will retrieve data that is stored in the database system by using a SELECT statement.

Part 1: Using Arithmetic Operators

1. Every customer has been told they can pay off their current balance over a 12 month period. Display the customer's first name, last name, current balance and monthly payment.



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

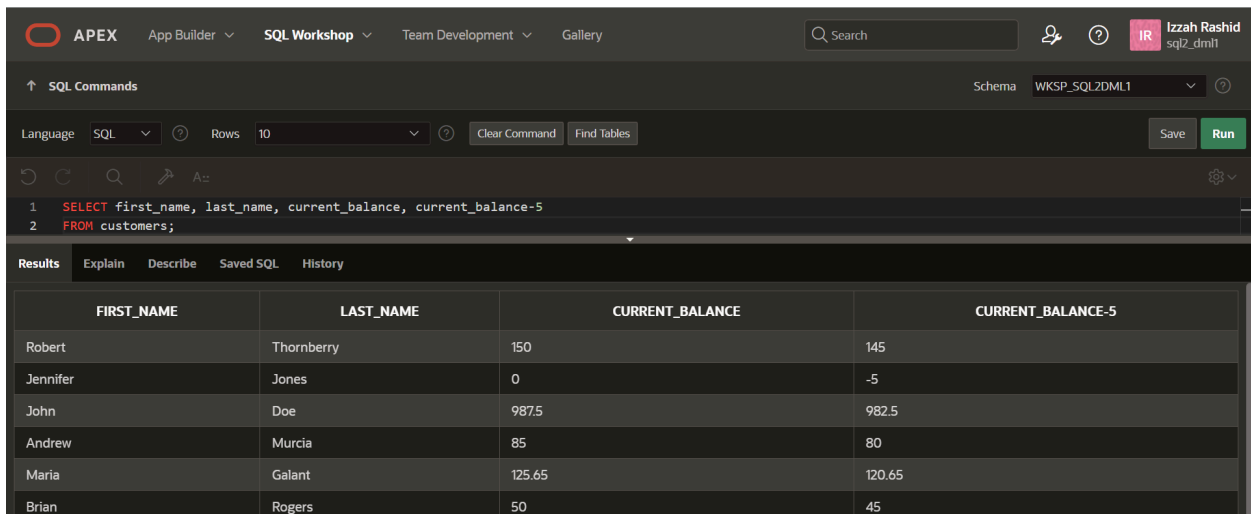
```
1 SELECT first_name, last_name, current_balance, current_balance/12
2 FROM customers;
```

The Results pane displays the following table:

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	CURRENT_BALANCE/12
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.291666666666666666666666666667
Andrew	Murcia	85	7.08333333333333333333333333333333
Maria	Galant	125.65	10.47083333333333333333333333333333
Brian	Rogers	50	4.16666666666666666666666666666667

6 rows returned in 0.01 seconds

2. Obl is considering giving a gift card to all its customers of 5.00 that can be used to reduce their current balance. Write a query that will show the customers first name, last name, customer number, current balance and the value of their balance minus the gift value.



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

```
1 SELECT first_name, last_name, current_balance, current_balance-5
2 FROM customers;
```

The Results pane displays the following table:

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	CURRENT_BALANCE-5
Robert	Thornberry	150	145
Jennifer	Jones	0	-5
John	Doe	987.5	982.5
Andrew	Murcia	85	80
Maria	Galant	125.65	120.65
Brian	Rogers	50	45

- What would be the problem with implementing this scheme?
= The new current balance will be a negative value.

Part 2 : Using Column Aliases

- You previously wrote a query that displayed the customer's first name, last name, current balance and monthly payment. Rewrite the query to use First Name, Last Name, Balance and Monthly Repayments as the column aliases. The aliases are to be shown exactly as described (case sensitive).

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

```
1 SELECT first_name AS "First Name", last_name AS "Last Name", current_balance AS "Balance", current_balance/12 AS "Monthly Repayments"
2 FROM customers;
```

The results are displayed in a table with the following data:

First Name	Last Name	Balance	Monthly Repayments
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.291666666666666666666666666667
Andrew	Murcia	85	7.08333333333333333333333333333333
Maria	Galant	125.65	10.47083333333333333333333333333333
Brian	Rogers	50	4.16666666666666666666666666666667

6 rows returned in 0.03 seconds

Part 3: Using Literal Character Strings

- Write a query that will display the team information in the following format:
The Rockets team has 25 players and receives a discount of 10 percent.
Use Team Information as the column alias.

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

```
1 SELECT 'The '||name||' team has '||number_of_players||' players and receives a discount of '||discount||' percent. '
2 AS "Team Information"
3 FROM teams;
```

The results are displayed in a table with the following data:

Team Information
The Rockets team has 25 players and receives a discount of 10 percent.
The Celtics team has 42 players and receives a discount of 20 percent.
The Rovers team has 8 players and receives a discount of percent.
The Jets team has 10 players and receives a discount of 5 percent.

4 rows returned in 0.03 seconds

2. Why does the last team not show a discount?
= Their team has a NULL value for the discount column.