



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

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

SQL LAB 3 - DML2 PART3

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Section 6 Lesson 7 Exercise 1: Restricting Data Using WHERE

Limit rows using WHERE (S6L7 Objective 1)

In this exercise you will refine the data that is returned in your query by adding a WHERE clause to your SELECT statement.

Part 1: Using the WHERE Clause.

1. Using the unique customer number in the where clause displays all columns for Maria Galant.

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

```
1 SELECT*
2 FROM customers
3 WHERE ctr_number='c01986';
```

The Results tab shows the output of the query, which is a single row for customer c01986. The results are displayed in a table with the following columns: CTR_NUMBER, EMAIL, FIRST_NAME, LAST_NAME, PHONE_NUMBER, CURRENT_BALANCE, SRE_ID, TEM_ID, and LOYALTY_CARD_NUMBER.

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-

1 rows returned in 0.00 seconds [Download](#)

2. Display the first name, last name and customer number for all customers who have a current balance of greater than 100. Use an appropriate alias for your column headings.

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

```
1 SELECT first_name, last_name, current_balance, ctr_number
2 FROM customers
3 WHERE current_balance>100;
```

The Results tab shows the output of the query, which is three rows of customer data. The results are displayed in a table with the following columns: FIRST_NAME, LAST_NAME, CURRENT_BALANCE, and CTR_NUMBER.

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	CTR_NUMBER
Robert	Thornberry	150	c00001
John	Doe	9875	c00101
Maria	Galant	125.65	c01986

3 rows returned in 0.03 seconds [Download](#)

- Display the order id, date and time of all orders that were placed before the 28th of May 2019. Use an appropriate alias for your column headings.

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 'Izzah Rashid' are on the right. The 'SQL Commands' tab is active, showing a query in the editor:

```
1 SELECT id AS "Order ID", odr_date AS "Order Date", odr_time AS "Order Time"
2 FROM orders
3 WHERE odr_date < TO_DATE('28-05-2019', 'DD-MM-YYYY');
```

The 'Results' tab is selected, displaying a table with 5 rows. The status bar indicates '5 rows returned in 0.03 seconds'.

Order ID	Order Date	Order Time
or0101250	04/17/2017	04/17/2017
or0101350	05/24/2017	05/24/2017
or0101425	05/28/2017	05/28/2017
or0101681	06/02/2017	06/02/2017
or0101750	06/18/2017	06/18/2017

Part 2: Range Conditions: BETWEEN Operator

- Display the inventory id, cost and number of units using appropriate aliases for all items that have a trade cost of between 3.00 and 15.00.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar is the same as the previous screenshot. The 'SQL Commands' tab is active, showing a query in the editor:

```
1 SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units"
2 FROM inventory_list
3 WHERE cost BETWEEN 3.00 and 15.00;
```

The 'Results' tab is selected, displaying a table with 2 rows. The status bar indicates '2 rows returned in 0.01 seconds'.

Inventory ID	Cost	Number of Units
il010230125	7.99	250
il010230126	5.24	87

Part 3: Membership Conditions: IN Operator

1. Display the inventory id, cost and number of units using appropriate aliases for all items that have 50, 100, 150 or 200 units in stock.

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

```
1 SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units"
2 FROM inventory_list
3 WHERE units IN ('50','100','150','200');
```

The results tab shows one row:

Inventory ID	Cost	Number of Units
il010230124	2.5	100

1 rows returned in 0.00 seconds

Part 4: Membership Conditions: NOT IN Operator

1. Display the inventory id, cost and number of units using appropriate aliases for all items that do not have 50, 100, 150 or 200 units in stock.

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

```
1 SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units"
2 FROM inventory_list
3 WHERE units NOT IN ('50','100','150','200');
```

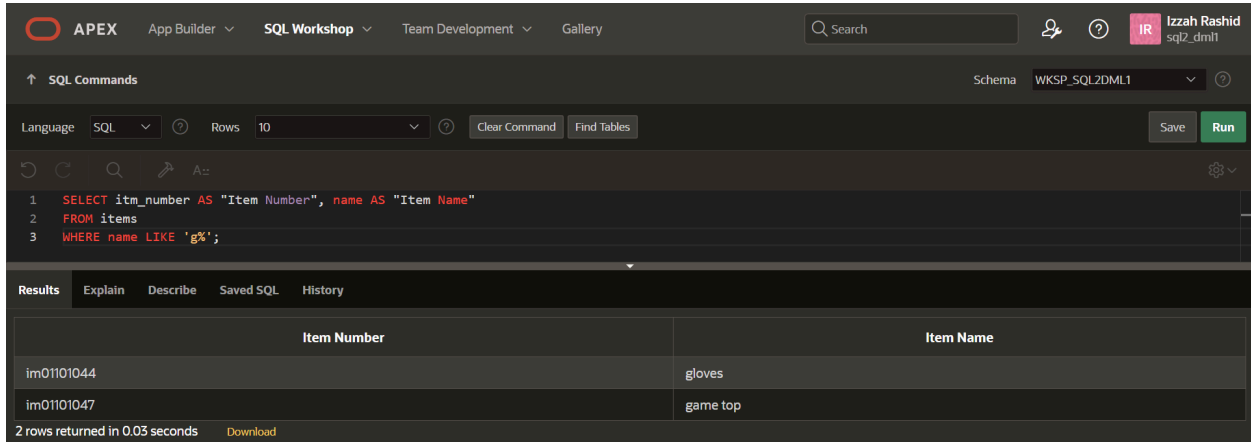
The results tab shows four rows:

Inventory ID	Cost	Number of Units
il010230125	7.99	250
il010230126	5.24	87
il010230127	18.95	65
il010230128	97.46	8

4 rows returned in 0.03 seconds

Part 5: Pattern Matching: LIKE Operator

1. Display item number and name of all items that have a name that begins with g. Use an appropriate alias for your column headings.



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

```
1 SELECT itm_number AS "Item Number", name AS "Item Name"
2 FROM items
3 WHERE name LIKE 'g%';
```

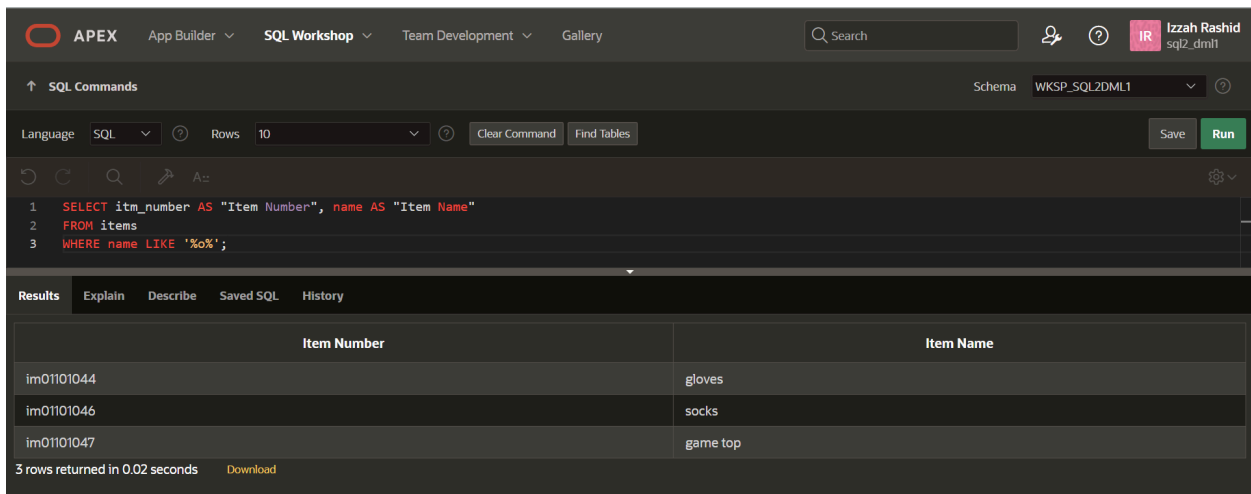
The results are displayed in a table with two columns: Item Number and Item Name. The results are:

Item Number	Item Name
im01101044	gloves
im01101047	game top

2 rows returned in 0.03 seconds

Part 6 : Pattern Matching: Combining Wildcard Characters with the LIKE Operator

1. Display item number and name of all items that have a name that contain a lowercase o. Use an appropriate alias for your column headings.



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

```
1 SELECT itm_number AS "Item Number", name AS "Item Name"
2 FROM items
3 WHERE name LIKE '%o%';
```

The results are displayed in a table with two columns: Item Number and Item Name. The results are:

Item Number	Item Name
im01101044	gloves
im01101046	socks
im01101047	game top

3 rows returned in 0.02 seconds