



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

DATABASE – SECD2523

SECTION: 06

LAB 3

NAME: LEOW YAN HONG

MATRIC.NO: A22EC0067

LECTURER: DR. IZYAN IZZATI BINTI KAMSANI

6.6 Retrieving Data

Exercise 1: Retrieving Columns from table

Part 1:

1. `SELECT * FROM customers;`
2. `SELECT * FROM teams;`
3. `SELECT * FROM items;`

Part 2:

1. `SELECT cfr-number, first-name, email, phone-number
FROM customers;`
2. `SELECT name, number_of_players
FROM teams;`
3. `SELECT name, description, category
FROM items;`

Exercise 2: Retrieving Data using SELECT

Part 1: using Arithmetic Operators

1. `SELECT first-name, last-name, current_balance and current_balance/12
FROM customers;`
2. `SELECT first-name, last-name, current_balance, current_balance - 5
FROM customers;`
3. The current balance cannot be zero value

Part 2: Using column Alias.

1. `SELECT first-name AS "First Name", last-name AS "Last Name", current_balance AS
"Balance", current_balance/12 AS "Monthly Repayments"
FROM customers;`

Part 3: Using Literal Character Strings

1. `SELECT 'The' || name || 'team' has ' || number_of_players || 'player and receives a discount of || discount || 'percent. AS "Team Information"`
`FROM teams;`
2. It contains the zero value since the "discount" column allow NULL value.

Lesson 7 Exercise 1: Restricting Data Using WHERE

Part 1: Using the WHERE Clause

1. `SELECT *`
`FROM customers`
`WHERE ctn_number = 'C0978';`
2. `SELECT first_name AS "FirstName", last_name AS "Last Name", current_balance AS "Balance"`
`FROM customers`
`WHERE current_balance > 100;`
3. `SELECT id AS "Order ID", odr_date AS "Date", TO_CHAR(odr_time, 'HH24:MI:SS') AS "Order Time"`
`FROM orders`
`WHERE odr_date < '28-May-2019';`

Part 2: Range Conditions: BETWEEN Operator

1. `SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units"`
`FROM inventory_list`
`WHERE cost between 3.00 AND 15.00;`

Part 3: Membership Conditions: IN Operator

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

Part 4: NOT IN Operator

1. SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units"
FROM Inventory list
WHERE units NOT IN (50, 100, 150, 200)

Part 5: Pattern Matching: LIKE Operator

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

Part 6: Combining Wildcard Characters with the LIKE Operator

1. SELECT itm_number AS "Item Number", name AS "Name"
FROM items
WHERE name LIKE '_o%';

Exercise 2: Restricting Data Using WHERE

Part 1: Using the NULL Conditions

1. SELECT 'The ' || name || ' team has ' || number_of_player || ' players and does not receive a discount'
AS 'Team Information'.
FROM teams
WHERE discount IS NULL;
2. SELECT 'The ' || name || ' team has ' || number_of_player || ' player and receive a discount of
10 percent.'
FROM teams
WHERE discount IS NOT NULL;

Part 2: Logical Operators: AND

1. SELECT ctr_number AS "Customer Number", address_line_1 AS "Street Address", zip_code AS
"Postal Code"
FROM customers_addresses
WHERE city = Liverpool AND address_line_2 = 'Stanford';

Part 3: OR

1. SELECT ctr_number AS "Customer Number", address_line_1 AS "Street Address", zip_code AS "Postal Code"
FROM customers_addresses
WHERE city = 'Liverpool' OR address_line_2 = 'Stanford';

Part 4: NOT equal To

1. SELECT ctr_number AS "Customer Number", address_line_1 AS "Street Address", zip_code AS "Postal Code"
FROM customer_addresses
WHERE city NOT IN ('Liverpool');

Lesson 8 Exercise 1: Sorting Data using ORDER BY

1. SELECT name AS "Team Name", number_of_players AS "Players"
FROM teams
ORDER BY name;
2. SELECT name AS "Team Name", number_of_players AS "Players"
FROM teams
ORDER BY number_of_player DESC;
3. SELECT name AS "Team Name", number_of_player AS "Players"
FROM teams
ORDER BY name DESC;

Exercise 2:Part 1: TOP-N-ANALYSIS

1. SELECT ROWNUM AS "Customer Number", first_name || ' ' || last_name AS "Customer Name"
FROM (SELECT first_name, last_name FROM customers)
WHERE ROWNUM <= 3;

Part 2: Using a Substitution Variable

```
1. SELECT first_name AS "First Name", last_name AS "Last Name", commission_rate AS  
   "Commission Rate"  
   FROM sales_representatives  
   WHERE commission_rate = :commission_rate  
   ORDER BY last_name;
```