CC105

Information Management

MySQL SELECT Statement

Objectives:

Understand the basic syntax and functionality of the MySQL SELECT statement.

Objectives:

Learn how to retrieve specific data from a database table using SELECT.

Objectives:

Practice writing SELECT queries to solve real-world data retrieval problems.

The **SELECT** statement is used to select data from a database.

The data returned is stored in a result table, called the result-set.

SELECT Syntax

```
SELECT column1, column2, ...
FROM table_name;
```

```sql
SELECT column1, column2, ...
FROM table_name;
```

Here, column1, column2, ... are the field names of the table you want to select data from.

If you want to select all the fields available in the table, use the following syntax:

```sql
SELECT * FROM table_name;
```

MySQL WHERE Clause

The **WHERE** clause is used to filter records.

It is used to extract only those records that fulfill a specified condition.

WHERE Syntax

```
SELECT column1, column2, ...
FROM table_name
WHERE condition;
```

Note: The WHERE clause is not only used in SELECT statements, it is also used in UPDATE, DELETE, etc.!

WHERE Clause Ex.

```sql
SELECT * FROM Customers
WHERE Country = 'Mexico';
```

Text Fields vs. Numeric Fields

SQL requires single quotes around text values (most database systems will also allow double quotes).

However, numeric fields should not be enclosed in quotes:

Text Fields vs. Numeric Fields

```sql
SELECT * FROM Customers
WHERE CustomerID = 1;
```

Operators in The WHERE Clause

The following operators can be used in the WHERE clause:

Operator	Description
=	Equal
>	Greater than
<	Less than
>=	Greater than or equal
<=	Less than or equal
<>	Not equal. **Note:** In some versions of SQL this operator may be written as !=
BETWEEN	Between a certain range
LIKE	Search for a pattern
IN	To specify multiple possible values for a column

WHERE IF WHEN GET INSIDE

* FROM MONITOR SELECT PRINT

```sql
CREATE TABLE employees (
    employee_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    department VARCHAR(50),
    salary DECIMAL(10, 2),
    hire_date DATE
);

INSERT INTO employees (employee_id, first_name, last_name, department, salary, hire_date)
VALUES
(1, 'John', 'Doe', 'Sales', 50000.00, '2020-05-15'),
(2, 'Jane', 'Smith', 'HR', 60000.00, '2019-08-20'),
(3, 'Alice', 'Johnson', 'Sales', 55000.00, '2021-02-10'),
(4, 'Bob', 'Brown', 'IT', 70000.00, '2018-11-30'),
(5, 'Charlie', 'Davis', 'IT', 75000.00, '2022-03-25');
```

Instructions:

Use the provided sample database table (*employees*).

Write your queries in ½ sheet of paper.

1. Write a query to retrieve all columns and rows from the *employees* table.
2. Write a query to retrieve only the *first_name, last_name, and department columns.*
3. Write a query to retrieve employees who work in the *Sales department.*

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