**Selecting Data in MySQL**

The SELECT statement is used in MySQL to retrieve data from one or more tables. It allows filtering, ordering, and limiting results to obtain meaningful insights from databases.

**1. Selecting Specific Columns**

To retrieve only certain columns from a table, list the column names after the SELECT keyword.

**Syntax:**

SELECT column1, column2 FROM table\_name;

**Example:**

SELECT first\_name, last\_name FROM employees;

This retrieves only the first\_name and last\_name columns from the employees table.

**2. Selecting Specific Rows**

To filter rows based on conditions, use the WHERE clause.

**Syntax:**

SELECT column1, column2 FROM table\_name WHERE condition;

**Example:**

SELECT \* FROM employees WHERE department = 'Sales';

This returns all columns for employees who work in the Sales department.

**Operators commonly used with WHERE:**

* = (equal)
* != or <> (not equal)
* > / < (greater/less than)
* >= / <= (greater/less than or equal to)
* BETWEEN, LIKE, IN, IS NULL

**3. Ordering Returned Data**

The ORDER BY clause sorts the result set based on one or more columns.

**Syntax:**

SELECT \* FROM table\_name ORDER BY column1 [ASC|DESC];

* ASC = Ascending order (default)
* DESC = Descending order

**Example:**

SELECT \* FROM employees ORDER BY salary DESC;

This displays employees sorted by salary in descending order.

**4. Limiting Returned Data**

The LIMIT clause restricts the number of rows returned by the query. It’s useful for pagination or sample queries.

**Syntax:**

SELECT \* FROM table\_name LIMIT number;

**Example:**

SELECT \* FROM employees LIMIT 5;

This returns the first 5 rows from the employees table.

You can also combine it with OFFSET:

SELECT \* FROM employees LIMIT 5 OFFSET 10;

This skips the first 10 rows and then returns the next 5 rows.

**Combined Example:**

SELECT first\_name, last\_name, salary

FROM employees

WHERE department = 'Marketing'

ORDER BY salary DESC

LIMIT 3;

This query returns the top 3 highest-paid employees in the Marketing department, showing only their first name, last name, and salary.