**Sql query basics (day 2)**

**1: Find employees with a salary greater than 50,000.**

SELECT \* FROM employees

WHERE salary > 50000;

**2: Find employees hired after January 1, 2020.**

SELECT \* FROM employees

WHERE hire\_date > '2020-01-01';

**3: Find employees working in the 'IT' department.**

SELECT \* FROM employees

WHERE department\_id = 'd003';

**4: Find employees with the first name 'Amit'.**

SELECT \* FROM employees

WHERE first\_name = 'Amit';

**ORDER BY Clause**

**1: List all employees ordered by their last name in ascending order.**

SELECT \* FROM employees

ORDER BY last\_name ASC;

**2: List all employees ordered by their hire date in descending order.**

SELECT \* FROM employees

ORDER BY hire\_date DESC;

**3: List all employees ordered by their salary in ascending order.**

SELECT \* FROM employees

ORDER BY salary ASC;

**4: List all employees ordered by department\_id and then by salary.**

SELECT \* FROM employees

ORDER BY department\_id, salary;

**GROUP BY Clause**

**1: Count the number of employees in each department.**

SELECT department\_id, COUNT(\*)

FROM employees

GROUP BY department\_id;

**2: Calculate the average salary for each job role.**

SELECT job\_id, AVG(salary) AS average\_salary

FROM employees

GROUP BY job\_id;

**3: Find the maximum salary in each department.**

SELECT department\_id, MAX(salary) AS max\_salary

FROM employees

GROUP BY department\_id;

**4: Count the number of employees hired in each year.**

SELECT YEAR(hire\_date) AS hire\_year, COUNT(\*)

FROM employees

GROUP BY YEAR(hire\_date);

**Operators**

**1: Find employees with salary between 30,000 and 60,000.**

SELECT \* FROM employees

WHERE salary BETWEEN 30000 AND 60000;

**2: Find employees whose first name is either 'Amit' or 'Neha'.**

SELECT \* FROM employees

WHERE first\_name IN ('Amit', 'Neha');

**3: Find employees with salary not equal to 50,000.**

SELECT \* FROM employees

WHERE salary != 50000;

**4: Find employees with job\_id greater than 3.**

SELECT \* FROM employees

WHERE job\_id > 3;

**Logical Operators**

**1: Find employees with salary greater than 50,000 and in the 'IT' department.**

SELECT \* FROM employees

WHERE salary > 50000 AND department\_id = 'd003';

**2: Find employees with salary less than 30,000 or in the 'Finance' department.**

SELECT \* FROM employees

WHERE salary < 30000 OR department\_id = 'd002';

**3: Find employees who are not in the 'Marketing' department and have a salary less than 40,000.**

SELECT \* FROM employees

WHERE department\_id != 'd004' AND salary < 40000;

**4: Find employees whose first name is 'Amit' and last name is not 'Sharma'.**

SELECT \* FROM employees

WHERE first\_name = 'Amit' AND last\_name != 'Sharma';

**LIMIT and OFFSET**

**1: Select the first 5 employees.**

SELECT \* FROM employees

LIMIT 5;

**2: Select 10 employees starting from the 6th employee.**

SELECT \* FROM employees

LIMIT 10 OFFSET 5;

**3: Select the top 3 highest-paid employees.**

SELECT \* FROM employees

ORDER BY salary DESC

LIMIT 3;

**4: Select 15 employees starting from the 11th employee, ordered by last name.**

SELECT \* FROM employees

ORDER BY last\_name

LIMIT 15 OFFSET 10;

**BETWEEN Clause**

**1: Find employees with salary between 40,000 and 60,000.**

SELECT \* FROM employees

WHERE salary BETWEEN 40000 AND 60000;

**2: Find employees hired between January 1, 2020, and December 31, 2021.**

SELECT \* FROM employees

WHERE hire\_date BETWEEN '2020-01-01' AND '2021-12-31';

**3: Find employees with job\_id between 2 and 5.**

SELECT \* FROM employees

WHERE job\_id BETWEEN 2 AND 5;

**4: Find employees with employee\_id between 10 and 20.**

SELECT \* FROM employees

WHERE employee\_id BETWEEN 10 AND 20;

**Pattern Matching (LIKE)**

**1: Find employees whose first name starts with 'A'.**

SELECT \* FROM employees

WHERE first\_name LIKE 'A%';

**2: Find employees whose email ends with 'example.com'.**

SELECT \* FROM employees

WHERE email LIKE '%example.com';

**3: Find employees whose last name contains 'Sh'.**

SELECT \* FROM employees

WHERE last\_name LIKE '%Sh%';

**4: Find employees whose phone number starts with '123'.**

SELECT \* FROM employees

WHERE phone\_number LIKE '123%';

**CASE Statement**

**1: Assign a performance level based on salary.**

SELECT employee\_id, first\_name, last\_name, salary,

CASE

WHEN salary > 80000 THEN 'High'

WHEN salary BETWEEN 50000 AND 80000 THEN 'Medium'

ELSE 'Low'

END AS performance\_level

FROM employees;

**2: Classify employees based on their department.**

SELECT employee\_id, first\_name, last\_name, department\_id,

CASE department\_id

WHEN 'd001' THEN 'Human Resources'

WHEN 'd002' THEN 'Finance'

WHEN 'd003' THEN 'IT'

ELSE 'Other'

END AS department\_name

FROM employees;

**3: Determine employment status based on hire date.**

SELECT employee\_id, first\_name, last\_name, hire\_date,

CASE

WHEN hire\_date > '2022-01-01' THEN 'New Hire'

WHEN hire\_date BETWEEN '2020-01-01' AND '2022-01-01' THEN 'Mid-Tenure'

ELSE 'Long-Tenure'

END AS employment\_status

FROM employees;