SQL Queries for Data Analysis

MySQL Queries for Employee Data Analysis

1. Create Employee Table:

```
-------------------------
CREATE TABLE emp_details (
    Name VARCHAR(50),
    Age INT,
    Sex CHAR(1),
    DOJ DATE,
    City VARCHAR(50),
    Salary DECIMAL(10,2)
);
```

2. Select Employees Older than 30 and Female:

```
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SELECT * FROM emp_details
WHERE Age > 30 AND Sex = 'F';
```

3. Calculate Total Salary by Gender:

```
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SELECT Sex, SUM(Salary) AS total_salary
FROM emp_details
GROUP BY Sex;
```

4. String Functions:

```
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SELECT REPEAT('@', 10);
SELECT LOWER('Nandhini');
SELECT UPPER('india') AS upper_case;
SELECT LOWER('india') AS lower_case;
SELECT CHARACTER_LENGTH('india');
SELECT CONCAT('India', ' is ', 'in Asia') AS merged;
```

5. Sorting Functions:

```
---------------------
SELECT LCASE('INDUA') AS lower_case;
SELECT LENGTH('    india     ');
SELECT LENGTH(LTRIM('     india    '));
SELECT LENGTH(RTRIM('     india    '));
```

6. Searching & ASCII Functions:

```
SELECT POSITION('fruit' IN 'orange is a fruit') AS position;
SELECT ASCII('4');
```

Lesson 3: GROUP BY & HAVING

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1. Create Employees Table:

```
CREATE TABLE employees (
    EmpID INT PRIMARY KEY,
    EmpName VARCHAR(50),
    Age INT,
    Gender CHAR(1),
    DOJ DATE,
    Dept VARCHAR(50),
    City VARCHAR(50),
    Salary DECIMAL(10,2)
);
```

2. Select Distinct Departments:

```
SELECT DISTINCT Dept FROM employees;
```

3. Calculate Average Age for All Employees:

```
SELECT AVG(Age) FROM employees;
```

4. Calculate Average Age by Department:

```
SELECT Dept, AVG(Age) AS avg_age
FROM employees
GROUP BY Dept;
```

5. Select Employees Grouped by Department Having More than 2 Employees:

```
SELECT Dept, COUNT(*) AS emp_count
FROM employees
GROUP BY Dept
HAVING COUNT(*) > 2;
```