Lab 13:

i) Illustrate set comparison operation with sub-queries

ii) Use EXISTS keyword in SELECT statement to test for empty relations

Source code:

```
CREATE DATABASE Corporation;

USE Corporation;

CREATE TABLE Employee_details (

    Emp_id INT PRIMARY KEY AUTO_INCREMENT,

    Emp_name VARCHAR(30),

    Department VARCHAR(20),

    Salary DECIMAL(10,2),

    Age INT

);

CREATE TABLE Department_details (

    Department VARCHAR(20) PRIMARY KEY,

    Location VARCHAR(50)

);

INSERT INTO Employee_details VALUES

    ('Ram', 'HR', 48000, 27),

    ('Sita', 'IT', 62000, 31),

    ('Shyam', 'Finance', 56000, 39),

    ('Gita', 'IT', 73000, 30),

    ('Prakash', 'Developer', 78000, 25),

    ('Hari', 'HR', 51000, 34);



INSERT INTO Employee_details VALUES

    ('Anita', 'Intern', 40000, 22);
```

INSERT INTO Department_details VALUES

   ('UI', 'Kathmandu'),

   ('Finance', 'Pokhara'),

   ('Developer', 'Lalitpur'),

   ('IT', 'Bhaktapur');

SELECT Emp_name, Salary FROM Employee_details

WHERE Salary > ANY (SELECT Salary FROM Employee_details WHERE Department = 'HR');

Emp_name	Salary
Sita	62000.00
Shyam	56000.00
Gita	73000.00
Prakash	78000.00
Hari	51000.00

SELECT Emp_name, Salary FROM Employee_details

WHERE Salary > ALL (SELECT Salary FROM Employee_details WHERE Department = 'HR');

Emp_name	Salary
Sita	62000.00
Shyam	56000.00
Gita	73000.00
Prakash	78000.00

SELECT Emp_name, Department FROM Employee_details

WHERE Department IN (SELECT Department FROM Employee_details WHERE Emp_name = 'Sita');

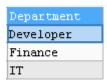| Emp_name	Department
Sita	IT
Gita	IT

SELECT Emp_name, Department FROM Employee_details AS e

WHERE EXISTS (SELECT 1 FROM Department_details AS d WHERE d.Department = 'Finance');

Emp_name	Department
Ram	HR
Sita	IT
Shyam	Finance
Gita	IT
Prakash	Developer
Hari	HR
Anita	Intern

SELECT Department FROM Department_details AS d

WHERE EXISTS (SELECT 1 FROM Employee_details AS e WHERE e.Department = d.Department);

Department
Developer
Finance
IT

SELECT Emp_name, Department FROM Employee_details

WHERE Department NOT IN (SELECT Department FROM Department_details WHERE Department = 'IT');

Emp_name	Department
Ram	HR
Shyam	Finance
Prakash	Developer
Hari	HR
Anita	Intern

SELECT Department FROM Department_details AS d

WHERE NOT EXISTS (SELECT 1 FROM Employee_details AS e WHERE e.Department = d.Department);

Department
UI