

### **Experiment 1.2**

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Branch: BE-CSE Section/Group: KRG-3B

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Subject name: ADBMS Subject code: 23CSP-333

### **Problem Statement:**

Department-Course Subquery and Access Control

- 1. Design normalized tables for departments and the courses they offer, maintaining a foreign key relationship.
- 2. Insert five departments and at least ten courses across those departments.
- 3. Use a subquery to count the number of courses under each department.
- 4. Filter and retrieve only those departments that offer more than two courses.
- 5. Grant SELECT-only access on the courses table to a specific user.
- 6. Ensure a foreign key relationship from the book to its respective author.
- 7. Insert at least three records in each table.
- 8. Perform an INNER JOIN to link each book with its author using the common author ID.
- 9. Select the book title, author name, and author's country.

### Code:

DROP TABLE IF EXISTS TBL EMPLOYEE;

CREATE DATABASE KRG\_3B

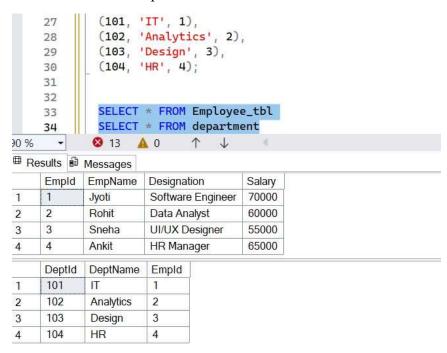
USE KRG 3B

```
CREATE TABLE Employee_tbl (
  EmpId INT PRIMARY KEY,
  EmpName VARCHAR(100),
  Designation VARCHAR(100),
  Salary INT
);
CREATE TABLE department (
  DeptId INT PRIMARY KEY,
  DeptName VARCHAR(100),
  EmpId INT,
  FOREIGN KEY (EmpId) REFERENCES Employee tbl(EmpId)
);
INSERT INTO Employee tbl (EmpId, EmpName, Designation, Salary) VALUES
(1, 'Jyoti', 'Software Engineer', 70000),
(2, 'Rohit', 'Data Analyst', 60000),
(3, 'Sneha', 'UI/UX Designer', 55000),
(4, 'Ankit', 'HR Manager', 65000);
INSERT INTO department (DeptId, DeptName, EmpId) VALUES
(101, 'IT', 1),
(102, 'Analytics', 2),
(103, 'Design', 3),
(104, 'HR', 4);
```

SELECT \* FROM Employee\_tbl



### SELECT \* FROM department



### -- INNER JOIN

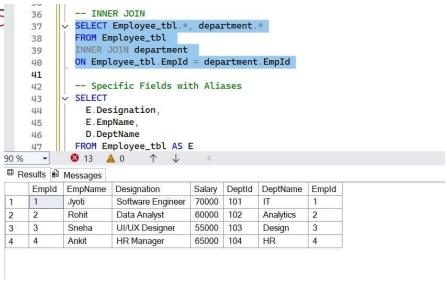
SELECT Employee\_tbl.\*, department.\*

FROM Employee tbl

INNER JOIN department

ON Employee tbl.EmpId = department.EmpId

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### **SELECT**

E.Designation,

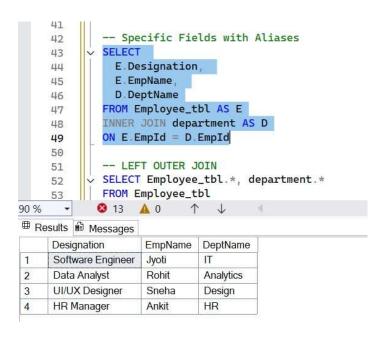
E.EmpName,

D.DeptName

FROM Employee tbl AS E

INNER JOIN department AS D

ON E.EmpId = D.EmpId





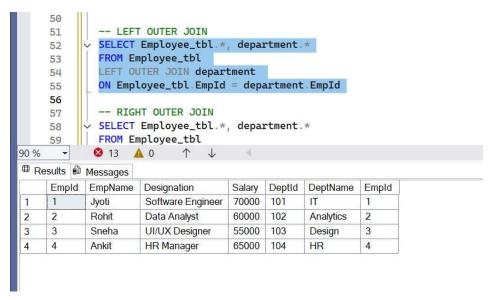
-- LEFT OUTER JOIN

SELECT Employee\_tbl.\*, department.\*

FROM Employee\_tbl

LEFT OUTER JOIN department

ON Employee\_tbl.EmpId = department.EmpId



### -- RIGHT OUTER JOIN

SELECT Employee\_tbl.\*, department.\*

FROM Employee tbl

RIGHT OUTER JOIN department

ON Employee tbl.EmpId = department.EmpId



## **COMPUTER SCIENCE & ENGINEERING**



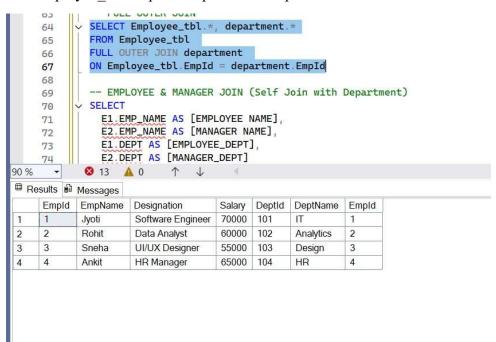
#### -- FULL OUTER JOIN

SELECT Employee tbl.\*, department.\*

FROM Employee tbl

FULL OUTER JOIN department

ON Employee tbl.EmpId = department.EmpId





-- EMPLOYEE & MANAGER JOIN (Self Join with Department)

**SELECT** 

E1.EMP\_NAME AS [EMPLOYEE NAME],

E2.EMP\_NAME AS [MANAGER NAME],

E1.DEPT AS [EMPLOYEE\_DEPT],

E2.DEPT AS [MANAGER\_DEPT]

FROM EMPLOYEE AS E1

LEFT OUTER JOIN EMPLOYEE AS E2

ON E1.MANAGER ID = E2.EMP ID