Name : Yadwinder Singh	Branch : BE CSE
UID : 23BCS10091	Sem. : 5th
Subject : ADBMS	Subject code: 23CSP-333

Aim:

Code :

```
-- ==============================
-- DROP old tables if they exist
-- ==============================
DROP TABLE IF EXISTS Courses;

DROP TABLE IF EXISTS Departments;


-- ==============================
-- PART A: CREATE TABLES (3NF)
-- ==============================
CREATE TABLE Departments (

    dept_id INT PRIMARY KEY,

    dept_name VARCHAR(50) UNIQUE NOT NULL

);
```

```sql
CREATE TABLE Courses (
    course_id INT PRIMARY KEY,
    course_name VARCHAR(100) NOT NULL,
    dept_id INT,
    FOREIGN KEY (dept_id) REFERENCES Departments(dept_id)
);


-- ==============================
-- PART B: INSERT SAMPLE DATA
-- ==============================
INSERT INTO Departments (dept_id, dept_name) VALUES
(1, 'Computer Science'),
(2, 'Electrical'),
(3, 'Mechanical'),
(4, 'Civil'),
(5, 'Electronics');


INSERT INTO Courses (course_id, course_name, dept_id) VALUES
(101, 'DBMS', 1),
(102, 'Operating Systems', 1),
(103, 'Power Systems', 2),
(104, 'Digital Circuits', 2),
(105, 'Thermodynamics', 3),
(106, 'Fluid Mechanics', 3),
(107, 'Structural Engineering', 4),
(108, 'Surveying', 4),
(109, 'Embedded Systems', 5),
(110, 'VLSI Design', 5);


-- ==============================
-- PART C: SUBQUERY – Departments with > 2 courses
```

```
-- =============================

SELECT dept_name

FROM Departments

WHERE dept_id IN (

    SELECT dept_id

    FROM Courses

    GROUP BY dept_id

    HAVING COUNT(course_id) >=2

);


-- =============================

-- PART D: GRANT (COMMENTED OUT – no privileges in byteXL)

-- =============================

-- GRANT SELECT ON Courses TO viewer_user;


SELECT * FROM Departments;

SELECT * FROM Courses;
```

OUTPUT :

fieldCount	affectedRows	insertId	info	serverStatus	warningStatus	changedRows
0	0	0		10	0	0
0	0	0		10	0	0
0	0	0		10	0	0
0	0	0		10	0	0
0	5	0	Records: 5 Dup...	10	0	0
0	10	0	Records: 10 Du...	10	0	0

id
dummy

dept_id	dept_name
4	Civil
1	Computer Science
2	Electrical
5	Electronics
3	Mechanical

course_id	course_name	dept_id
101	DBMS	1
102	Operating Systems	1
103	Power Systems	2
104	Digital Circuits	2
105	Thermodynamics	3
106	Fluid Mechanics	3
107	Structural Engineering	4
108	Surveying	4
109	Embedded Systems	5
110	VLSI Design	5