

Name : Yadwinder Singh	Branch : BE CSE
UID : 23BCS10091	Sem. : 5 th
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
```

```
);
```

```
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