

## EXPERIMENT 1.2

**Title:** Insert Sample Data into Department and Course Tables

**Description:**

After defining the schema, your task is to populate the

**Departments**

and

**Courses**

tables with at least 5 departments and 10 courses. Ensure that multiple courses are associated with each department.

**Input Format:**

Pre-existing **Departments** and **Courses** table structures from Problem 2A.

**Output Format:**

No output — just successful insertion of sample data.

**Constraints:**

- Use meaningful department names like "Computer Science", "Electrical", "Mechanical", etc.
- Use course names like “DBMS”, “Circuits”, “Thermodynamics” etc.
- Use valid foreign keys linking courses to department.

**Sample Input:**

**Departments**

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

## Courses

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

## Query:

```
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);

SELECT * FROM Departments;

SELECT * FROM Courses;

```

## Output:

commands.sql

```

1
2 CREATE TABLE Departments (
3     dept_id INT PRIMARY KEY,
4     dept_name VARCHAR(50) UNIQUE NOT NULL
5 );
6
7 CREATE TABLE Courses (
8     course_id INT PRIMARY KEY,
9     course_name VARCHAR(100) NOT NULL,
10    dept_id INT NOT NULL,
11    FOREIGN KEY (dept_id) REFERENCES Departments(dept_id)
12 );
13
14 INSERT INTO Departments (dept_id, dept_name) VALUES
15 (1, 'Computer Science'),
16 (2, 'Electrical'),
17 (3, 'Mechanical'),
18 (4, 'Civil'),
19 (5, 'Electronics');
20
21 INSERT INTO Courses (course_id, course_name, dept_id) VALUES
22 (101, 'DBMS', 1),
23 (102, 'Operating Systems', 1),
24 (103, 'Power Systems', 2),
25 (104, 'Digital Circuits', 2),
26 (105, 'Thermodynamics', 3),
27 (106, 'Fluid Mechanics', 3),
28 (107, 'Structural Engineering', 4),
29 (108, 'Surveying', 4),
30 (109, 'Embedded Systems', 5),
31 (110, 'VLSI Design', 5);
32
33 SELECT * FROM Departments;
34
35 SELECT * FROM Courses;
36
37
38
39

```

STDIN

Input for the program (Optional)

Output:

```

CREATE TABLE
CREATE TABLE
INSERT 0 5
INSERT 0 10

```

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

(5 rows)

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

(10 rows)

## Learning Outcome:

Understand how to associate courses with departments using foreign keys.

Learn to write and run INSERT and SELECT SQL statements.