



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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## EXPERIMENT- 01

**Student Name: Himanshi**

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**Branch: BE-CSE**

**Section/Group: KRG 1(B)**

**Semester: 05**

**Date of Performance: 22/07/25**

**Subject Name: ADBMS**

**Subject Code: 23CSP-333**

### Easy-Level Problem

#### **1. Aim:**

- i. Design two tables — one for storing author details and the other for book details.
- ii. Insert at least three records in each table.
- iii. Perform an INNER JOIN to link each book with its author using the common author ID and Select the book title, author name, and author's country.

#### **2. Objective:**

- Understand basic table creation with primary and foreign keys.
- Practice inserting data into relational tables.
- Implement JOIN operations to fetch combined data from multiple tables.

#### **3. DBMS script and output:**

##### **i. Creating Tables**

```
CREATE TABLE TBL_AUTHOR  
(  
    AUTHOR_ID INT PRIMARY KEY,  
    AUTHOR_NAME VARCHAR(10),  
    COUNTRY VARCHAR(10)  
);
```

```
CREATE TABLE TBL_BOOK  
(  
    BOOK_ID INT PRIMARY KEY,  
    BOOK_TITLE VARCHAR(10),  
    AUHTORID INT,  
    FOREIGN KEY (AUHTORID) REFERENCES TBL_AUTHOR(AUTHOR_ID)  
);
```

##### **ii. Inserting Records**



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```
INSERT INTO TBL_AUTHOR VALUES(101, 'Rahul', 'India');  
INSERT INTO TBL_AUTHOR VALUES(103, 'Neha', 'India');
```

```
INSERT INTO TBL_BOOK VALUES(121, 'jiya', 103);  
INSERT INTO TBL_BOOK VALUES(111, 'Shubham', 101);
```

### iii. INNER JOIN Query

```
SELECT B.BOOK_TITLE, A.AUTHOR_NAME AS 'AUTHOR NAME', A.COUNTRY  
FROM TBL_BOOK AS B  
INNER JOIN TBL_AUTHOR AS A  
ON B.AUHTORID = A.AUTHOR_ID;
```

## 4. Output:

 NEW  

STDIN

Input for the program ( Optional )

Output:

BOOK_TITLE	AUTHOR NAME	COUNTRY
Shubham	Rahul	India
jiya	Neha	India

Caption



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## Medium-Level Problem

### 1. Aim:

- i. Design two tables — one for storing author details and the other for book details.
- ii. Insert at least three records in each table.
- iii. Perform an INNER JOIN to link each book with its author using the common author ID and Select the book title, author name, and author's country.

### 2. Objective:

- Create normalized tables with proper foreign key relationships.
- Use subqueries to count and filter relational data.
- Implement user-level access control using GRANT statement.

### 2. DBMS script and output:

#### i. Creating Tables

```
CREATE TABLE Department (  
    DeptID INT PRIMARY KEY,  
    DeptName VARCHAR(100)  
);
```

```
CREATE TABLE Course (  
    CourseID INT PRIMARY KEY,  
    CourseName VARCHAR(100),  
    DeptID INT,  
    FOREIGN KEY (DeptID) REFERENCES Department(DeptID)  
);
```

#### ii. Inserting Records

```
INSERT INTO Department VALUES  
(1, 'Computer Science'),  
(2, 'Physics'),  
(3, 'Mathematics'),  
(4, 'Chemistry'),  
(5, 'Biology');
```

```
INSERT INTO Course VALUES  
(101, 'Python Basics', 1),
```



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```
(102, 'System Design', 1),  
(103, 'Astrophysics', 2),  
(104, 'Nano Science', 2),  
(105, 'Matrix Theory', 3),  
(106, 'Numerical Methods', 3),  
(107, 'Inorganic Chemistry', 4),  
(108, 'Bioinformatics', 4),  
(109, 'Human Anatomy', 5),  
(110, 'Cell Biology', 5);
```

### iii. Subquery to Retrieve Departments with More Than Two Courses

```
SELECT DeptName  
FROM Department  
WHERE DeptID IN (  
    SELECT DeptID  
    FROM Course  
    GROUP BY DeptID  
    HAVING COUNT(*) > 2  
);
```

### iv. Granting SELECT-Only Access to a Specific User

```
CREATE LOGIN LOGIN_ABC  
WITH PASSWORD = 'ABC@04';
```

```
CREATE USER ABC_04 FOR LOGIN LOGIN_ABC;
```

```
GRANT SELECT ON Course TO ABC_04;
```



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## 5. Output:

100 % No issues found

Results Messages

	DeptName
1	Physics

100 % No issues found

Messages

Commands completed successfully.

Completion time: 2025-07-30T18:41:38.4036882+05:30