EXPERIMENT- 01

Student Name: Himanshi UID: 23BCS10694

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)
).
```

```
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 BINNER JOIN TBL_AUTHOR AS A ON B.AUHTORID = A.AUTHOR ID;

4. Output:



Caption

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

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),

iii. Subquery to Retrieve Departments with More Than Two Courses

(110, 'Cell Biology', 5);

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;

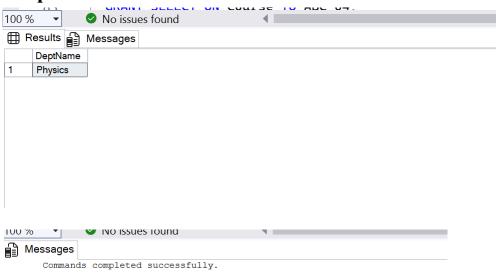


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5. Output:



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