## **EXPERIMENT - 1, SQL OVERVIEW**

AIM: To create and manage a basic book management system using SQL.

- 1. Create tables Authors and Books using DDL commands.
- 2. Insert sample records into the tables.
- 3. Retrieve book titles along with their respective author information using INNER JOIN.

#### **OBJECTIVE**

To understand table creation, insertion of records, and retrieval of related data from multiple tables using SQL commands in a relational database management system. Also to implement primary and foreign key constraints to maintain referential integrity.

#### PROCEDURE / ALGORITHM

- 1. Start SQL environment (e.g., MySQL, PostgreSQL, etc.).
- 2. Create Authors and Books tables using CREATE TABLE with proper constraints.
- 3. Use INSERT INTO to populate both tables with valid records.
- 4. Write an INNER JOIN query to fetch combined results from both tables.
- 5. Verify table structure and query results.
- 6. Capture screenshots of query execution and output.

### Q1: Create Author and Book Tables using DDL Commands

### **Problem Statement:**

You are tasked with designing a basic book management system. Create two tables — Authors and Books — to represent a one-to-many relationship (one author can write multiple books). Use proper primary and foreign key constraints while designing the schema.

## Query

```
CREATE TABLE Authors (

author_id INT PRIMARY KEY,

name VARCHAR(50),

country VARCHAR(50)
```

#### **CREATE TABLE Books (**

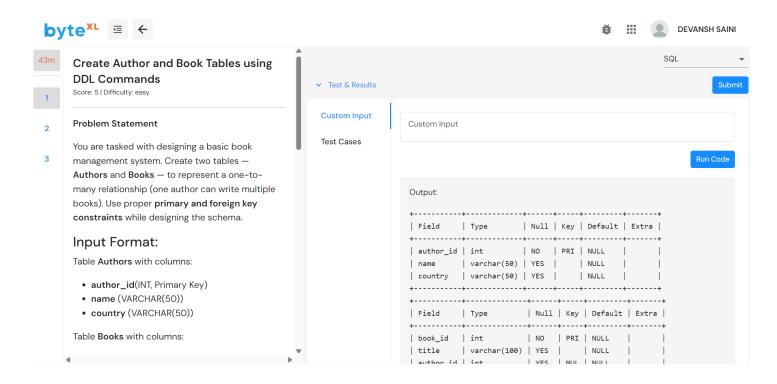
book\_id INT PRIMARY KEY,

title VARCHAR(100),

author\_id INT,

FOREIGN KEY (author\_id) REFERENCES Authors(author\_id)

);



## **Q2: Insert Sample Records into Author and Book Tables**

### **Problem Statement**

After creating the Authors and Books tables, insert at least 3 authors and 3 books. Ensure the books reference valid authors using the foreign key.

# Query

**INSERT INTO Authors VALUES** 

(1, 'Ashish', 'India'),

(2, 'Smaran', 'USA'),

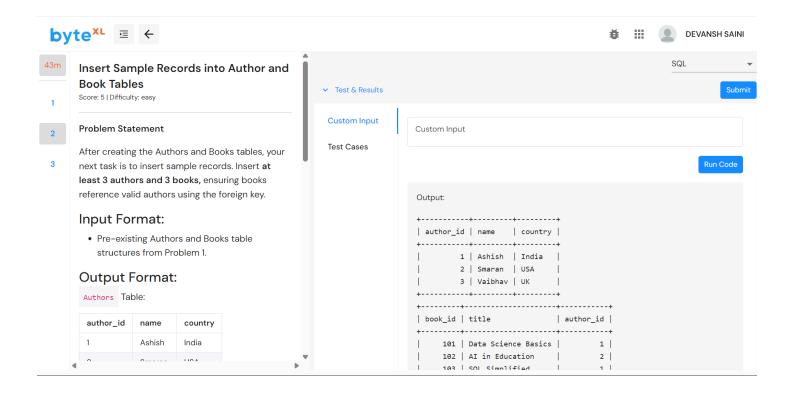
(3, 'Vaibhav', 'UK');

**INSERT INTO Books VALUES** 

(101, 'Data Science Basics', 1),

(102, 'AI in Education', 2),

(103, 'SQL Simplified', 1);



# Q3: Retrieve Book Titles Along with Author Information Using INNER JOIN

## **Problem Statement**

Retrieve the titles of all books along with their author's name and country using INNER JOIN on the Authors and Books tables.

# Query

SELECT b.title, a.name, a.country

FROM Books b

INNER JOIN Authors a ON b.author\_id = a.author\_id;

