

EXPERIMENT 1.1

Title: Create Author and Book Tables using DDL Commands

Description:

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.

Input Format:

Table **Authors** with columns:

- **author_id**(INT, Primary Key)
- **name** (VARCHAR(50))
- **country** (VARCHAR(50))

Table **Books** with columns:

- **book_id** (INT, Primary Key)
- **title** (VARCHAR(100))
- **author_id** (INT, Foreign Key referencing Authors)

Output Format:

- Authors and Books tables created. Print description of the table.

Constraints:

- The **author_id** in **Books** must exist in the **Authors** table.
- Use appropriate data types and constraints.
- **name** and **country** should allow up to 50 characters.

Sample Input:

Write query to create tables for Authors and Books

Sample Output:

authors

Table:

Field	Type	Null	Key	Default	Extra
author_id	int	NO	PRI	NULL	
name	varchar(50)	YES		NULL	
country	varchar(50)	YES		NULL	

books

Table:

Field	Type	Null	Key	Default	Extra
book_id	int	NO	PRI	NULL	
title	varchar(100)	YES		NULL	
author_id	int	YES	MUL	NULL	

Query:

```
CREATE TABLE authors (
  author_id INT NOT NULL PRIMARY KEY,
  name VARCHAR(50),
  country VARCHAR(50)
);

--

CREATE TABLE books (
  book_id INT NOT NULL PRIMARY KEY,
  title VARCHAR(100),
  author_id INT,
  FOREIGN KEY (author_id) REFERENCES authors(author_id)
);

DESCRIBE authors;

DESCRIBE books;
```

Output:

The screenshot shows a SQL IDE interface with a query editor on the left and an output pane on the right. The query editor contains the following SQL code:

```
1 -- create
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18 CREATE TABLE authors (
19     author_id INT NOT NULL PRIMARY KEY,
20     name VARCHAR(50),
21     country VARCHAR(50)
22 );
23
24
25
26 CREATE TABLE books (
27     book_id INT NOT NULL PRIMARY KEY,
28     title VARCHAR(100),
29     author_id INT,
30     FOREIGN KEY (author_id) REFERENCES authors(author_id)
31 );
32 DESCRIBE authors;
33 DESCRIBE books;
```

The output pane shows the results of the DESCRIBE commands. It displays two tables: authors and books. The authors table has columns: author_id (int, NOT NULL, PRIMARY KEY), name (varchar(50), YES, NULL), and country (varchar(50), YES, NULL). The books table has columns: book_id (int, NOT NULL, PRIMARY KEY), title (varchar(100), YES, NULL), and author_id (int, YES, NULL, FOREIGN KEY).

STDIN

Input for the program (Optional)

Output:

Field	Type	Null	Key	Default	Extra
author_id	int	NO	PRI	NULL	
name	varchar(50)	YES		NULL	
country	varchar(50)	YES		NULL	

Field	Type	Null	Key	Default	Extra
book_id	int	NO	PRI	NULL	
title	varchar(100)	YES		NULL	
author_id	int	YES	MUL	NULL	

Learning Outcome:

Learned how to create a tables.

Learned how to insert data into the tables.