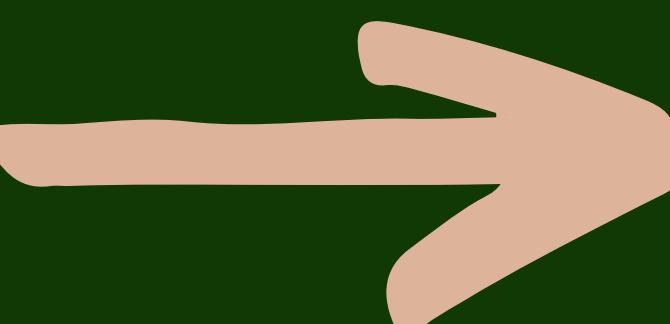




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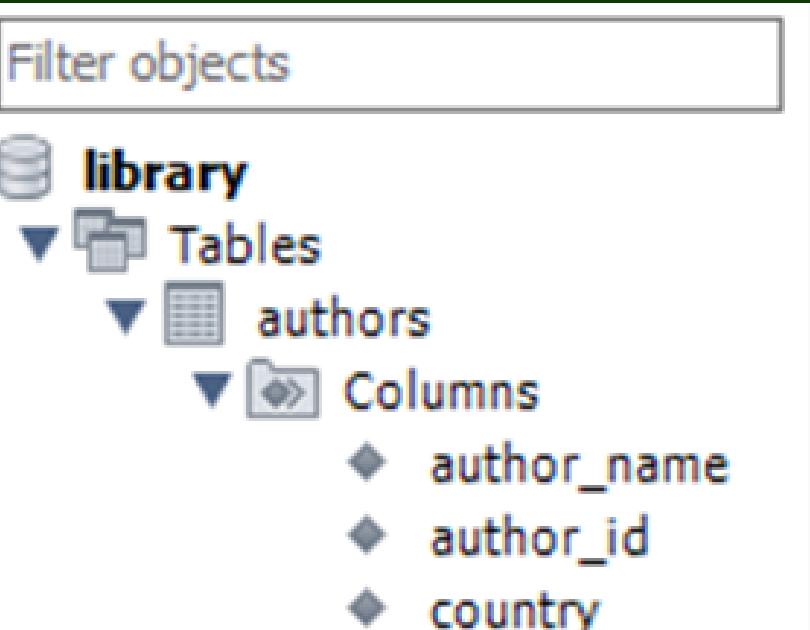


Library Management System Using Sql

CAPSTONE PROJECT PART_04

Write SQL statements to create the Authors and Books tables.

Creation Of Authors Table:



```
1 • CREATE DATABASE LIBRARY;
2 • USE LIBRARY;
3 • CREATE TABLE AUTHORS(
4   author_name VARCHAR(20) NOT NULL,
5   author_id INT PRIMARY KEY,
6   country VARCHAR(20));
```

Creation Of Books Table:



```
9 • CREATE TABLE Books (
10   book_id INT PRIMARY KEY AUTO_INCREMENT,
11   title VARCHAR(50) NOT NULL,
12   genre VARCHAR(50),
13   pages INT,
14   author_id INT,
15   FOREIGN KEY (author_id) REFERENCES Authors(author_id));
16 );
```

Insert the sample data into the Authors table

Insertion in Authors Table:

```
INSERT INTO Authors (author_name, country) VALUES
('J.K. Rowling', 'UK'),
('George Orwell', 'UK'),
('J.R.R. Tolkien', 'South Africa');
SELECT * FROM Authors;
```

Output:

author_id	author_name	country
1	J.K. Rowling	UK
2	George Orwell	UK
3	J.R.R. Tolkien	South Africa
NONE	NONE	NONE

Insert the sample data into the Books table

Insertion in Books Table:

```
INSERT INTO Books (title, genre, pages, author_id) VALUES
('Harry Potter and the Philosopher\''s Stone', 'Fantasy', 223, 1),
('1984', 'Dystopian', 328, 2),
('The Hobbit', 'Fantasy', 310, 3),
('Animal Farm', 'Political Satire', 112, 2),
('The Lord of the Rings', 'Fantasy', 1178, 3);
SELECT * FROM Books;
```

Output:

book_id	title	genre	pages	author_id
1	Harry Potter and the Philosopher's Stone	Fantasy	223	1
2	1984	Dystopian	328	2
3	The Hobbit	Fantasy	310	3
4	Animal Farm	Political Satire	112	2
5	The Lord of the Rings	Fantasy	1178	3
NULL	NULL	NULL	NULL	NULL

Write an SQL query to display all books along with their authors' names using a LEFT JOIN.

Sql Query:

```
SELECT Books.title, Authors.author_name AS author_name  
FROM Books  
LEFT JOIN Authors ON Books.author_id = Authors.author_id;
```

Output:

title	author_name
Harry Potter and the Philosopher's Stone	J.K. Rowling
1984	George Orwell
The Hobbit	J.R.R. Tolkien
Animal Farm	George Orwell
The Lord of the Rings	J.R.R. Tolkien

Update the country of 'J.R.R. Tolkien' to 'UK' in the Authors table.

Sql Query:

```
SET SQL_SAFE_UPDATES = 0;  
UPDATE Authors  
SET country = "UK"  
WHERE author_name = "J.R.R. Tolkien";  
SELECT * FROM Authors;
```

Output:

	author_id	author_name	country
1		J.K. Rowling	UK
2		George Orwell	UK
3		J.R.R. Tolkien	UK

Delete the book with the title '1984' from the Books table

Sql Query:

```
DELETE FROM Books
```

```
WHERE title = '1984';
```

```
SELECT * FROM Books;
```

Output:

book_id	title	genre	pages	author_id
1	Harry Potter and the Philosopher's Stone	Fantasy	223	1
3	The Hobbit	Fantasy	310	3
4	Animal Farm	Political Satire	112	2
5	The Lord of the Rings	Fantasy	1178	3
NULL	NULL	NULL	NULL	NULL

Write an SQL query to sum the number of pages for each genre using the SUM function and the GROUP BY clause

Sql Query:

```
SELECT genre, SUM(pages) AS total_pages  
FROM Books  
GROUP BY genre;
```

Output:

genre	total_pages
Fantasy	1711
Political Satire	112