

Assignment 2: Design a database schema for a library system, including tables, fields, and constraints like NOT NULL, UNIQUE, and CHECK. Include primary and foreign keys to establish relationships between tables.

SOLUTION:

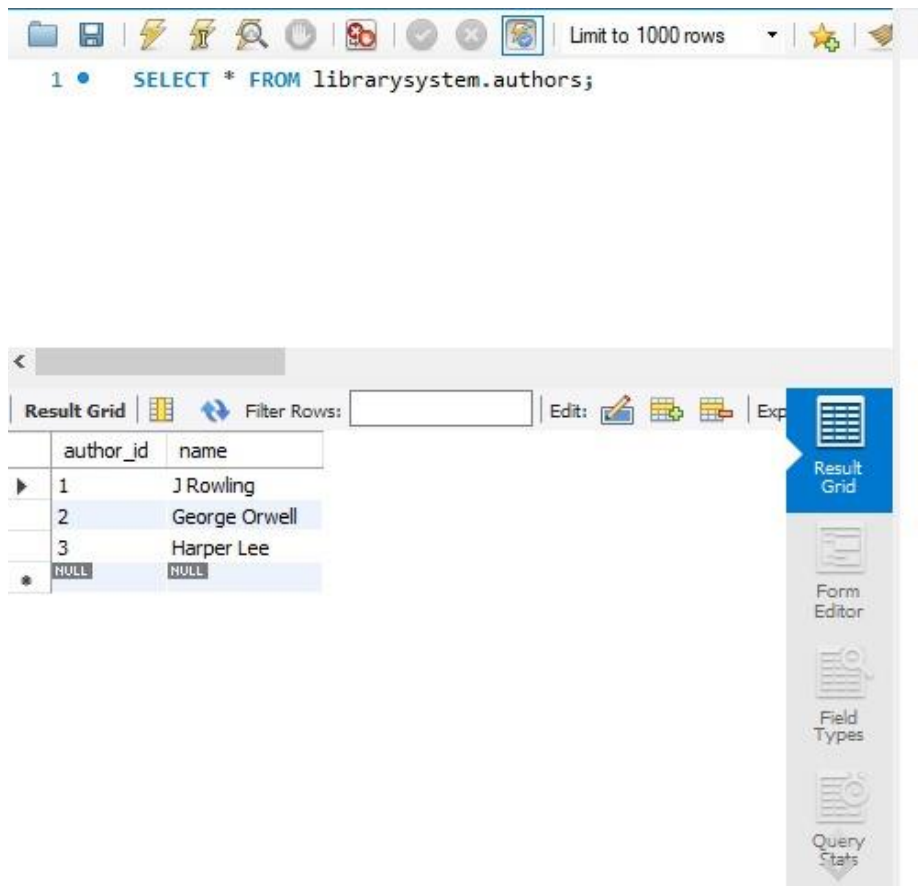
```
CREATE TABLE Authors (  
  author_id INT PRIMARY KEY,  
  name VARCHAR(100) NOT NULL  
);
```

```
CREATE TABLE Members (  
  member_id INT PRIMARY KEY,  
  name VARCHAR(100) NOT NULL,  
  email VARCHAR(100) UNIQUE NOT NULL  
);
```

```
CREATE TABLE Books (  
  id INT PRIMARY KEY,  
  title VARCHAR(200) NOT NULL,  
  isbn VARCHAR(13) UNIQUE NOT NULL,  
  author_id INT NOT NULL,  
  FOREIGN KEY(author_id) REFERENCES Authors(author_id),
```

publication_year INT CHECK (publication_year >= 0)
);

OUTPUT:






The screenshot shows a database management interface. At the top, a toolbar contains various icons for file operations, execution, and settings. Below the toolbar, a SQL query is entered in a text area: `1 • SELECT * FROM librarysystem.authors;`. The query is executed, and the results are displayed in a table below. The table has two columns: `author_id` and `name`. It contains three rows of data: J Rowling (author_id 1), George Orwell (author_id 2), and Harper Lee (author_id 3). A fourth row is highlighted with a blue background and contains `NULL` for both columns. To the right of the table, a vertical sidebar contains icons for 'Result Grid' (selected), 'Form Editor', 'Field Types', and 'Query Stats'.

author_id	name
1	J Rowling
2	George Orwell
3	Harper Lee
NULL	NULL

1 • `SELECT * FROM librarysystem.members;`

Result Grid

Filter Rows:

Edit:    Exp

	member_id	name	email
▶	1	John Doe	john@example.com
	2	Jane Smith	jane@example.com
*	NULL	NULL	NULL

Result Grid







Form Editor

Field Types

1 • `SELECT * FROM librarysystem.books;`

Result Grid

Filter Rows:

Edit:    Export/Import:   Wrap Cell Content: 

	id	title	isbn	author_id	publication_year
▶	1	Harry Potter and the Sorcerer s Stone	9780590353427	1	1997
	2	1984	9780451524935	2	1949
	3	To Kill a Mockingbird	9780061120084	3	1960
*	NULL	NULL	NULL	NULL	NULL

Result Grid

Form Editor

Field Types

Query Stats