ASSIGNMENT – 3

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COURSE: DATABASE MANAGEMENT SYSTEM

COURSE CODE: CSA0593

SCENERIO:

Create a database schema for managing an online bookstore. The schema should include tables for Books, Authors, Genres, and Customers. Define the relationships between these tables. The Books table should store information like book title, price, and the author ID. The Authors table should store author name and biography. The Genres table should store genre names. The Customers table should store customer information like name, email, and address.

Database Schema for an Online Bookstore

1. Books Table

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| book\_id | INT | Primary Key, Auto-Increment |
| title | VARCHAR(100) | Title of the book |
| price | DECIMAL(10,2) | Price of the book |
| author\_id | INT | Foreign Key referencing the Authors table |
| genre\_id | INT | Foreign Key referencing the Genres table |

2. Authors Table

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| author\_id | INT | Primary Key, Auto-Increment |
| name | VARCHAR(100) | Name of the author |
| biography | TEXT | Biography of the author |

3. Genres Table

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| genre\_id | INT | Primary Key, Auto-Increment |
| genre\_name | VARCHAR(50) | Name of the genre |

4. Customers Table

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| customer\_id | INT | Primary Key, Auto-Increment |
| name | VARCHAR(100) | Name of the customer |
| email | VARCHAR(100) | Email address of the customer |
| address | VARCHAR(255) | Address of the customer |

Relationships:

* One-to-Many Relationship:
  + An author can write many books.
  + A genre can have many books.
* Many-to-Many Relationship:
  + A customer can buy many books.
  + A book can be bought by many customers.

To represent the many-to-many relationship between Customers and Books, we'll introduce a junction table:

5. Orders Table

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| order\_id | INT | Primary Key, Auto-Increment |
| customer\_id | INT | Foreign Key referencing the Customers table |
| book\_id | INT | Foreign Key referencing the Books table |
| quantity | INT | Quantity of the book ordered |
| order\_date | DATETIME | Date the order was placed |

This schema provides a solid foundation for an online bookstore database. It can be further extended to include additional features like reviews, ratings, shopping carts, and order tracking.