

**Write SQL statements to CREATE a new database and tables that reflect the library schema you designed earlier. Use ALTER statements to modify the table structures and DROP statements to remove a redundant table.**

-- Create a new database

```
CREATE DATABASE LibraryDB;
```

-- Use the newly created database

```
USE LibraryDB;
```

-- Create tables

```
CREATE TABLE Authors (  
    AuthorID INT PRIMARY KEY AUTO_INCREMENT,  
    AuthorName VARCHAR(100) NOT NULL  
);
```

```
CREATE TABLE Books (  
    BookID INT PRIMARY KEY AUTO_INCREMENT,  
    Title VARCHAR(255) NOT NULL,  
    ISBN VARCHAR(20) NOT NULL,  
    AuthorID INT,  
    PublicationYear INT,  
    FOREIGN KEY (AuthorID) REFERENCES Authors(AuthorID)  
);
```

```
CREATE TABLE Users (  
    UserID INT PRIMARY KEY AUTO_INCREMENT,  
    Username VARCHAR(50) NOT NULL,  
    Email VARCHAR(100) NOT NULL
```

```
);
```

```
CREATE TABLE Checkouts (  
    CheckoutID INT PRIMARY KEY AUTO_INCREMENT,  
    UserID INT,  
    BookID INT,  
    CheckoutDate DATE,  
    ReturnDate DATE,  
    FOREIGN KEY (UserID) REFERENCES Users(UserID),  
    FOREIGN KEY (BookID) REFERENCES Books(BookID)  
);
```

```
-- Alter table structure (example: add a column)
```

```
ALTER TABLE Books  
ADD COLUMN Genre VARCHAR(50);
```

```
-- Drop a redundant table
```

```
DROP TABLE RedundantTable;
```