CREATE DATABASE LibraryDB;

GO

USE LibraryDB;

GO

CREATE TABLE [User] (

ID INT IDENTITY(1,1) PRIMARY KEY,

Name NVARCHAR(100) NOT NULL,

Email NVARCHAR(100) NOT NULL UNIQUE,

Password NVARCHAR(255) NOT NULL,

Address NVARCHAR(255) NOT NULL,

Role NVARCHAR(10) CHECK (Role IN ('Admin', 'Member')) NOT NULL,

CreatedAt DATETIME DEFAULT GETDATE()

);

CREATE TABLE Book (

ID INT IDENTITY(1,1) PRIMARY KEY,

Title NVARCHAR(200) NOT NULL,

Author NVARCHAR(100) NOT NULL,

Category NVARCHAR(100) NOT NULL,

CoverImageUrl NVARCHAR(500) NOT NULL,

Description NVARCHAR(MAX) NULL,

Quantity INT NOT NULL CHECK (Quantity >= 0)

);

CREATE TABLE BorrowHistory (

ID INT IDENTITY(1,1) PRIMARY KEY,

MemberId INT NOT NULL,

BookId INT NOT NULL,

BorrowedAt DATETIME DEFAULT GETDATE(),

ReturnedAt DATETIME NULL,

FOREIGN KEY (MemberId) REFERENCES [User](ID),

FOREIGN KEY (BookId) REFERENCES Book(ID)

);

CREATE TABLE BorrowRequest (

ID INT IDENTITY(1,1) PRIMARY KEY,

MemberId INT NOT NULL,

BookId INT NOT NULL,

Status BIT NOT NULL, -- 1: Approved, 0: Pending/Rejected

RequestedAt DATETIME DEFAULT GETDATE(),

ApprovedAt DATETIME NULL,

FOREIGN KEY (MemberId) REFERENCES [User](ID),

FOREIGN KEY (BookId) REFERENCES Book(ID)

);

CREATE TABLE MemberNotification (

ID INT IDENTITY(1,1) PRIMARY KEY,

MemberId INT NOT NULL,

SeenStatus BIT NOT NULL DEFAULT 0,

Message NVARCHAR(MAX) NOT NULL,

FOREIGN KEY (MemberId) REFERENCES [User](ID)

);

ALTER TABLE BorrowHistory ADD ReturnRequested BIT NOT NULL DEFAULT 0;

|  |  |
| --- | --- |
| ID (Auto increment) |  |
| Name |  |
| Email |  |
| Password |  |
| Address |  |
| Role (Admin or Member) |  |
| CreatedAt |  |

Book:

|  |  |
| --- | --- |
| ID (Auto increment) |  |
| Title |  |
| Author |  |
| Category |  |
| CoverImageUrl |  |
| Description (nullable) |  |
| Quantity |  |

BorrowHistory:

|  |  |
| --- | --- |
| ID (Auto increment) |  |
| MemberId (foreign key) |  |
| BookId (foreign key) |  |
| BorrowedAt |  |
| ReturnedAt |  |
| ReturnRequested |  |

BorrowRequest:

|  |  |
| --- | --- |
| ID (Auto increment) |  |
| MemberId (foreign key) |  |
| BookId (foreign key) |  |
| Status (boolean) |  |
| RequestedAt |  |
| ApprovedAt (nullable) |  |

MemberNotification:

|  |  |
| --- | --- |
| ID (Auto increment) |  |
| MemberId (foreign key) |  |
| SeenStatus |  |
| Message |  |