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.

```
CREATE TABLE Authors (
    AuthorID INT PRIMARY KEY NOT NULL,
    Name VARCHAR(255) NOT NULL UNIQUE,
    Biography TEXT NULL
);

CREATE TABLE Categories (
    CategoryID INT PRIMARY KEY NOT NULL,
    CategoryName VARCHAR(255) NOT NULL UNIQUE
);

CREATE TABLE Books (
    BookID INT PRIMARY KEY NOT NULL,
    Title VARCHAR(255) NOT NULL,
    AuthorID INT NOT NULL,
    CategoryID INT NOT NULL,
    ISBN VARCHAR(13) NOT NULL UNIQUE,
    Publisher VARCHAR(255) NOT NULL,
    Year YEAR NOT NULL CHECK (Year BETWEEN 1000 AND YEAR(CURDATE())),
    CopiesAvailable INT NOT NULL CHECK (CopiesAvailable >= 0),
    FOREIGN KEY (AuthorID) REFERENCES Authors (AuthorID),
    FOREIGN KEY (CategoryID) REFERENCES Categories (CategoryID)
);

CREATE TABLE Members (
    MemberID INT PRIMARY KEY NOT NULL,
    Name VARCHAR(255) NOT NULL,
    Email VARCHAR(255) NOT NULL UNIQUE,
```

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    Phone VARCHAR(15) NOT NULL UNIQUE,
    JoinDate DATE NOT NULL
);

CREATE TABLE Loans (
    LoanID INT PRIMARY KEY NOT NULL,
    BookID INT NOT NULL,
    MemberID INT NOT NULL,
    LoanDate DATE NOT NULL,
    ReturnDate DATE NULL CHECK (ReturnDate >= LoanDate),
    FOREIGN KEY (BookID) REFERENCES Books (BookID),
    FOREIGN KEY (MemberID) REFERENCES Members (MemberID)
);
```