**LIBRARY MANAGEMENT SYSTEM**

Query for Databases and tables  
  
Create Database libraryManagementSystem

-- Creating the "members" table

CREATE TABLE members (

id INT PRIMARY KEY,

first\_name VARCHAR(25) NOT NULL,

last\_name VARCHAR(25) NOT NULL,

email VARCHAR(50) NOT NULL,

date\_of\_birth DATE

);

-- Creating the "books" table

CREATE TABLE books (

id INT PRIMARY KEY,

title VARCHAR(150) NOT NULL,

author VARCHAR(50),

publisher VARCHAR(50),

publication\_date DATE,

genre VARCHAR(30),

price NUMERIC(5,2) NOT NULL,

barcode CHAR(10) NOT NULL,

rating SMALLINT,

review\_count INT,

total\_copies INT NOT NULL,

available\_copies INT NOT NULL

);

-- Creating the "waitlists" table

CREATE TABLE borrowed\_books (

id INT PRIMARY KEY,

member\_id INT NOT NULL,

book\_id INT NOT NULL,

borrow\_date DATE NOT NULL,

due\_date DATE NOT NULL,

return\_date DATE,

FOREIGN KEY (member\_id) REFERENCES members(id),

FOREIGN KEY (book\_id) REFERENCES books(id)

);

-- Creating the "waitlists" table

CREATE TABLE waitlists (

id INT PRIMARY KEY,

member\_id INT NOT NULL,

book\_id INT NOT NULL,

requested\_time TIMESTAMP NOT NULL,

FOREIGN KEY (member\_id) REFERENCES members(id),

FOREIGN KEY (book\_id) REFERENCES books(id)

);

Notes:  
  
available\_copies should make Nullable since there is scenario if only 1 copy of a book is totally available and its already rented , in such cases available\_copy will be zero hence should accept null.

Used Entity Framework Codefirst approach .