contains

Shelf

Requests

adds

Librarian

Book

Library Card

Person

1 1

has

1

M

Checks Out

M N

M 1

M

1

Library Card

|  |  |  |
| --- | --- | --- |
| Id | Pin # | dateIssued |

Person

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| id | DOB | Fname | Lname | Pin # | libraryCardNum |

Book

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id | Author  FName | Author  Lname | Title | Desc | Genre | Checked  OutBy | dateOut | dueDate | addedBy | shelf |

Request

|  |  |  |
| --- | --- | --- |
| id | pid | bid |

Librarian

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id | Fname | Lname | startDate | DOB | Pin # | username |

Shelf

|  |  |  |
| --- | --- | --- |
| id | Location | floor |

QUERIES:

**CREATE TABLES:**

CREATE TABLE libraryCard(

id INT AUTO\_INCREMENT ,

pinNum INT UNIQUE NOT NULL ,

dateIssued DATE,

PRIMARY KEY ( id, pinNum )

) ENGINE = INNODB;

CREATE TABLE Person (

id int AUTO\_INCREMENT PRIMARY KEY,

DOB date,

fname varchar(255) NOT NULL,

lname varchar(255) NOT NULL,

libraryCardNum int DEFAULT NULL,

pinNum int DEFAULT NULL,

FOREIGN KEY (libraryCardNum, pinNum) references libraryCard (id, pinNum) ON DELETE SET NULL ON UPDATE CASCADE)ENGINE = INNODB;

CREATE TABLE Librarian (

id int PRIMARY KEY AUTO\_INCREMENT,

DOB date,

fname varchar(255) NOT NULL,

lname varchar(255) NOT NULL,

startDate date,

pinNum int NOT NULL UNIQUE,

userName varchar(255) NOT NULL UNIQUE)ENGINE = INNODB;

CREATE TABLE Shelf(

id int PRIMARY KEY AUTO\_INCREMENT,

location ENUM('North Wing', 'East Wing', 'South Wing', 'West Wing'),

floorNum int

)ENGINE = INNODB;

CREATE TABLE Book(

id int PRIMARY KEY AUTO\_INCREMENT,

authorFName varchar(255) NOT NULL,

authorLName varchar(255) NOT NULL,

title varchar(255) UNIQUE NOT NULL,

genre varchar(255) NOT NULL,

description text,

checkedOutBy int DEFAULT NULL,

dateOut Date,

dueDate Date,

addedBy int NOT NULL,

shelf int NOT NULL,

FOREIGN KEY (checkedOutBy) references Person (id),

FOREIGN KEY (addedBy) references Librarian (id),

FOREIGN KEY (shelf) references Shelf (id)

)ENGINE = INNODB;

CREATE TABLE request(

id int PRIMARY KEY AUTO\_INCREMENT ,

pid INT NOT NULL ,

bid INT NOT NULL ,

FOREIGN KEY ( pid ) REFERENCES Person( id ) ,

FOREIGN KEY ( bid ) REFERENCES Book( id )

) ENGINE = INNODB;

**CREATE LIBRARIAN:**

INSERT INTO Librarian (DOB, fName, lName, startDate, pinNum, userName)

VALUES ('1990-03-07', 'Rory', 'Gilmore', CURDATE(), '1234', 'rgilmore');

Hermione Granger

Klaus Baudelaire

**CREATE PERSON:**

INSERT INTO Person (DOB, fname, lname, pinNum)

VALUES ('1967-10-18', 'Ross', 'Geller', '6543');

**CREATE LIBRARY CARD:**

INSERT INTO libraryCard( pinNum, dateIssued )

VALUES ( 6543, CURDATE( ) ) ;

**UPDATE PERSON WITH CARD INFO:**

UPDATE Person SET libraryCardNum = (SELECT libraryCard.id FROM libraryCard WHERE pinNum = 6543) WHERE pinNum = 6543;

**SEARCH FOR PERSON CARD NUMBR AND PIN NUM: -- to validate log in**

SELECT libraryCardNum, pinNum FROM Person;

**SEARCH FOR LIBRARIAN USERNAME AND PIN: --to validate log in**

SELECT username, pinNum FROM Librarian;

**SEARCH FOR PERSON NAME: --to display profile**

SELECT fname, lname

FROM Person

WHERE libraryCardNum =2;

**CREATE SHELF:**

INSET INTO Shelf (‘location’, floorNum’)

VALUES (‘North Wing’, 1);

**CREATE BOOK:**

INSERT INTO Book( authorFName, authorLName, title, genre, description, addedBy, shelf )

VALUES ('J.K.', 'Rowling', 'Harry Potter', 'Youth', 'Book about wizards', 5, 5)

**SELECT BOOKS: --to print Patron table**

SELECT Book.id, authorFName, authorLName, title, genre, description, checkedOutBy, dueDate, Shelf.location AS location, Shelf.floorNum AS floorNum, Person.libraryCardNum AS libNum

FROM Book

INNER JOIN Shelf ON Shelf.id = Book.shelf

LEFT JOIN Person on Person.id = Book.checkedOutBy

**CHECK OUT A BOOK:**

UPDATE Book SET checkedOutBy = ( SELECT id

FROM Person

WHERE libraryCardNum = '2' ), dateOut=curdate(), dueDate=date\_add(curdate(), Interval 10 DAY)

WHERE id =4

**RETURN BOOK:**

UPDATE Book SET checkedOutBy=NULL WHERE id=2

**PATRON BOOK SEARCH:**

SELECT Book.id, authorFName, authorLName, title, genre, description, checkedOutBy, dueDate, Shelf.location AS location, Shelf.floorNum AS floorNum, Person.libraryCardNum AS libNum  
FROM Book  
INNER JOIN Shelf ON Shelf.id = Book.shelf  
LEFT JOIN Person ON Person.id = Book.checkedOutBy  
WHERE authorfName LIKE '%shel%'