

## Relational Schemas

1. Librarian  
(Librarian-ID, First Name, Last Name, Street, City, State, Country, Password)  
Primary Key- Librarian-ID  
Foreign Key- None
2. User  
(User-ID, First Name, Last Name, Role, Street, City, State, Country, Password, unpaid-fines)  
Primary Key- User-ID  
Foreign Key- None
3. Shelf  
(shelf-ID, Capacity)  
Primary Key- shelf-ID  
Foreign Key- None
4. Books  
(ISBN, Author, Rating, Title, current-status, copy-number, Year of publication, shelf-ID, User-ID, Due-Date, Issue-Date, issue-email-date, Hold-Date\_time, Hold-status, hold-email-date)  
Primary Key- ISBN  
Foreign Key- 1) shelf-ID references Shelf(shelf-ID)  
                  2) User-ID references User(User-ID)
5. Keeps\_Track  
(Librarian-ID, User-ID)  
Primary Key- Librarian-ID, User-ID  
Foreign Key- 1) Librarian-ID references Librarian(Librarian-ID)  
                  2) User-ID references User(User-ID)
6. Maintain  
(Librarian-ID, ISBN)  
Primary Key- Librarian-ID, ISBN  
Foreign Key- 1) Librarian-ID references Librarian(Librarian-ID)  
                  2) ISBN references Books(ISBN)
7. Genres  
(Genre-ID, Name)  
Primary Key- Genre-ID  
Foreign Key- None

8. Belongs\_to  
(Genre-ID, ISBN)  
Primary Key- Genre-ID, ISBN  
Foreign Key- 1) Genre-ID references Genres(Genre-ID)  
2) ISBN references Books(ISBN)
9. Favourite  
(Genre-ID, User-ID)  
Primary Key- Genre-ID, User-ID  
Foreign Key- 1) Genre-ID references Genres(Genre-ID)  
2) User-ID references Users(User-ID)
10. Reading\_List  
(ISBN, User-ID, Name)  
Primary Key- ISBN, User-ID  
Foreign Key- 1) ISBN references Books(ISBN)  
2) User-ID references Users(User-ID)
11. Personal\_Book\_Shelf  
(ISBN, User-ID, shelf-Name)  
Primary Key- ISBN, User-ID  
Foreign Key- 1) ISBN references Books(ISBN)  
2) User-ID references Users(User-ID)
12. Return  
(ISBN, User-ID, Return-date, Issue-Date, Fine)  
Primary Key- ISBN, User-ID  
Foreign Key- 1) ISBN references Books(ISBN)  
2) User-ID references Users(User-ID)
13. Rate  
(ISBN, User-ID, Rating, Review)  
Primary Key- ISBN, User-ID  
Foreign Key- 1) ISBN references Books(ISBN)  
2) User-ID references Users(User-ID)
14. Friend  
(Friend-Id, User-ID, Since)  
Primary Key- Friend-ID, User-ID  
Foreign Key- 1) Friend-ID references Users(User-ID)  
2) User-ID references Users(User-ID)

