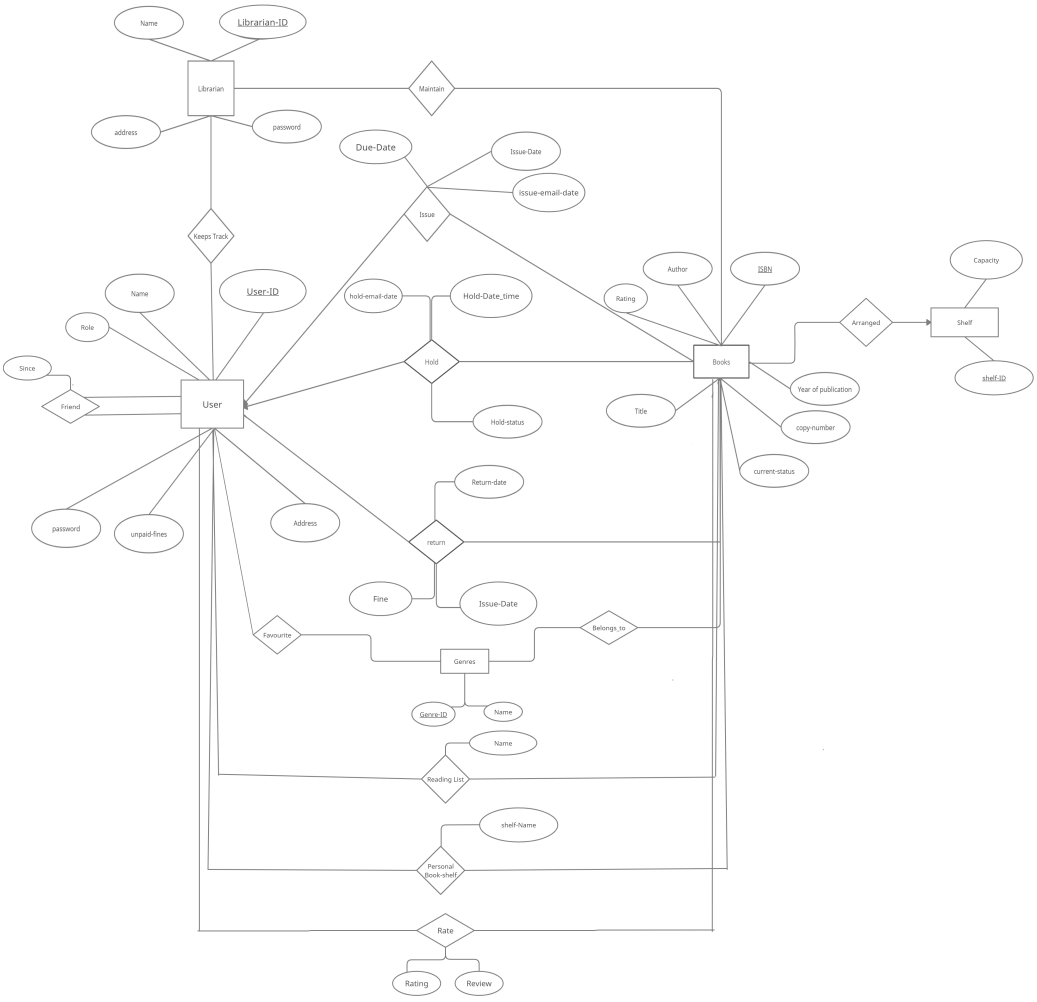
Library Management ER Model

10/April/2020

Deepkamal Singh	Krishanu Saini	Kuldeep Singh	Rahul Kumar
190001011	190001029	190001030	190001049

1 ER MODEL



2 Explanation

2.1 Librarian entity

Contains - (Name, Id - PK, address, password) fields. Librarians will have administer privileges and manage registration of new user, books order and issuing. They will have separate UI screen.

2.2 User entity

Contains information about user (Name, Id - PK, role, address, fines, password etc.). The users are distinguished by roles - student or faculty and will have different features accordingly.

2.3 Books entity

Contains information about books - (ISBN - PK, category, copy-number, year of publication, author, rating, title, shelf-id etc.). This table will be managed by librarian through manages relation. Books are ordered by shelf and category.

2.4 Genre entity

This will contain (genreId-PK, Name). It can be used to derive list of favorite genres read by user. This can be used to predict new suggestions for further readings using machine learning.

2.5 shelf entity

This table contains - (capacity, shelf-Id - PK) ie, the information about shelf and books space present.

2.6 Maintain relation

It is m:n relation, depicts librarians assigned to different books.

2.7 Keep Track relation

It is m:n relation, depicts librarians assigned to different student and classes / years.

2.8 Friend relation

It is m:n relation, depicts if users are friends.

2.9 Issue relation

It is 1:n relation, depicts books issued to a user, contains issue date, due-date and reminder sent date. Used to calculate fines in case overdue.

2.10 Hold Relation

It is 1:n relation, Contains hold-status, hold-date and reminder date. It will store information of books user have hold after due date.

2.11 Return relation

It is m:n relation. Contains Info of all books returned, and fine associated with it.

2.12 Rate relation

It is m:n relation. Contains rating and review given by a user for a book. It can be used to generate net ratings and book suggestions.

2.13 Reading List relation

It is a m:n relation. Contains list of books which users have added to reading wishlist.

2.14 Personal Book-shelf relation

It is a m:n relation. User can create own shelf like in good-reads. to store in modular manner.

2.15 Arranged relation

It is a n:1 relation. It stores list of books are stored in which shelf in the library.

2.16 favorite relation

It is a m:n relation. Contains list of books user have tagged facourite.