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CS203
Q2

- **Entity: Book ->** They are arranged by shelves, and librarians manage the table. It contains the following attributes:
    - ISBN_NO(PK)
    - Title
    - Authors
    - Status
    - Copy_Number
    - Year of Publication

- **Entity: Shelf ->** It has the capacity of the shelf and its type information.It contains the following attributes:
    - Shelf_ID(PK)
    - Capacity

- **Entity: Student ->** They are allowed to put books on hold for 10 days and not to withdraw more than 3 books. It contains the following attributes:
    - Name
    - Student_ID(PK)
    - Password
    - Address
    - Unpaid_Fees

- **Entity: Faculty ->** They aren't subjected to the restrictions that students have. It contains the following attributes:
    - Name
    - Faculty_ID(PK)
    - Password
    - Address
    - Unpaid_Fees

- **Entity: Librarian ->**They have administrator permissions and can manage registration, issuing and order of books. It contains the following attributes:
    - Name
    - Librarian_ID(PK)
    - Password
    - Address

- **Relation: On Shelf ->** Details of books assigned to various shelves.
    - 1:n relation

- **Relations: _Loan ->** 1:n relations for each of Students and Faculty. It is used to send Reminders. If unpaid_fees exceed 1000 for students, then they can't withdraw more books. It contains the attributes:
    - Transaction_ID(PK)
    - Loan_Since
    - Due_Date(derived)
    - Last_remainder_Date

- **Relations: _Hold ->** m:n relations between book and each of Student and Faculty. It is used to track the hold status of Students(not more than 10 days) and Faculty. It contains the attributes:
    - Hold_Since
    - Hold_Till(Derived)

- **Relations: _Read ->** m:n relations between Books and each of Student and Faculty. It is used to store ratings and reviews and then to recommend books to the users. It contains the attributes:
    - Ratings
    - Reviews

- **Relation: Return ->** m:n relation between Book and customer. It is used to keep track of book returns, fees and overdue fines. It contains the attributes:
    - Issue_Date
    - Return_Date

- **Relations: Friend ->** m:n relations for each Student and Faculty which contains lists of friends of the customers