Library Management System
Domain Classes

The main users of the library management system are the librarians and the patrons. The librarian manages the book issues and returns for the library. The main functionalities of the system will be the issue of book, return of book and searching for a book. From the defined scope the following are found to be the domain classes for the system to be developed:

1) <u>Library</u>
   Overview : This is the core part of the system that will consist of the classes like 'Library Books' and 'Librarian'.
   Attributes : none (this is a higher level entity)
   Relationships and associations : a library has one or more librarians and many Library books.

2) <u>Librarian</u>
   Overview : The library has one or more librarians who manage the 'Request' from patrons.
   Attributes : LibraianID, Name, Password
   Relationships and associations : one librarian manages one request from a patron at one time. As a result of processing the request they update the books issued class.

3) <u>Patron</u>
   Overview : The patron uses few entities of the system like the request and search entity. They just provide inputs to the system, they do not directly change the state of the system.
   Attributes : patronNo, Name, userType, fine
   Relationships and Associations : -none-

4) <u>Library Books</u>
   Overview : This class contains the information about all the books available in the library.
   Attributes : ISBN, bookId, title, author, category, shelf, availability
   Relationships and associations : -none-

5) <u>Books Issued</u>

   Overview : This class contains information about the books that have been issued to the patrons.

   Attributes: ISBN, Patron_Id, Issue_Date, Return_Date, fine_incurred, Availability

   Relationships and associations: It is updated by the Librarian once a request is made by the patron. This is a subclass of the library books.

6) <u>Request</u>

   Overview: The patron requests the librarian for a book issue or book return.

   Attributes: -none-

   Relationships and associations: -none-

7) <u>Search</u>

   Overview: The patron searches for the desired book from all the books available in the library.

   Attributes: -none-

   Relationships and associations: -none-

Team Members:
21z256 - Shruti S
22z431 - Aishwarya R