

# DBMS Assignment Proposal

## Section 1:

### Domain Description

This is a web portal to buy and sell Books and Items. Each person has to create an account on the site and then sign in with the account. He/she can then put up books or items up for sale. One can also put up that they want to buy a particular book or item. He/she can search for books and items put up by others. Along with each listing, the buyer/seller's name and phone number is displayed, so that the buyer/seller can be contacted.

## Section 2:

### Constraints

Length of all fields except item description is 50 characters. Maximum length of item description is 500 characters. Only 10 digit mobile numbers are allowed for phone number. User's password has to be minimum 8 characters, maximum 20 characters.

## Section 3:

### Functionality

When a user signs up, along with username and password, he/she has to fill up his/her Name and Phone number. User can put up books and items for sale, and books and items wanted. A book is uniquely identified by book\_id and has properties like title, author, publisher, edition, year of publishing, condition and cost. An item is uniquely identified by item\_id and has the properties name, description, cost.

Users can search for items and books based on a specific property such as author (for books) or name (for items). There would be an option to select whether the search results should consist of books/items for sale or books/items required by someone. The user can edit the details of his/her listing, and on the same screen, once a book or item is sold, the user can go and set it as sold, and it will be deleted.

## Section 4:

### GUI Interfaces

1. Home Screen/ Login Screen – Default screen when un-logged in user opens site. User logs in here
2. Signup screen – User can sign up. One has to enter his/her username, password, name and phone number
3. User Dashboard – Default screen that loads up when user logs in. Contains links to different features of the website
4. Edit Details – User can edit their details such as phone number and name
5. Add Book Screen – User can add book for sale/ want to buy
6. Add Item Screen – User can add item for sale/ want to buy

7. Edit Listing – User can edit listings put up by him/her or set it as sold to delete it. This also provides an option to export the list of books/items put up by the user to a text file, which can be downloaded
8. Search Listing Screen – Lists books/items with name and contact number of the person who put it up, based on search term and options provided by the user. Also provides an option to export the results to a text file, which the user can download

#### Section 5:

##### Technology used

Node.js with express framework is used for the website, hence most of the code is written in javascript. This platform was used as some of the members were already familiar with it, and it is easy for the others to learn. The express framework comes inbuilt with a server. MySQL is used for the database. Database is interfaced using node.js package mysql. Passwords are salted and hashed using pbkdf2 before storing in database. Cookies implemented using jsonwebtoken. HTML pages will be created using ejs templating.

#### Section 6:

##### Members of group

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