**Mini Project 2**

**Library Management System is a computer based system that is designed to keep track of the books that are in library and the users that are using the library services. As part of this mini-project you are required to use Object Oriented Programming Concepts and design and implement a system that can do the following. (Note that file handling is not required. So, we will not be using it)**

**For Library Users**

1. Type of library user (student, teacher or librarystaff)
2. User account number (for students it can be the roll number, for teachers and staff it can be the employee code)
3. List of books that the user has currentlyissued.
4. Maximum number of books that a particular user is allowed to issue. (3 for student, 5 for staff, 10 for teachers)
5. Return Date for each issued book. (this is the date before which user must return the books otherwise they will have to pay some fine, 7 days for students, 21 days for staff, 3 months forteachers)
6. Total fine on a user (at the rate of Rs.10/- per lateday)

**For Books**

1. Title of book
2. Author (or list of Authors) of that book
3. Year of publication
4. Library Code for the book
5. ISBN (International Standard Book Number)
6. Category e.g. CS, EE, English, Bioetc.
7. Status of book (Available, Issued, Lost, On Order)
8. If Issued, Account number of the user to whom the book is issued.
9. Total number of copies of the book
10. Copy Number

**For Newspapers / Magazines /Journal**

1. Name of Newspaper / Magazine /Journal
2. Date of publication
3. Library Code
4. Status (Available / Lost /Archived)
5. Category e.g. CS, EE, English, Bioetc.

Your System should be able to perform the following tasks.

Library staff members should be able to perform the following tasks.

1. List books according to theircategory
2. Check status of anybook.
   1. Available / Issued / Lost / OnOrder
   2. If Issued, Name and Account Number ofUser
3. Check account information of any user
   1. Number of Books Issued
   2. List of books Issued with ReturnDate
4. Issue books
5. Retur nbooks
6. Re-issuebooks
7. Remove fine of anyuser
8. Enter New Books (all information about abook)

Library Users should be able to perform the following tasks.

1. List books according to theircategory
2. Check status of anybook.
   1. Available / Issued / Lost / OnOrder
3. Re-Issue Books (Only before the ReturnDate)
4. Check the following information about theiraccount
   1. Number of BooksIssued
   2. List of books Issued with Return Date The System should automatically update fines of auser.

**MENU:**

**Login Screen:**

1. **If Student orTeacher**
   1. Search books toissue

*List the available categories and display books according to the category specified*

*Book availability must be written. To whom a book is issued and return date must be mentioned*

* + 1. Choose aCategory
       1. IssueBook
  1. See issuedbooks

*Return dates must be included Book category must be included*

* 1. Returnbooks
  2. Re- Issuebooks

*List the issued books and give option to choose the book to re- issue*

1. **IfStaff**
   1. Search forbooks

*List the available categories and display books according to the category specified*

*Book availability must be written. To whom a book is issued and return date must be mentioned*

1. Choose aCategory
   1. IssueBook
2. See issued books(by them and by any student orteacher)
   1. Byyou

*Return dates must be included Book category must be included*

* 1. ByMembers
     1. List all the issued books with member who issued and returndate.

*Return dates must be included Book category must be included*

1. Issue books
2. Returnbooks
3. Re- Issuebooks

*List the issued books and give option to choose the book to re- issue*

1. Remove Fine
2. Enter Newbooks