

United International University

Project Report

CSI 212: Object Oriented Programming

**Title: Library Management System**

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**Brief Description:**

**Abstract**

The library contains so many books and members which must be organized in order to prevent chaos.  As our technology improves, we start to see more and more the enormous amount of help which we can receive from computers.  Therefore, the logical and simple solution to this organization problem is to computerize the whole library system.

    For this purpose, we built a system which can help all the libraries in the world: A "Computerized Library System" .  Our system has a GUI (graphical user interface) on the internet which allows all of the members, both readers and librarians, a full function access to the library system through the Internet.

**Goal**

    The goal of this project is to create a system for library management. The system will allow performance of the actions needed in order to manage the library in a simple and comfortable way.  The actions will include addition/removal of books, addition/removal of members, member and book and much more. The system in parallel to the user actions keeps a basic security level which prevents access or modifications of data by users which don't possess the proper permissions.

**Features:**

Users of the System

1. Admin
2. Librarian
3. Students

Functional Requirements

**1. Admin**

1. Can add/view/delete librarian
2. Can add/view/delete students
3. Can logout

**2. Librarian**

1. Can add/view books
2. Can issue books
3. View issued books
4. Return Books
5. Can logout

**3. Student**

1. Can view books
2. Can issue books
3. View issued books
4. Return Books
5. Can logout

**File/Database Structure (if any):**

1. I use 3 columns for admin login database where 1st column takes id, 2nd column takes name and 3rd column takes password. I set Id as primary it always increases by 1 after every input. When an admin gives his/her name and password it checks whether it is valid or not. If his/her name and password are available in the admin database then he/she can access.
2. I use 7 columns for librarian database where 1st column takes id, 2nd column takes name and 3rd column takes password,4rd column takes email,5th column takes address,6th column takes city,7th column takes contact. I set Id as primary it always increases by 1 after every input. When a librarian gives his/her name and password it checks whether it is valid or not. If his/her name and password are available in the librarian database then he/she can access.
3. I use 8 columns for student database where 1st column takes id, 2nd column takes name and 3rd column takes password,4rd column takes email,5th column takes department,6th column takes university,7th column takes contact,8th column takes university id no. I set Id as primary it always increases by 1 after every input. When a student gives his/her name and password it checks whether it is valid or not. If his/her name and password are available in the student database then he/she can access.
4. I use 8 columns for books database where 1st column takes id, 2nd column takes call no and 3rd column takes name ,4rd column takes author,5th column takes publisher,6th column takes quantity,7th column takes issued no,8th column takes date of added no. I set Id as primary it always increases by 1 after every input. I also set the publish date as on update it always update date of input.
5. I use 6 columns for issue books database where 1st column takes id, 2nd column takes book call no and 3rd column takes librarian id,4rd column takes librarian name,5th column takes librarian contact,6th column takes issue date. I set Id as primary it always increases by 1 after every input. I also set the issue date as on update it always updates date of input.
6. I use 6 columns for student issued books database where 1st column takes id, 2nd column takes book call no and 3rd column takes student id,4rd column takes student name,5th column takes student contact,6th column takes issue date. I set Id as primary it always increases by 1 after every input. I also set the issue date as on update it always updates date of input.

**Conclusion:** We learn lots of things about how to create database and its connection. How to solve problem if it is not worked easily. How to manage every lines of code for making a project. We learn how to deal with the java code .We like to make a better project when we get the database subject. This knowledge will help us to make a better project in future courses.