

1<sup>st</sup> Year 2<sup>nd</sup> Semester BSc. (Hons) Final Examination 2019

Institute of Information Technology

**Jahangirnagar University**

Savar, Dhaka-1342

ICT 1200: Course Viva

## **Library Management System of IIT**

Submitted To:

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## DECLARATION

This project report is submitted to the Institute of Information Technology, Jahangirnagar University, Savar, Dhaka in partial fulfillment of the requirements for having the B.Sc (Hons.) degree in ICT. This is also needed to certify that the project work is under the 1st Year 2<sup>nd</sup> Semester course of the IIT “ICT-1200: Course Viva”. So, we are here declaring that this project report has not been submitted elsewhere for the requirement of any kind of degree, diploma or publication.

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## ACCEPTANCE

This project report is submitted to the Institute of Information Technology, Jahangirnagar University, Savar, Dhaka in partial fulfillment of the requirements for having the B.Sc. (Hons.) degree in ICT.

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Finally, we convey our regards to our honourable teacher **Dr M Mesbahuddin Sarker** Sir for giving us the opportunity to learn the subject particularly practically.

## ABSTRACT

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library. This project has many features which are generally not available in normal library management systems like facility of admin login through which the admin can monitor the whole system. The librarian after logging into his account can generate various option such as new student, new book, issue book and return book details.

Overall this project of ours is being developed to help staff of library to maintain the library in the best way possible and also reduce the human efforts.

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## Chapter 1

### **Introduction**

#### 1.1 Introduction:

Modern Generation is going to dependable on computer and through computer we use Software. Hence, we are learning java that's why we create an Application for managing library system by using java. By using this, we can store a student's information, issue a book and store a student's information who take a book from this library. Mainly this application are used by Library administration.

#### 1.2 Motivation:

Libraries are essential in a process of giving citizens access to knowledge. In digital times they are needed more than ever before. In our country, library systems are written that's why we make a great use of paper. By making paper we cut trees. It is very harmful for our environment. For our environment, we take this step to reduce this.

### 1.3 Objectives:

The aim of this project is to develop a system that can handle & manage the activities involved in a library in an efficient & reliable way. Less managing personnel & easy searching availability & user profile managing are major goals in this project.

- ❖ Develop a system that can replace the manual library managing system.
- ❖ Develop a database which stores user details & book details.
- ❖ Give reliable search facility for the users.
- ❖ Administrator or librarian should have logins.
- ❖ Create an easy to understand user friendly environment.
- ❖ Attractive user interfaces to navigate through the system for the users.
- ❖ Develop the system documentation with detailed UML specifications.



## Chapter 2

### **Background**

#### 2.1 Introduction:

Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc.

Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non computerized system is used.

All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared to library systems which are not computerized.

#### 2.2 Related Works:

- ❖ Data base connection.
- ❖ Java GUI Application.
- ❖ Java swing application.
- ❖ Unified modelling language.

## 2.3 Scope of the Problem:

- ❖ When connect with Database table .
- ❖ When make a runnable jar file.
- ❖ When make a Exe file.
- ❖ When need to add some of extra jar file.

## 2.4 Challenges:

- ❖ Work with database.
- ❖ Make a runnable jar File.
- ❖ Make jar file to exe File.
- ❖ UMI design.
- ❖ Working with java GUI and Swim.
- ❖ Set specific code for different kinds of  
jbutton, jlabel, jtextfield,jdate,jTable, jpanel  
etc.

## Chapter 3

### **Requirement Specification**

#### **3.1 Requirement Collection & Analysis:**

##### **Software configuration:**

This software package is developed using java as front end which is supported by sun micro system. Microsoft SQL server is the back end to store the database.

Operating system: Windows 7, 8, 10, 11.

Software: NetBeans 8.2 (front end)

Language: java Runtime Environment,

Database: MySQL Database Service

##### **Hardware Configuration:**

Processor: Pentium(R) Dual-core CPU to core-i3

Hard Disk: Minimum 4 GB

RAM: 512 MB or more.

## Chapter 4

### Implementation & Testing

#### 4.1 Implementation of Database:

```
package Project;
import java.sql.*;
import com.mysql.jdbc.Connection;

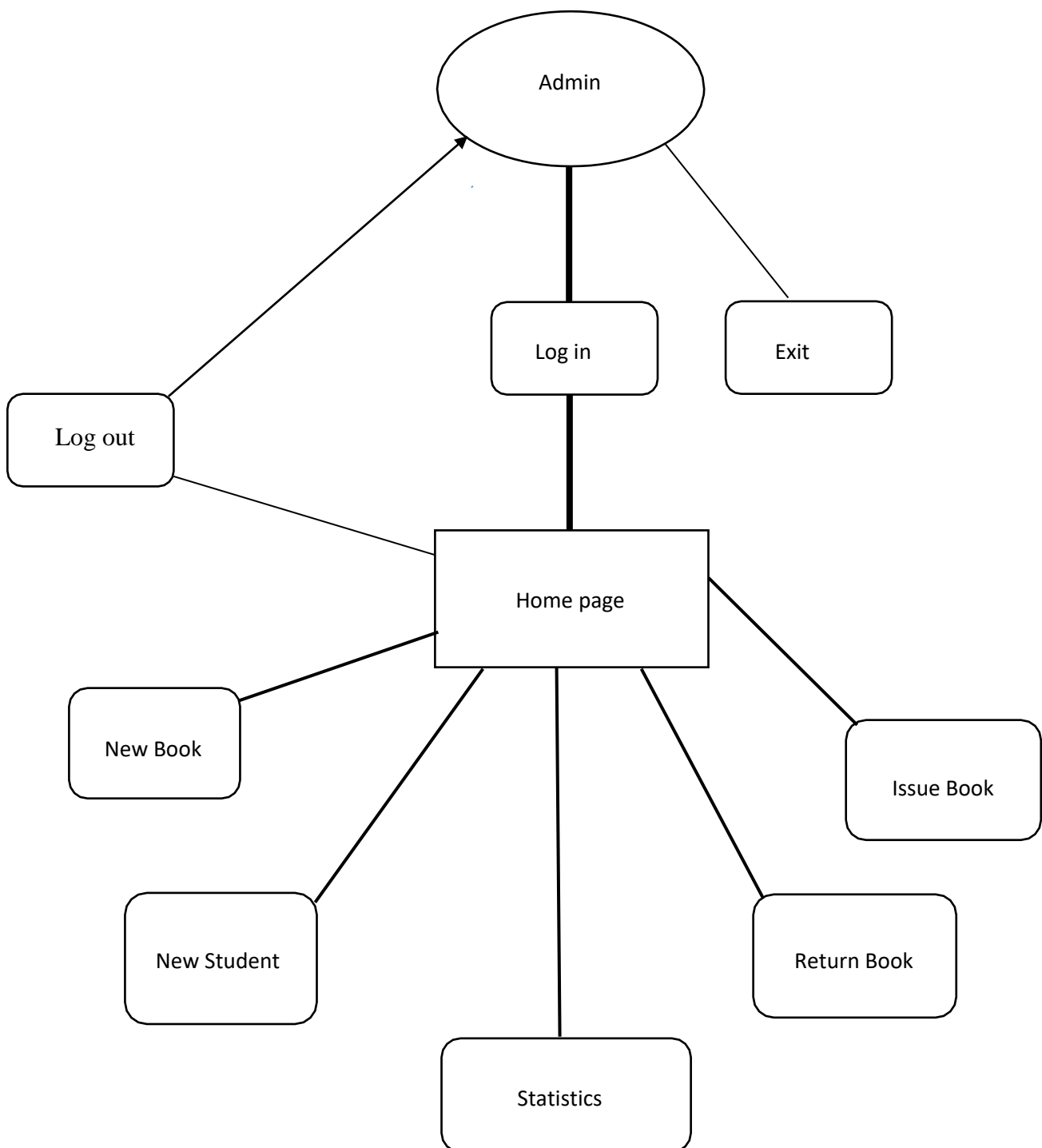
public class ConnectionProvider {
    public static Connection getCon() {
        try {

Class.forName("com.mysql.jdbc.Driver");
Connection con = (Connection)
DriverManager.getConnection("jdbc:mysql:/
/localhost:3306/lmsi", "root", "Mysql");

            return con;

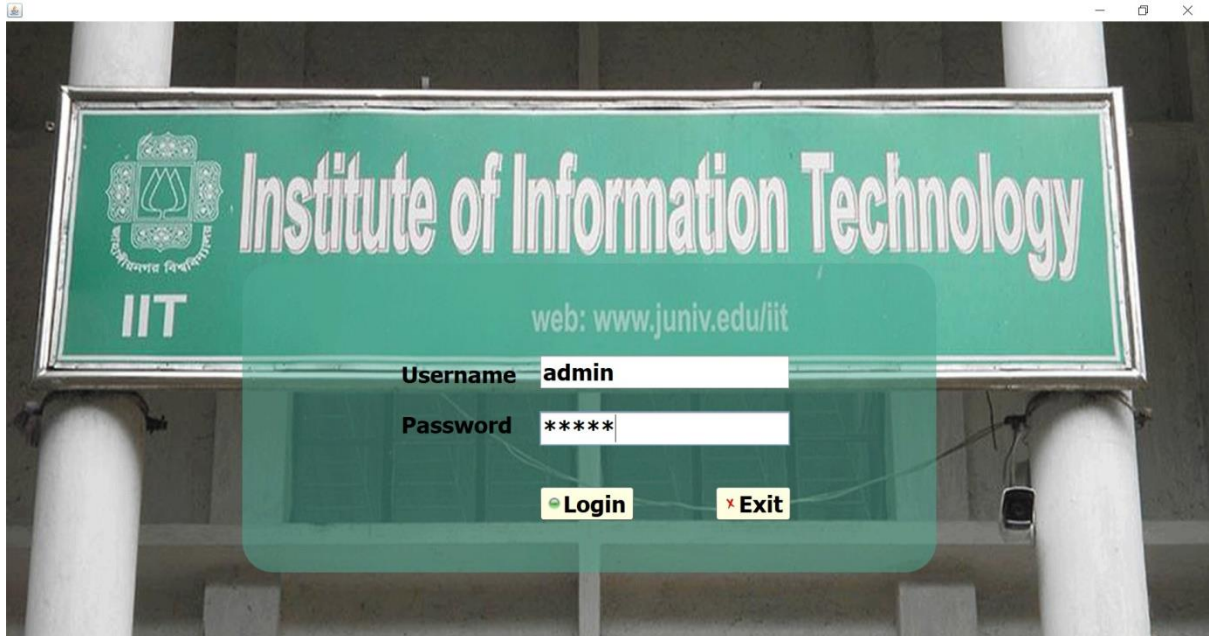
        } catch (Exception e) {
            System.out.println(e);
            return null;
        }
    }
}
```

## 4.2 Context Diagram:

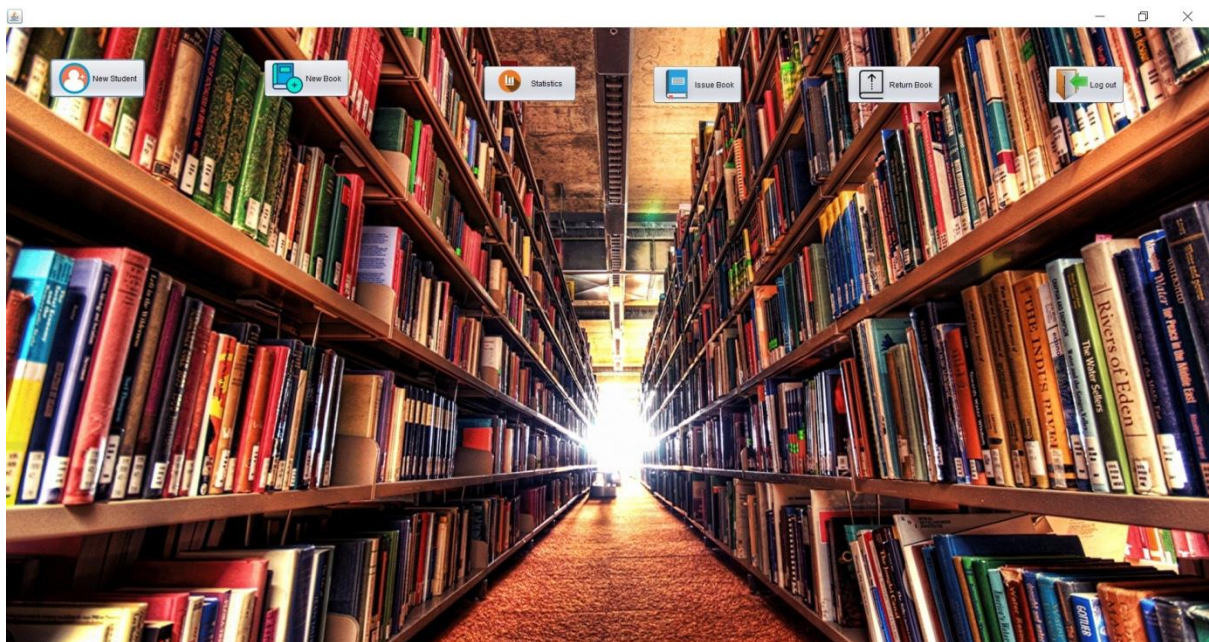


## 4.2 Test Results and Report:

### Login



### Home





## New Student

Student ID:

Name :

Hall :

Batch :

## New Book

Book ID :

Name :

Autor :

Publisher :

Price :

Publish Year :



## Issue Book

New Student New Book Statistics Issue Book Return Book Log out

Book ID : 2

Student ID : 1

Issue Date : 20/8/2021

Due Date : 30/8/2021

Issue Exit

## Return Book

New Student New Book Statistics Issue Book Return Book Log out

Book ID : 2

Student ID : 1 Search

Issue Date : 20/08/2021

Due Date : 30/08/2021

Return Exit



## Statistics

Issue Details					
studentID	name	bookID	name	issueDate	dueDate
1	Gaurav kumar	1	Physics	24-02-2020	29-02-2020
1	Gaurav kumar	1	Physics	25-02-2020	25-02-2020
2	Saurav kumar	3	The water Sellers	24-02-2020	29-02-2020
Return Details					
studentID	name	bookID	name	issueDate	dueDate
2	Saurav kumar	2	Chemistry	24-02-2020	29-02-2020
2	Saurav kumar	1	Physics	24-02-2020	29-02-2020
3	Amit kumar	4	Hindi	24-02-2020	28-02-2020
4	Sumit kumar	5	The indus river	25-02-2020	29-02-2020
					

## Chapter 5

### **Conclusion and Future work**

#### **5.1 Discussion & Conclusion:**

In this application we can entry a new book which has a specific id, price, pages, book name, publisher. We also add a student's information such as name, id, father's name, batch, semester which is help admin when a student issue a book & return a book. If admin wants to see the details information of returning or issuing a book with date, he needs to click just a button on our application.

#### **5.1 Scope for further development:**

We have many scope for developing our Application. We can make this application as Server based application. In our application we don't have student's interaction to this application. We can make this happen in future. We can make this application as an android application which is very helpful to the user and the library authority.

## References

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