



Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
Semester: (Spring, Year:2022), B.Sc. in CSE (Day)

Course Title: Database System Lab
Course Code: CSE-210 Section: 201_DJ

Lab Project Name: GUB Portal Management System

Student Details

Name		ID
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Submission Date : 15/05/2022
Course Teacher's Name : Mahmuda Rahman

[For Teachers use only: **Don't Write Anything inside this box**]

Lab Project Status

Marks:

Signature:

Comments:

Date:

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Chapter 1

Introduction

1.1 Introduction

A Portal Management System is also known as a Student & Teacher Information System . These systems work to coordinate scheduling and communications between faculty regarding students. GUB Portal Management System is to manage the details of profiles, Logins, database. It manages all the information about Profiles, Student database. The Name of Project is GUB Portal Management System. Where there will be a log in system. After successful login the user will get access to do their task and all the task will be academic related.

1.2 Design Goals/Objective

GUB Portal Management System is a solution tool that is designed to track, maintain and manage all the data The project aims and objectives that will be achieved after completion of this project is discussed in this subchapter. The aims and objectives are as follow:

- Try to make simple teachers corner.
- Help teacher to do their academic work easily.
- Try to do all the academic work in one place.

Chapter 2

Design/Development/Implementation of the Project

2.1 Tools

To implement this project we have used these tools :

2.1.1 Netbeans

I have used it to implement the Graphical user interface. We implemented several Jframes.

2.1.2 Xampp

I have used it to implement the database .

2.1.3 GUI

I have implemented the graphical user interphase in the java platform. I have used several Jframes in making the GUI's. I have several special methods while making the GUI's-

- JOptionPane.showMessageDialog ()-to show messages .
- setVisible()- to open jframes.
- this.dispose()- to close jframes .
- setString(int, string)- to set String values in given index .
- EventQueue.invokeLater() - to save jframe updates.
- Class.forName() - to connect the gui with the database.

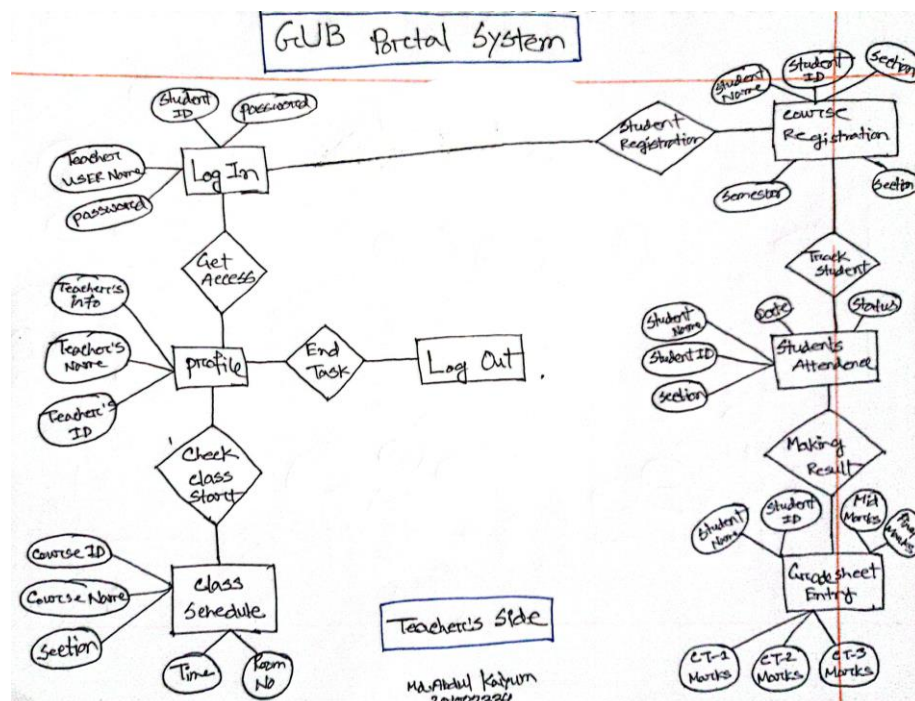
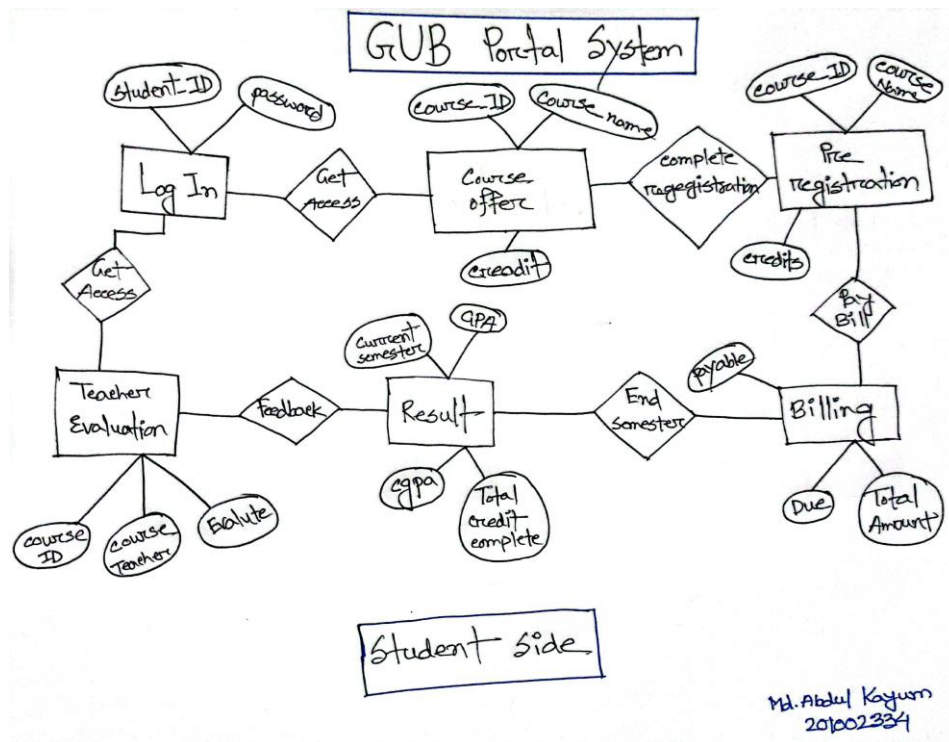
2.2 Procedure

We divided our procedure in some subsections. The procedure will be known after reading the subsections.

2.2.1 Getting Ready

In this phase we collected all the required resource required and set up our environment. We used NetBeans and MySQL database and Java programming language to implement the GUB Portal Management System.

2.2.2 ER-Diagram



2.3 Implementation

In this following the procedure we had successfully implemented the GUB Portal Management System-

2.3.1 Sample GUI Code

In this following the procedure we had successfully implemented the GUB Portal Management System-

```
package com.LMS.forms;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.logging.Level;
import javax.swing.JOptionPane;

public class Login extends javax.swing.JFrame {

    public Login() {

        //Connection conn=null;
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        username = new javax.swing.JTextField();
        password = new javax.swing.JPasswordField();
        jButton1 = new javax.swing.JButton();
        jLabel1 = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setMinimumSize(new java.awt.Dimension(800, 600));
        setName("login"); // NOI18N
        setResizable(false);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());
```

```

Button1.setText("Submit");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});
getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 440, 100, 40));
jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/com/LMS/images/login_1.png"))); // NOI18N
jLabel1.setText("Submit");
jLabel1.setMaximumSize(new java.awt.Dimension(800, 600));
jLabel1.setMinimumSize(new java.awt.Dimension(800, 600));
getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 800, 600));
pack();
setLocationRelativeTo(null);
} // </editor-fold>
private void usernameActionPerformed(java.awt.event.ActionEvent evt) {
}
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
Database obj = new Database();
if(username.getText().length()==0) // Checking for empty field
JOptionPane.showMessageDialog(null, "Empty fields detected ! Please fill up all fields");
else if(password.getPassword().length==0) // Checking for empty field
JOptionPane.showMessageDialog(null, "Empty fields detected ! Please fill up all fields");
else{
String user = username.getText(); // Collecting the input
char[] pass = password.getPassword(); // Collecting the input
String pwd = String.valueOf(pass); // converting from array to string
if(validate_login(user,pwd)){
obj.setVisible(true);
this.dispose();
}
else
JOptionPane.showMessageDialog(null, "Incorrect Login Credentials");
}
}
}
8 | P a g e
Chapter 3
private boolean validate_login(String username,String password) {
try{
Class.forName("com.mysql.jdbc.Driver"); // MySQL database connection
Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/library_management_system","root","");
PreparedStatement pst = conn.prepareStatement("Select * from login where ID=? and pass=?");
pst.setString(1, username);
pst.setString(2, password);
ResultSet rs = pst.executeQuery();
if(rs.next())
return true;
else
return false;
}
catch(Exception e){
return false;
}
}
}

```

```

}
/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new Login().setVisible(true);
        }
    });
}
// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JLabel jLabel1;
private javax.swing.JPasswordField password;
private javax.swing.JTextField username;
// End of variables declaration
}

```

2.3.2 Database

To implement the database, I have used XAMPP. I have used several commands to create the database –

- Create table
- Insert Into
- Alter Table
- On delete and On Update

2.3.1 Database Codes :

Here is the code for creating the Database-

Database: `gub_student_portal`

Table structure for table `registration` -

```

CREATE TABLE `registration` (
  `student_id` varchar(30) NOT NULL,
  `course_id` varchar(15) NOT NULL,
  `course_name` varchar(30) NOT NULL,
  `credit` varchar(10) NOT NULL,
  `section` varchar(15) NOT NULL
)

```


Table structure for table `result`-

```
CREATE TABLE `result` (  
  `student_id` varchar(15) NOT NULL,  
  `student_name` varchar(30) NOT NULL,  
  `Course` varchar(30) NOT NULL,  
  `ct1` varchar(15) NOT NULL,  
  `ct2` varchar(15) NOT NULL,  
  `ct3` varchar(15) NOT NULL,  
  `mid` varchar(15) NOT NULL,  
  `final` varchar(15) NOT NULL,  
  `assignment` varchar(15) NOT NULL,  
  `Total` varchar(15) DEFAULT NULL  
)
```

Triggers `result`-

```
CREATE TRIGGER `Total_calculation` BEFORE INSERT ON `result` FOR EACH ROW BEGIN  
set new.total=new.final+new.mid+new.assignment+((new.ct1+new.ct2+new.ct3)/3);  
END
```

Table structure for table `schedule`-

```
CREATE TABLE `schedule` (  
  `course` varchar(20) NOT NULL,  
  `title` varchar(20) NOT NULL,  
  `section` varchar(10) NOT NULL,  
  `day` varchar(10) NOT NULL,  
  `time` varchar(20) NOT NULL,  
  `room_no` varchar(20) NOT NULL  
)
```

Table structure for table `student_info`-

```
CREATE TABLE `student_info` (  
  `ID` varchar(15) NOT NULL,  
  `Name` varchar(30) NOT NULL,  
  `Department` varchar(15) NOT NULL,  
  `Phone` varchar(15) NOT NULL,  
  `Mail` varchar(30) NOT NULL  
)
```

Table structure for table `student_login`-

```
CREATE TABLE `student_login` (  
  `id` varchar(15) NOT NULL,  
  `pass` varchar(30) NOT NULL  
)
```

Dumping data for table `student_login`-

```
INSERT INTO `student_login` (`id`, `pass`) VALUES  
(201002334, 'kaiyum334');
```

Table structure for table `teacher_evaluation`-

```
CREATE TABLE `teacher_evaluation` (  
  `T_id` varchar(255) NOT NULL,  
  `Teacher_name` varchar(30) NOT NULL,  
  `Course` varchar(15) NOT NULL,  
  `Marks` varchar(15) NOT NULL  
)
```

Triggers `teacher_evaluation`-

```
CREATE TRIGGER `marks_to_teacher_info` BEFORE INSERT ON `teacher_evaluation` FOR EACH ROW  
BEGIN  
  update teacher_info set Marks=new.marks where T_id=new.T_id;  
END
```

Table structure for table `teacher_info`-

```
CREATE TABLE `teacher_info` (  
  `T_id` varchar(255) NOT NULL,  
  `Name` varchar(30) NOT NULL,  
  `Course` varchar(15) NOT NULL,  
  `Phone` varchar(15) NOT NULL,  
  `Mail` varchar(30) NOT NULL,  
  `Marks` varchar(15) NOT NULL  
)
```

Table structure for table `teacher_login`-

```
CREATE TABLE `teacher_login` (  
  `username` varchar(15) NOT NULL,  
  `password` varchar(15) NOT NULL,  
  `question` varchar(30) NOT NULL  
)
```

Dumping data for table `teacher_login`-

```
INSERT INTO `teacher_login` (`username`, `password`, `question`) VALUES  
(Mahmuda Rahman, '201002334', 'Pizza');
```

Chapter 3

Performance Evaluation

3.1 Results and Discussions

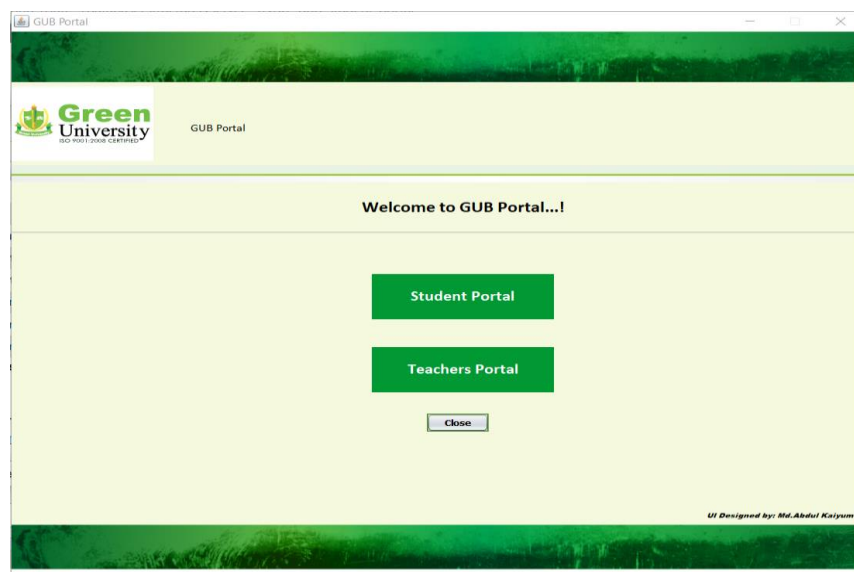
3.1.1 Results

After completing all steps and objects we got the desired and satisfied result. We were able to grasp the core requirement of our project and able to Implement our project which is GUB Portal Management System.


Database Tables:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> billing	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> result	★ Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> schedule	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> student_info	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> student_login	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> teacher_evaluation	★ Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> teacher_info	★ Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	-
<input type="checkbox"/> teacher_login	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
8 tables	Sum	11	InnoDB	utf8mb4_general_ci	144.0 KiB	0 B

Welcome frame:



Log In:



Student Log In


Please Login...!

StudentID :

Password :

[Forgot your password..?](#)

UI Designed by: Md.Abdul Kalyum



Teacher Log In


Please Login...!

User Name :

Password :

[Forgot your password..?](#)

UI Designed by: Md.Abdul Kalyum



Home **Preregistration** Schedule Billing Result Profile Teacher Evaluation

You are logged in as: 201002334 [Log out](#)


Preregistration

Semester: 221(Spring 2022) StudentID:201002334 Student Name: Md.Abdul Kalyum
Adviser: Safal Islam Ayon

Pre-advising Completed

Course ID	Course Name	Credit	Section
CSE 210	Database System Lab	1.5	DJ

UI Designed by: Md.Abdul Kalyum



Home **Result** Preregistration Schedule Billing Profile Teacher Evaluation


You are logged in as: 201002334 [Log out](#)

Result

Semester: 221(Spring 2022) StudentID:201002334 Student Name: Md.Abdul Kalyum
Adviser: Safal Islam Ayon

Course	d1	d2	d3	mid	final	assignment	total
CSE-201	15	12	7	23	29	15	

UI Designed by: Md.Abdul Kalyum




Home Preregistration Schedule Billing Result **Profile** Teacher Evaluation

You are logged in as: 201002334 [Log out](#)


My Profile

Semester: 221(Spring 2022) StudentID:201002334 Student Name: Md.Abdul Kalyum
Adviser: Safal Islam Ayon



ID	Name	Department	Phone	Email
201002334	Abdul Kalyum	CSE	181103445	kalyum_pir@gmail

UI Designed by: Md.Abdul Kalyum



Home **Grade Sheet Entry** Course Registration Students Attendance Class Schedule Profile

You are logged in as: Mahmuda Rahman [Log out](#)

Grade Sheet Entry

Teacher Name: Mahmuda Rahman
TeacherID: 201002334

Student Name:

Student ID:

Course:

CT-1 Marks:

CT-2 Marks:

CT Message:

Mid Term Exam Marks:

Final Exam Marks:

Assignment & Attendance:

Student Name	StudentID	CT-1 Marks	CT-2 Marks	Mid Term Exam Marks	Final Exam Marks	Assignment Marks	Total Marks
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UI Designed by: Md.Abdul Kalyum

Course Registration

You are logged in as: **Mahmuda Rahman** (Log out)

Course Registration
Teacher Name: Mahmuda Rahman
TeacherID: 201002334

Student ID: 201002334
Course ID: CSE-201
Course Name: OOP
Credit: 3
Section: DB

Teacher Profile

You are logged in as: **Mahmuda Rahman** (Log out)

My Profile
Teacher Name: Mahmuda Rahman
TeacherID: 201002334

Name	Course	Phone	Mail	Marks
Mahmuda Rahman	CSE 210	81747676507	mahmuda.cse@gmail.com	10

Student ID	Course ID	Course Name	Credit	Section
201002334	CSE 210	Database System Lab	1.5	DJ
201002300	CSE 210	Database System Lab	1.5	DB
201002300	CSE 210	Database System Lab	1.5	DB
201002324	CSE 210	Database System Lab	1.5	DF
201002334	CSE-201	OOP	3	DB

Database:

Password table-

+ Options

id	pass
201002334	kaiyum334

+ Options

username	password	question
Mahmuda Rahman	201002334	Pizza

Registration table-

+ Options

student_id	course_id	course_name	credit	section
201002334	CSE 210	Database System Lab	1.5	DJ
201002300	CSE 210	Database System Lab	1.5	DB
201002300	CSE 210	Database System Lab	1.5	DB
201002324	CSE 210	Database System Lab	1.5	DF
201002334	CSE-201	OOP	3	DB

Result table-

+ Options

student_id	student_name	Course	ct1	ct2	ct3	mid	final	assignment	Total
334	Kaiyum	CSE-201	12	11	13	25	32	12	81

Student_Info table-

ID	Name	Department	Phone	Mail
201002334	Abdul Kaiyum	CSE	1961859445	kaiyum.gub@gmail

Teacher Evaluation table-

+ Options

T_id	Teacher_name	Course	Marks
1	Shahela Akter	EEE 203	10
0	Mahmuda Rahman	CSE 210	10

Teacher_Info table-

+ Options

T_id	Name	Course	Phone	Mail	Marks
0	Mahmuda Rahman	CSE 210	01747676507	mahmuda.cse@gmail.com	10
1	Shahela Akter	EEE 203	017*****	shahela.eee@gmail.com	10

3.1.2 Analysis and Outcome

Although we finished our project as we desired but there were a lot of obstacles that we had to overcome during making the project. Some of the main obstacles were:

- a) We faced some problem in implementing part.
- b) Also faced some problem when we run our code because lagging.
- c) When user put some value the program work very slowly.

Chapter 4

Conclusion

4.1 Introduction

I basically decided to make GUB Portal management System project because it helps both Students and Teachers. This project also helps the institutional workload. In this project i have tried to add more features. But there is a problem i implemented this project only for a single user but implementing multi user which is little bit critical for me. Mainly I focus that, I can make a portal system for student and teacher both can login in this portal system.

4.1 Practical Implications

GUB Portal management System is basically use for institutional work load. We can also call as portal System. Here,

- Can be use in any Educational Institute.
- Both Student and Teacher can use.
- All options are in one place.
- Updatable according to our need.
- Simple & easy to use.

4.2 Scope of Future Work

This project has a lot of potentiality.

1. By using this project an institution can have better utilization of time & resources.
 2. This project certainly will enhance productivity.
 3. This project will improve inter-relations between Departments.
 4. So given the facts, if the logic behind this project is on point, then this project will run perfectly and as a result any institution would definitely want to buy this project.
- So, it is clear that this project will help us personally and professionally.

References

- [1] Head First Java by “Kathy Hussain & Bert Bates”
- [2] Java Programming by “A N M Bojlur Rahman”
- [3] <https://javatpoint.com/>
- [4] <https://stackoverflow.com/>
- [5] <https://www.https://www.w3schools.com/sql/>
- [6] <https://www.youtube.com>