

**Ahsanullah University of Science and Technology (AUST)**  
Department of Computer Science and Engineering

**[Integrated University Management System (IUMS)]**

**Final Project Report**

Course No: CSE2100

Course Title: Software Development Lab-2

**Submitted To-**

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## Introduction

The project titled “**Integrated University Management System**” is a window-based application project. Integrated University Management System (IUMS) deals with the maintenance of university, faculty and student information within the university. It is an automation system, which is used to store the university, faculty, student, courses and information of a university.

This software mainly focuses on basic operations in a university management as well as some special features like the facility of user login, faculty login and administrative login. New users can open a user account quite easily after filling a registration form provided with user name and password. All the necessary information of the university will be saved in the MySQL database and it will show in the user interface (UI). Starting from registration of a new student in the university, it maintains all the details regarding the attendance and marks of the students and also collect the details of a faculty member and the information will be saved in the same database. The purpose of this software is to improve the quality of education, ease one's daily operations, digitalize data collection and management, optimize resources and improving communication. IUMS helps make important tasks like results processing, registration, and attendance management more efficient, so they can be done faster. All users, including students and university personnel, paper valuers, setters, and moderators, are given a role-based login/password to complete their tasks.

In this project, we have used NetBeans 8.2 IDE and MySQL for database purpose. As the access of this application is very easy hence our management app is very user friendly.

## Project description

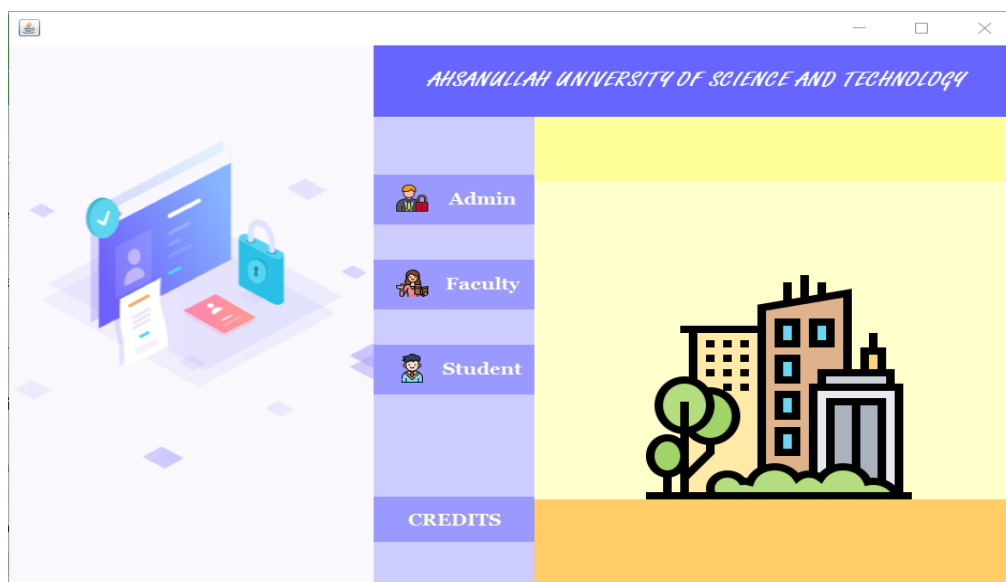
### Splash Window:

We have added a splash screen to our project. It's graphical control element consisting our program's main image. It appears while program is launching. Its main task is to notify the user that the program is in the process of loading.



### Sign-up and login:

After the launching of the splash window there is a login/signup page for student, faculty or administrator to login to the main page of the software.



In the login page user has to provide their personal details like user ID or email and password.

The image displays three login forms for the AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY. Each form is designed for a specific user role: Admin (yellow background), Faculty (pink background), and Student (green background). All forms share a common left sidebar with icons and labels for Admin, Faculty, Student, and CREDITS. The Admin form includes fields for Username and Password, a LOGIN button, a 'Not registered yet?' link, and a 'Create New Account' button. The Faculty form includes fields for Employee ID and Password, a LOGIN button, a 'Not registered yet?' link, and a 'Create New Account' button. The Student form includes fields for Student ID and Password, a LOGIN button, a 'Not registered yet?' link, and a 'Create new Account' button.

If a user doesn't have an account, he/she can create it by clicking “**Create new account**”. After clicking the “**Create new account**” button in the previous login window, registration form will arrive. To create an account, one must submit his/her personal information in this section and after that he/she can sign-in the login section.

The image shows two registration forms for the AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY. The 'New Student Details' form (pink background) includes fields for Name, Student ID, Department, Year/Semester (a dropdown menu showing '1/1'), Address, Phone, Gender (a dropdown menu showing 'Male'), Email, Password, and Date of Birth. It features 'Submit' and 'Cancel' buttons at the bottom. The 'New Faculty Details' form (green background) includes fields for Name, Email, Password, Department, Employee ID, Gender (a dropdown menu showing 'Male'), Address, Phone, Course, and Date of Birth. It also features 'Submit' and 'Cancel' buttons at the bottom. Both forms share the same left sidebar as the login forms.

He/she cannot signup if he/she keeps one of the text field blank in the sign-up option and an error message will pop up.

The image displays three screenshots of the Ahsanullah University of Science and Technology web application interface. The first screenshot shows the 'New Student Details' form with a 'Missing Information' error message. The second screenshot shows the 'New Faculty Details' form with a 'Missing Information' error message. The third screenshot shows the 'ADMIN' login page with a 'Invalid Username or Password' error message.

**New Student Details**

Admin Faculty Student CREDITS

Name Student ID Department Email Password Date of Birth

Submit Cancel

**New Faculty Details**

Admin Faculty Student CREDITS

Name Email Password Department Gender Age Phone Course Date of Birth

Submit Cancel

**ADMIN**

Username Password

Invalid Username or Password

Not registered yet? Create New Account

## Main Menu:

Main menu contains three sub-Interfaces: -

- Administration
- Faculty
- Student

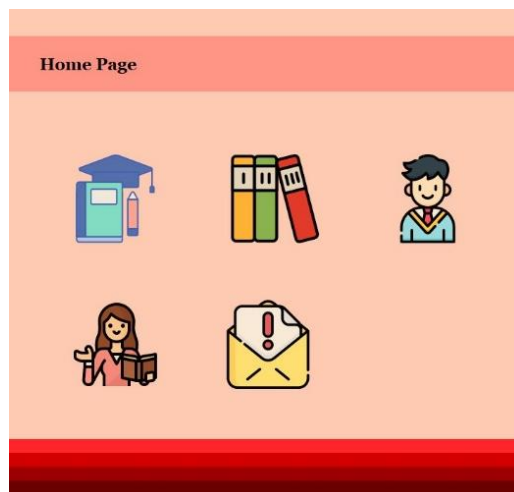
## Administration:

An administrator or administrative assistant performs clerical duties to help an office run smoothly and efficiently. In the administration page we have added some features that are home panel, courses, subjects, student and faculty panel etc.



## Home Panel:

Home page is the main page of the project. It includes some picture buttons which will help us to go different interfaces. It includes courses, books, student and faculty list and also notices.



## Courses:

By using this courses module university authority can add departments and also the number of seats in particular departments. If they have any query, they can easily delete the information they don't need by using the “**Delete**” button.

COURSES

Programs

Program Code

No. of Seat

No	Programs	P_code	Seat
1	Computer Science and Engineering	CSE	100
2	Electrical and Electronic Engineering	EEE	150
3	Mechanical Engineering	ME	150

ADD

DELETE

## Subjects:

The university authority can use this module to add courses, subjects and marks. After filling up the text field all the information will be shown in the MySQL database connected table. If they have any query, they can easily delete the information they don't need by using the “**Delete**” button.

SUBJECTS

Course

CSE

Subjects

DLD

Subject Code

DLD1200

Year/Sem

1/2

Theory Marks

80

Practical Marks

20

No	Course	Subjects	Subject_Code	Year/Sem	Theory	Practical
1	CSE	Math	Math1006	1/1	80	20
2	CSE	EEE	EEE1006	1/1	80	20
3	CSE	HUM	HUM2001	1/1	80	100
4	CSE	ME	ME2006	1/1	80	20
5	CSE	CSE	CSE1114	1/1	80	20
6	EEE	Math	Math2006	1/2	80	20

ADD

DELETE

**Students:**

When a new student admits in the university the authority provides a registration form to them, where they fill up all their necessary information that will store in the database connected table. Students can visit their profile by login with the correct information. The authority can edit and delete information from the table by pressing the following buttons.

Home

Courses

Subjects

Students

Faculties

Notice

Back

STUDENTS

Name	Student_ID	Department	Year_Semester	Address	Phone	Gender	Email	Password	Date_of_Birth
Miftahul Sh...	38	CSE	2/1	Manik Nagar	01535763993	Male	alex@gmail...	38	2001
Mishbahul S...	39	CSE	2/1	Manik Nagar	01523231453	Male	maxon@gmail...	39	2001
Nafisa Tam...	40	CSE	2/1	Dhannondii	0152159786	Female	nabai@gmail...	40	2001
Tanvir Raly...	34	CSE	2/1	Mugda	0142325987	Female	ralyan@gmail...	34	2000
Adib	29	CSE	2/1	Uttara	1324567890	Male	adib@gmail...	29	2000

ADD

DELETE

**Faculty:**

When a new faculty joins in the university the authority provides a registration form to them, where they fill up all their necessary information that will store in the database connected table. Faculties can visit their profile by login with the correct information. The authority can delete information from the table by pressing the “**Delete**” buttons.

Home

Courses

Subjects

Students

Faculties

Notice

Back

FACULTY

Name	Email	Password	Department	EmployeeID	Gender	Address	Phone	Course	DateOfBirth
MD. Iqbal	iqbal@gmail...	1	Math	1	Male	Mugda	0117852369	Math101	1985
MD. Abrir	abrir@gmail...	2	ELE	2	Male	Maulbag	02444608	ELE2023	1980
Ms. Rithi	Rithi@gmail...	3	CSE	3	Female	Arambag	022334199	CSE2003	1990

ADD

DELETE



## Notice:

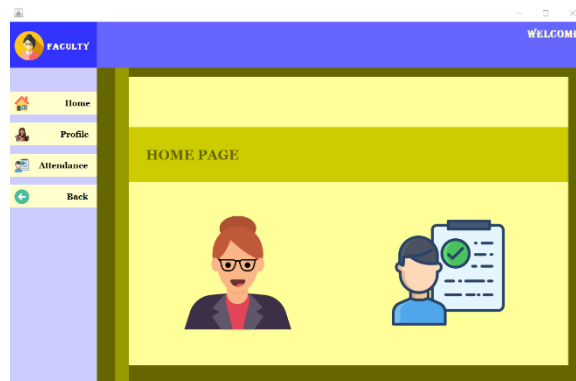
For observing or paying attention to something which is very important for the students the authority give a short notice by this application.



## FACULTY

### Home:

Faculty home page includes some picture buttons which will help us to go to different interfaces. It encloses faculty profile and students' attendance.



## Profile:

Faculty profile stores all the information which is taken from the time of faculty registration.

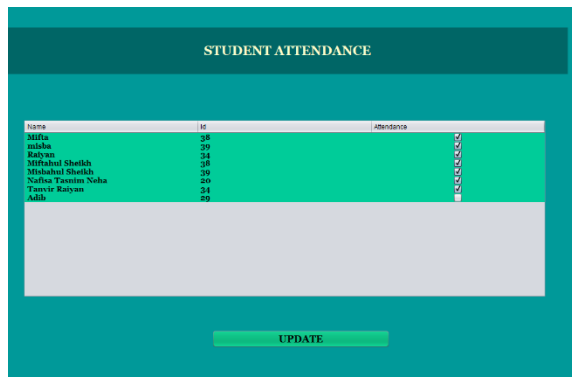


A screenshot of a web form titled "FACULTY PROFILE". The form is set against a light pink background with a dark red header and footer. It contains several input fields for personal and professional information.

Field	Value
Name	MD. Iqbal
Email	iqbal@gmail.com
Department	Math
Employee ID	1
Gender	Male
Address	Mugda
Phone	017822369
Course	Math1105
Date of Birth	1965

## Attendance:

When a student registers, all the information stores in the MySQL database which is linked with the database connected attendance table. So, students attendance information can easily be shown in that table and the faculty can take attendance form that table.



A screenshot of a web interface titled "STUDENT ATTENDANCE". It displays a table with student names, IDs, and attendance status. Below the table is a large grey rectangular area and an "UPDATE" button.

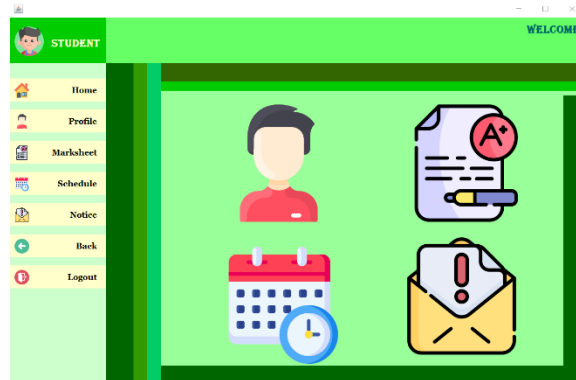
name	id	attendance
Milla	38	
milka	39	
Raiyan	34	
Mishahul Sheikh	38	
Mishahul Sheikh	39	
Nafsa Tannim Neha	30	
Tanzir Raiyan	34	
Adib	39	

UPDATE

# STUDENT

## Home:

Student home page contains some picture buttons which will help us to go to different interfaces. It encloses student profile, marksheet, schedule and notices.



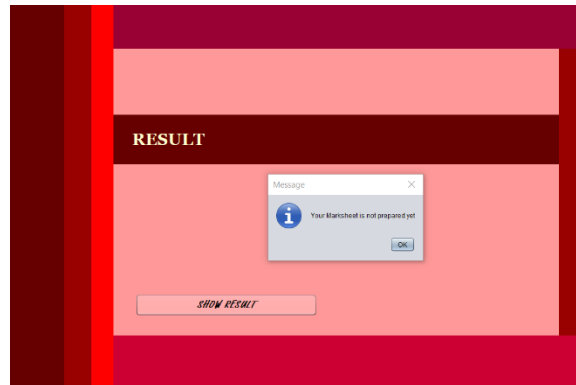
## Profile:

Student profile stores all the information which is taken from the time of student registration.

STUDENT PROFILE	
Name	Miftahul Sheikh
Student_ID	38
Department	CSE
Year/Semester	2/1
Address	Manik Nagar
Phone	01532763995
Gender	Male
Email	alen@gmail.com
Date of Birth	2001

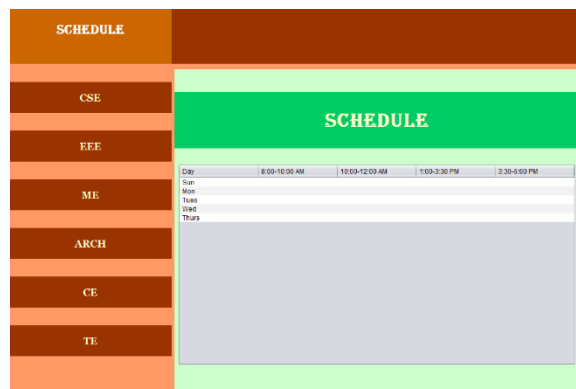
## Marksheet:

We did not work with the result management sector. So, if we click “**Show Result**” button that will show “**Marksheet will not prepared yet**”.



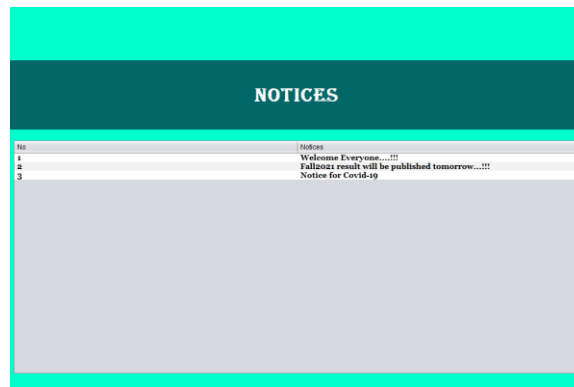
## Schedule:

One student can easily check out his/her department-wise class routine by going into this section that will help the students to go to the class and lab on time.



## Notice:

Students can see important notices by using this feature.



NOTICES		
No.	Notices	
1	Welcome Everyone....!!!	
2	Fallout result will be published tomorrow....!!!	
3	Notice for Covid-19	

## Problems we faced while working on the project

At first, we were unable to connect with the database (PhpMyadmin) with the help of XAMPP. While working with the student profile, we missed a single underscore in code and the software and the database were not connecting for this single reason. We wanted to sort the list of students or search the student list on the basis of due date but failed. We faced problems while creating swing GUI in my project because of its old version. The j-frame size was changing spontaneously while adding panels and buttons in my frame. We also faced some issues in the time of connecting my program with the database. We used online database for my program that's why my database was unstable that's why we faced problems. After using many panels, button and label pictures in our swing GUI, our program became a little bit slower. Some necessary libraries were not included in NetBeans at first. We had to download the necessary libraries like: [rs2xml.jar](#), [commons-dbutils-1.3-sources.jar](#) and include it in our program.

We have to transfer our project from PC to laptop for carry our project to university for the evaluation but in this case, we faced some difficulties like alignment and designing.

## Differences between the proposed project and the final project

In our previous proposal we had thought about adding grading system, payment or financial matter and examination management but in the final project we have dropped these features because these are totally two big projects and would take a long time to complete the whole thing. In our proposal, we had planned to add library and hostel management system in our IUMS project but lastly, we realized that those are two different projects.

## Software and tools used:

- ✚ Java Swing
- ✚ NetBeans 8.2
- ✚ MySQL Server (PhpMyAdmin)

## Conclusion

By completing this project, we are able to increase our coding skills a lot specially in java programming and also learn about MySQL database and its uses. Our university management system will be very helpful to manage students and faculties in professional level. Our program is very user friendly so that one can easily use it without any hassle. Future upgradation is possible at any time in our program. The generation may be inspired by watching our project and also can learn many things and get better ideas. After facing many problems and solving them, we finally be able to make a project like “**Integrated University Management System**”. This application provides efficient service to the various users. Implemented with the best technology available, this software is convenient to use and virtually fault-free, providing the users with a smooth and unique experience.