



Purbanchal University

College of Information Technology & Engineering

Subidhanagar, Tinkune, Kathmandu

Project Report

On

University Management System

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LETTER OF APPROVAL

We, the supervising committee of CITE College, have successfully supervised and Approved the Project report entitled “University Management System” submitted by Project the members (Raman Chaudhary, Sujan Thapa & Anish Chaudhary), BIT-IV Semester. During our supervising period, we found that the corresponding report has been prepared as approved by the department in prescribed format of Bachelor of Information Technology (BIT), Faculty of Science & Technology. This report is forwarded to the further Examination.

With best regards,

.....

Project supervisor

.....

Internal Examiner

.....

External Examiner

ACKNOWLEDGEMENT

With immense please, we are presenting “University Management System” report as part of curriculum “Bachelor of Information Technology”. We wish to thank all the people who gave us unending support.

We express our profound thanks to our Academic Director Mr. Saroj Dahal, Project Supervisor Dr. R N Thakur & other’s all those who have indirectly guided and helped us to build this project.

We would like to thank Purbanchal University (PU) as well as College of Information Technology & Engineering (CITE) for the course and the project assigned which helped in our study and developing skills like code and project management.

ABSTRACT

The objective of this paper is to provide a university management system, often referred to as Student Information System (SIS) or Enterprise Resource Planning (ERP) systems in the context of higher education, are complex software platforms designed to streamline and automate various administrative and academic processes within integrated solution for managing the diverse activities and data associated with education institutions. We have developed our project UMS with java programming and database integrated in it.

Abstractions about university management systems typically encompass several key aspects: (User Management and Authentication, Academic Program Management, Student Information, Faculty and Staff Management, Financial Management, Admissions and Enrollment, Course Registration and Scheduling, exam results & student management, Data Security and Privacy etc.)

[Keywords: UMS, SIS, ERP, higher education, complex software platforms, integrated solution, authentication, privacy, data security]

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CHAPTER: 1 INTRODUCTION

1.1 Introduction of Project

UNIVERSITY MANAGEMENT SOFTWARE (UMS) is a flag product of easy solution which covers all aspects of Universities, Colleges, or Schools. UMS covers every minute aspects of a universities work flow and integrates all processes with user friendly interface. UMS is an outcome of hard work done by our project members in supervision of our supervisor sir which includes many fields such as (account, examination, student, teachers etc.). Our project give access to register the student and teacher in the application and helps to do many works with simple use of application. Almost everything works that is to be done in university is covered by our system so it will be fruitful to use as fully developed software.

UMS streamline path of information flow in organization by taking care of following departments:

- Account Department
- Examination Department
- Attendance
- Faculty Information Portal
- Student Tnformation Portal

1.2 Problem Statement

Storing and accessing the data in the form of Excel sheets and account books is a tedious work. It requires a lot of laborious work. It may often yield undesired results. Maintaining these records as piles may turn out to be a costlier task than any other of the colleges and institutions (Academia, 2023).

The current landscape in university management presents several significant challenges. Firstly, there is a notable absence of a comprehensive university management system, leaving educational institutions grappling with fragmented solutions. Secondly,

administrative processes are primarily manual and often time-consuming, resulting in inefficiencies and resource constraints. Moreover, accessing and managing critical data pertaining to students and staff members can be a daunting task. Additionally, the existing communication channels between different departments within these institutions are often inadequate, hindering effective collaboration and coordination. Lastly, the available commercial systems in the market tend to come with exorbitant price tags, making them financially burdensome for many educational organizations.

Addressing these issues and developing a more streamlined and cost-effective solution is imperative for enhancing the overall efficiency and effectiveness of university management.

1.3 Objectives

- To build the self- service systems with simple to use with little or no training.
- To eliminate duplicate data entry.
- To mobilize “University Management System” with application.
- To use database for dynamically inserting & keeping records.
- To make system secure.

1.4 Motivation

University management software is the system which is used to manage their records of student and teacher data in efficient way that helps the student, teachers, administrators to view the results, account details, registration information. It helps the university to maintain in easy way.

Before making the project, we have seen the problem facing by the student and teacher. So, we decide to build a system that helps all students & teachers as well as others staffs to coordinate with university system. We have seen this system is used by few universities to maintain records of students and teachers that is not so effective. We have made this system according to need of students, teachers and universities.

Hence, Main aim is to developed project will be user friendly and can be used easily. Various work of university can be done by this software.

1.4 Scope

This project deals with the various functioning in university management process. The main idea is to implement a proper process to system. In our existing systems, they contain many operations registrations, student search, fees, attendance, exam records, performance of the student etc. All these activity takeout manually by administrator.

Another main scope of our project is in context of Nepal, Universities only have websites for all types of works to do such as (result publishing, view result, student registration, entrance form fill-up, and many more). Websites are great for the use but we have come with the project which does this all works through application. So, in future this system can be enhanced and put in operation for the universities.

1.6 Application

- Student Information Management
- Teacher Information Management
- Registration Management
- Course and Curriculum Management
- Fee Management
- Faculty Management
- Account Department Management
- University Description Management

1.7 Feasibility study

A feasibility study is an assessment of the practicality of a project or system. A feasibility study aims to objectively and rationally uncover the strengths and weaknesses of an existing business or proposed venture, opportunities and threats present in the natural environment, the resources required to carry through, and ultimately the prospects for

success. In its simplest terms, the two criteria to judge feasibility are cost required and value to be attained (Simplilearn, 2023).

From all the study done regarding the feasibility of the proposed system, it can be said that the system is slightly feasible. Feasibility study on the project can be categorized in the following:

1.7.1 Technical Feasibility

Technical feasibility is the process of figuring out how you're going to produce your product or service to determine whether it's possible for your company. Before launching your offerings, you must plan every part of your operations, from first sourcing your production materials all the way to tracking your sales (Indeed, 2023).

All the tools and technologies needed can be found and collected easily so our project is technically feasible.

1.7.2 Economic Feasibility

Economic feasibility refers to the ability of a project or business venture to generate enough revenue to cover its costs and provide a reasonable return on investment. It involves analyzing the costs and benefits of a project, including the costs of materials, labor, and equipment, as well as the projected revenue from sales or other sources of income (Ceopedia, 2023).

Because of our project is cheaper than other available software's in the market it can be said that it is economically feasible.

1.7.3 Operational Feasibility

Operational feasibility is the measure of how well a proposed system solves problems and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development (Qsstudy, 2023).

Our project will solve the problems of students and teachers with the university management and also use all the types of technologies and tools to make it possible.

1.8 Requirement Specifications

1.8.1 Tools & Technologies

We have developed our entire project in Apache NetBeans, which is the famous IDE For the programmers in today's world because of its faster performance and easy to use and for the database connection we have used MySQL database.

1.8.2 File Extensions

The coding is stored in java file extensions like “.java”.

1.8.3 Hardware Requirements

Processor:	i3 or higher
RAM:	Minimum 2GB
Hard Drive Size:	Minimum 128GB

1.8.4 Software Requirements

Operating System:	Windows 10
Application Server:	JAVA (NetBeans)
Front End:	JAVA
Connectivity:	JDBC Driver
Database Connectivity:	MySQL

1.9 Tools Description

1.9.1 Overview of Front End

An important issue for the development of a project is the selection of suitable front- end and back-end. When we decided to develop the project, we went through an extensive study to determine the most suitable platform that suits the needs of the organization as well as helps in development of the project.

The aspects of our study included the following factors. Front-end selection:

- 1) It must have a graphical user interface that assists employees that are not from IT background.
- 2) Scalability and extensibility.
- 3) Flexibility.
- 4) Robustness.
- 5) According to the organization requirement and the culture.
- 6) Must provide excellent reporting features with good printing support.
- 7) Platform independent.
- 8) Easy to debug and maintain.
- 9) Front end must support some popular back end like MySQL.

According to the above stated features and our project is only in java programming we have chosen java swing to develop the front-end part.

1.9.2 About Java

Java is a general-purpose, class-based, object-oriented programming language designed for having lesser implementation dependencies. It is a computing platform for application development. Java is fast, secure, and reliable, therefore.

Java provide a very big collection of ready-to-use classes to perform a very wide programming tasks: String manipulation, Math computations, File I/O, Database access,

Networking, Data transfer, ...Graphical user interface building, 2D and 3D graphics, game development (Qasem & Safwan, 2010).

Here are some important Java applications:

- It is used for developing Android Apps
- Helps you to create Enterprise Software
- Wide range of Mobile java Applications
- Scientific Computing Applications
- Use for Big Data Analytics
- Java Programming of Hardware devices
- Used for Server-Side Technologies like Apache, JBoss, Glassfish, etc.

Java AWT & Swing

Java AWT (Abstract Window Toolkit) is an API to develop GUI or window-based applications in java. Java AWT components are platform-dependent i.e., components are displayed according to the view of operating system. AWT is heavyweight i.e., its components are using the resources of OS. The java.awt package provides classes for AWT api such as TextField, Label, TextArea, RadioButton, CheckBox, Choice, List etc. (Hansraj College, 2023).

Java Swing tutorial is a part of Java Foundation Classes (JFC) that is used to create window-based applications. It is built on the top of AWT (Abstract Windowing Toolkit) API and entirely written in java. Unlike AWT, Java Swing provides platform-independent and lightweight components. The javax.swing package provides classes for java swing API such as JButton, JTextField, JTextArea, JRadioButton, JCheckbox, JMenu, JColorChooser etc. (Javatpoint, 2023).

1.9.3 Overview of Back End

Back End Selection:

- 1) Multiple user support.

- 2) Efficient data handling.
- 3) Provide inherent features for security.
- 4) Efficient data retrieval and maintenance.
- 5) Stored procedures.
- 6) Popularity.
- 7) Operating System compatible.
- 8) Easy to install.
- 9) Various drivers must be available.
- 10) Easy to implant with the Front-end.

According to above stated features we selected MySQL as the backend.

The technical feasibility is frequently the most difficult area encountered at this stage. It is essential that the process of analysis and definition be conducted in parallel with an assessment to technical feasibility. It centers on the existing computer system (hardware, software etc.) and to what extent it can support the proposed system.

1.9.4 About SQL

SQL is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in a relational database. SQL is the standard language for Relational Database System. All the Relational Database Management Systems (RDMS) like MySQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server use SQL as their standard database language.

MySQL is an open-source tool that's used to manage data stored within servers and databases. As one of the most popular database management tools available, MySQL has become the industry standard thanks to its highly customizable and easy to use nature. It's also incredibly secure and compatible with all the major operating systems, including Windows, Mac and Linux. It handles a large subset of the functionality of the most expensive and powerful database packages. MySQL uses a standard form of the well-known SQL data language. MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc. (Oracle, 2023).

CHAPTER 2: LITERATURE REVIEW

2.1 Study on Existing Systems

To understand more about the University Management System, we have analyzed the existing systems documentation found in the internet. There are huge numbers of documentation found and some of which we have studied are as follows:

2.1.1 University Management System by Studocu

The university management system project given by this document is a web-based solution for colleges, universities, and schools. This project was created for the university and its affiliated institutions to conduct, monitor, and analyze complicated activities such as student admission, examinations, and much more. This is a program that manages the complete student life cycle up to degree completion. Their UMS helps make important tasks like admission, results processing, registration, and fee management more efficient, so they can be done faster. All users, including students, college and university personnel, paper valuers, setters, and moderators, are given a role-based login/password to complete their tasks. Each student has access to an online tool through the university's examination management system to complete the following student lifecycle tasks. This is available to all students (Studocu, 2023).

2.1.2 Final Project in IT - University Management System

Their project UNIVERSITY MANAGEMENT SYSTEM (UMS) deals with the maintenance of university, college, faculty, student information within the university. UMS is an automation system, which is used to store the college, faculty, student, courses and information of a college. Starting from registration of a new student in the college, it maintains all the details regarding the attendance and marks of the students. The project deals with retrieval of information through an INTRANET based campus wide portal. It collects related information from all the departments of an organization and maintains files, which are used to generate reports in various forms to measure individual and overall

performance of the students. Development process of the system starts with System analysis. System analysis involves creating a formal model of the problem to be solved by understanding requirements (Afari, 2004).

2.1.3 Online Registration System

This system presents the research and findings of a student registration system at Methodist University college Ghana. It was found out that students must be physically present on their campuses to do registration for the semester, after the payment of fees. With the numerous alternatives in technological choices, this research sort to find out which alternative would help eliminate the current difficulties students go through to register for the semester. This system analyzed this existing system using the waterfall model leading to the design and development of an online registration system which does not require the physical presence of students on campus but on remotely register (Falolo, Capillas, Vergarra, & Cerbito, 2022).

2.1.4 School Management System

This document is purposed by Degif Teka and submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Master of Science in Computer Science in June 2008. This project work automates the school management system. In the System two applications are developed, windows based, and web based.

The windows application takes most of the activities such as offline student registering, transcript and report card generation and producing the timetable. The web application facilities attendance recording by the homeroom teachers, to view status of students by their parents and to view reports by the homeroom teachers, to view status of students by their parents and to view reports by kebele and kifle-ketema education bureau officials.

The solution of the timetable is very simple. In the high school considered for the project there are then subjects for both grade nine and grade ten. Loads are assigned to each subject teacher and a code is given for each teacher-subject combination. A simple search technique

has been used during allocation of each teacher-subject code to a time slot. A database has been used to enforce constraints and to store data (Academia, 2023).

2.1.5 Student Registration System

The proposed Student Registration System will eliminate the paper trail required for the completion of various formalities. The entire process of prospective student registration till new student registration can be handled by this system. The testing process can be done entirely on the system and results can be quickly judged and shared. The presence of this system will remove ambiguity in the process that can confuse tense prospective students (Projectsgeek, 2023).

2.2 Relevance of Literature Review with Project

All the projects and documents we have analyzed are almost similar in some sense. They have used java programming with database connection for the records of students and their enrollment. As well our project “University Management System” also uses the same method for the all of our activities which we will do in it. We have used the concept of all projects which we have analyzed & applied in our project which are possible to integrate.

CHAPTER 3: RESEARCH METHODOLOGY

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. It is an academic activity and as such the term should be used in a technical sense. The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet (C.R.Kothari, 1990).

3.1 Waterfall Model

The waterfall model is a breakdown of project activities into linear sequential phases, meaning they are passed down onto each other, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks. The approach is typical for certain areas of engineering design. In software development, it tends to be among the less iterative and flexible approaches, as progress flows in largely one direction ("downwards" like a waterfall) through the phases of conception, initiation, analysis, design, construction, testing, deployment and maintenance. The waterfall model is the earliest SDLC approach that was used in software development (Tutorialspoint, 2023).

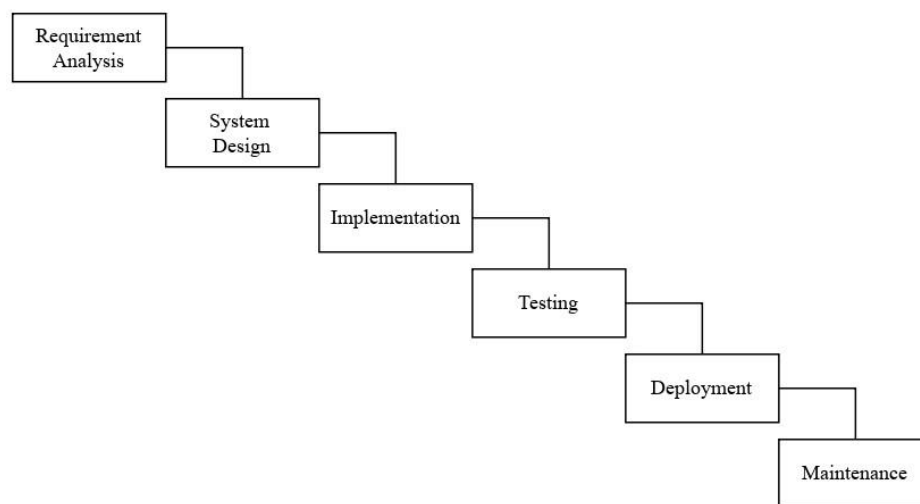


Figure 1: Waterfall Model

We have used the waterfall model which moves from top to bottom as mentioned above to complete our project. We have chosen this model because it divides the project into sequential and distinct phases, such as requirements gathering, design, implementation, testing, deployment, and maintenance & Each phase must be completed before moving on to the next, which makes the project development easier for the beginners like us.

At the very first stage when we have chosen the topic of our project, we get engaged in gathering requirements which are necessary for the completion of our project such as (java AWT, MySQL database, java Swing, effective and easy IDE (NetBeans), etc.).

When all the requirements are gathered by us, we have started to design the system i.e., our project "University Management System". We have given continuous effort until our project is fully finished. We have also left some section which are not got developed as our requirements gathering and thought of develop it later at the time of fully completion of project.

When our project got ready then we have implemented it and tested to see as it works correctly or not. This implementation and testing contain of many methods which we will cover at the implementation phase.

After testing is complemented, we have run our project in our computer to see how it works and also, we have continuously kept maintaining it whenever we see any errors or bugs in it or if we have to add some more features.

CHAPTER: 4 IMPLEMENTATIONS

Project implementation is the process of putting a project plan into action to produce the deliverables, otherwise known as the products or services, for clients or stakeholders. It takes place after the planning phase, during which a team determines the key objectives for the project, as well as the timeline and budget. Implementation involves coordinating resources and measuring performance to ensure the project remains within its expected scope and budget. It also involves handling any unforeseen issues in a way that keeps a project running smoothly (Indeed, 2023).

4.1 ER Diagram

An Entity-Relationship Diagram (ER diagram) is a visual representation of entities, attributes, and relationships between them in a database. The ER diagram consists of several components including entities, attributes, and relationships. Relationships describe how entities are related to one another, and can be categorized as one-to-one, one-to-many, or many-to-many relationships. It helps to understand the system processes and data in an easy and effective way.

Entity relationship diagrams provide a visual starting point for database design that can also be used to help determine information system requirements throughout an organization. After a relational database is rolled out, an ERD can still serve as a reference point, should any debugging or business process re-engineering be needed later. However, while an ERD can be useful for organizing data that can be represented by a relational structure, it can't sufficiently represent semi-structured or unstructured data. It's also unlikely to be helpful on its own in integrating data into a pre-existing information system (Techtarget, 2023).

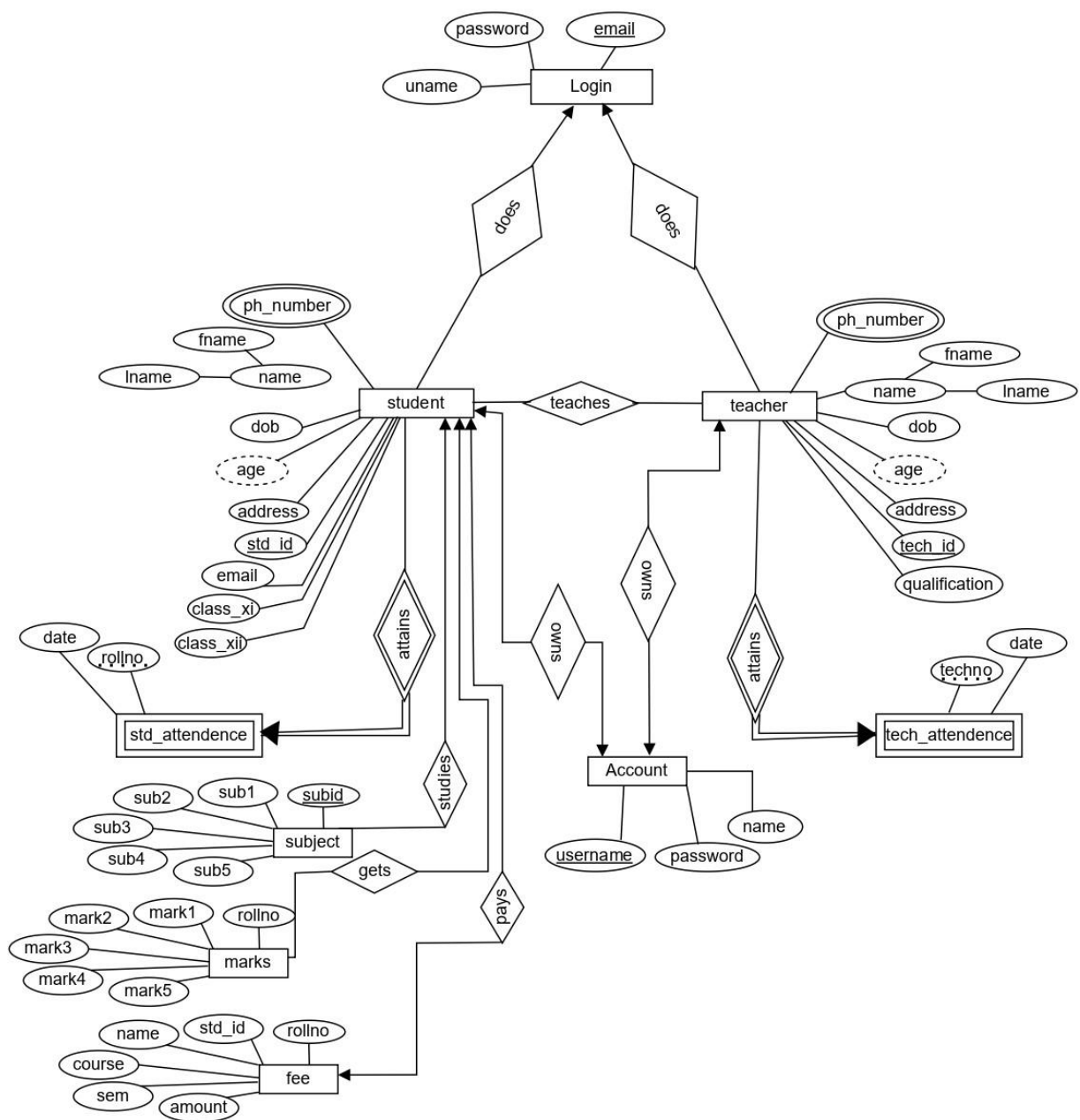


Figure 2: ER Diagram

4.2 Flowchart

A flowchart is a diagram depicting a process, a system or a computer algorithm. It is a diagrammatic representation of the solution to a given problem but, more importantly, it provides a breakdown of the essential steps to solving the problem. When designing and planning a process, flowcharts can help you identify its essential steps and simultaneously offer the bigger picture of the process. It organizes the tasks in chronological order and identify them by type, e.g., process, decision, data, etc. Each step is independent of implementation as the flowchart only describes what should happen at that step, what input is needed and what the output of the step is but it says nothing about how to implement the step (UCL, 2023).

The flow chart given below shows the operations procedure of our project University Management System.

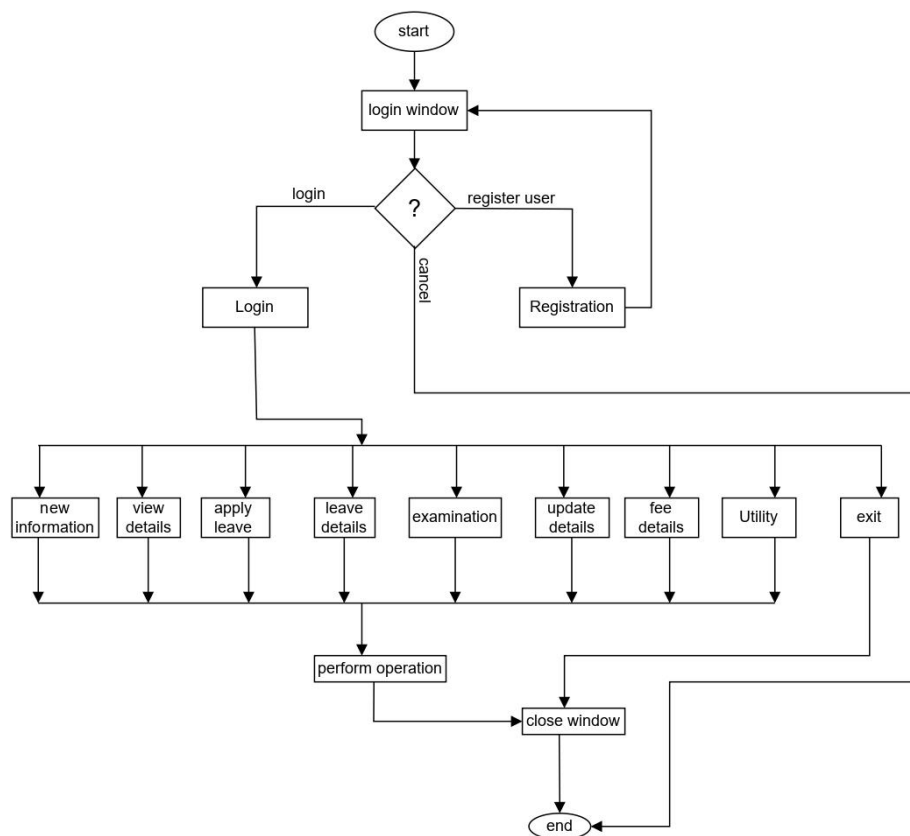


Figure 3: Flowchart of the UMS

4.3 Team Structure

Team Members	Symbol no.	Task done
Sujan Thapa	345342	Research, Coding, Debugging, simulation, hardware connection & Documentation
Raman Chaudhary	344938	Research, Coding, Debugging, simulation, hardware connection & Documentation
Anish Chaudhary	344929	Research, Coding, Debugging, simulation, hardware connection & Documentation

Table 1: Team Structure

4.4 Implementation Details

We have used “.java” extension to store the code written for this project for different features.

Files	Description
Splash.java	It contains the very first part of the project where image gets opened and project starts.
Project.java	It is the main file of our project from where all the features' files are invoked.
Login.java	This section contains the login part of the project.
About.java	This section contains the description of the project & project members.
AddStudent.java	This section is for adding of new student.
AddTeacher.java	This section is for adding of new teacher.
Conn.java	This file contains the code for the database connection.
EnterMarks.java	Give access to add marks obtained by the student.
ExaminationDetails.java	Result can be accessed from here.

FeeStructure.java	Shows the fee structure of the programs.
Marks.java	Shows the result of the student.
StudentDetails.java	It gives details of the students in different format.
StudentFeeForm.java	Shows the fee form & payable of the student.
StudentLeave.java	Contains the form to apply leave by the student.
StudentLeaveDetails.java	Shows all the details of the students in leave.
TeacherDetails.java	It gives the details of teacher in different format.
TeacherLeave.java	Contains the form to apply leave by the teacher.
TeacherLeaveDetails.java	Shows all the details of the teacher in leave.
UpdateStudent.java	It updates the details of the student.
UserRegistration.java	Registers the user.
Forgot_Password.java	It gives the user to change the password of his/her account.
UpdateTeacher.java	It updates the details of the teacher.

Table 2: Implementation Details

4.5 Gantt Chart

A Gantt chart is a project management tool that helps in planning, scheduling and monitoring a project. Using a Gantt chart can improve your planning and scheduling, remote work collaboration, resource allocation and task delegation. A Gantt chart represents all information visually through a horizontal bar graph. Project managers and team members can view the task schedules, dependencies and progress by just glancing at the chart. Planning for all tasks in advance and making them visible in one place empowers teams to deliver on time. Gantt charts make it easy for project managers to identify the critical path to project completion and ensure that there is no delay in those tasks. Project managers should use Gantt charts for project planning and scheduling, allocating resources, tracking the progress of each task at all times and ensuring the smooth and timely execution of critical tasks (Forbes, 2023).

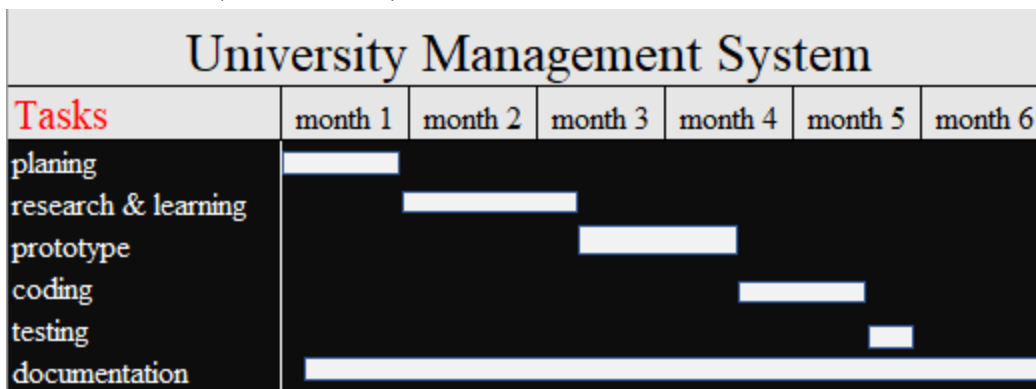


Figure 4: Gantt Chart

Above Gantt chart shows the progress of our project in 6 months period. There we have done project with 5 different sections such as (planning, research & learning, prototype, coding, testing, documentation).

4.6 Testing of System

Test Case 1: Login, Registration & Forgot Password

No.	Test Objective	Test Step	Expected Result	Result
1.	To ensure Registration of the user works perfectly.	All fields are filled and submitted for the registration.	Registration must be successful and data must be saved in database.	Pass
	To ensure Login of the user becomes successful.	All fields are field and submitted for the Login.	Login should be successful be matching credentials from the database.	
	To ensure Forgot password section changes the password perfectly.	Required details are Filled and proceed for the change password.	Password must be changed by matching input details in database and save new password in database.	

Table 3: Test of Login, Registration & Forgot Password

Test Case 2: Add Student & Teacher, Update Student & Teacher, Upload Result, View Result, Apply Leave

No.	Test Objective	Test Case	Expected Result	
1.	To ensure that add student and teacher form works perfectly.	All the required fields are filled and proceed for the adding new teacher or student.	New teacher & student must be added successfully and data must be saved in respective database table.	Pass
	To ensure that update student and teacher form works perfectly.	All the required fields are filled and proceed for the updating teacher or student details.	Teacher & Student details must be updated successfully and data must be saved in respective database table.	
	To ensure that result upload and view result field works perfectly.	All the required fields are filled and proceed for the result upload & all the fields filled are proceed for the view result.	Result must be successfully saved in database and when result is being viewed then result must be shown correctly fetching from database.	
	To ensure that apply leave form works perfectly	All the required fields are filled and proceed for the leave apply.	Leave must be successfully applied and granted details must be saved in	

Table 4: Add, Update, Result & Leave

CHAPTER 5: CONCLUSION

The development and implementation of the University Management System (UMS) project represent a significant achievement towards enhancing the efficiency, transparency, and overall management of our university's administrative and academic processes. This project aimed to address several key challenges faced by our institution and provide a comprehensive solution to improve administrative workflow, student services, and data management. The project is designed keeping in view the day-to-day problems faced by a college. Deployment of our application will certainly help the college to reduce unnecessary wastage of time in personally going to each department for some information. Awareness and right information about any college is essential for both the development of student as well as faculty. So, this serves the right purpose in achieving the desired requirements of both the communities.

Limitations

Any program cannot be 100% reliable and efficient. This program also has some drawbacks which are given below:

- Application cannot be embedded online.
- It doesn't meet the university standard to use in real time.
- Limited features.

Further Works

- We will change our desktop application to online application.
- Auto transcript generation and provide it to students with application will be developed.
- Fee payment will be made online with integrating application with wallets like (esewa, Khalti, etc.).
- For entrance exams and any MCQ's practice exams auto question generation by application will be developed.

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APPENDIX

1) About Section

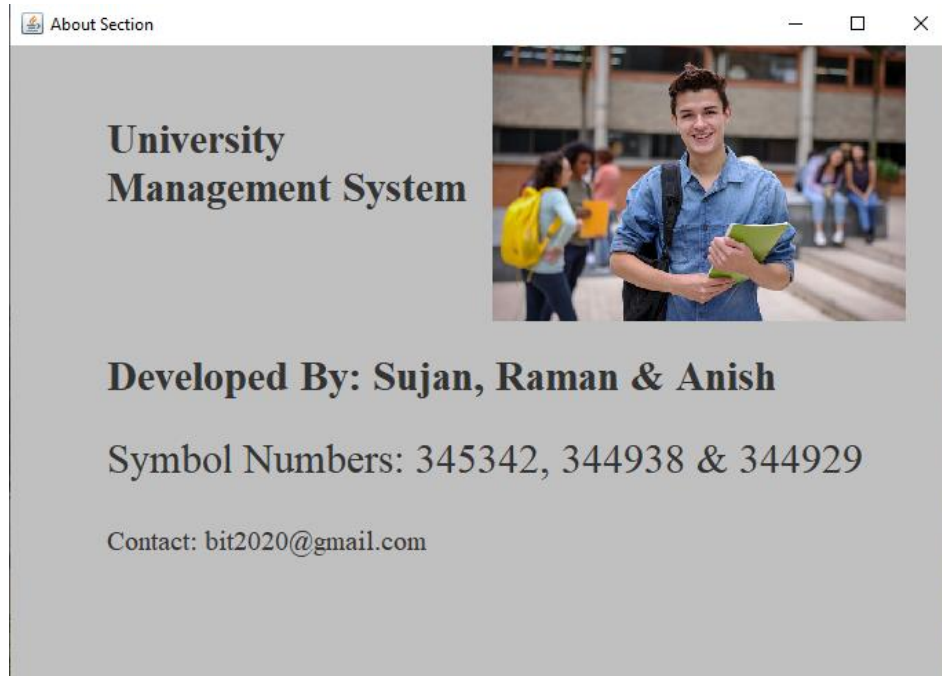


Figure 5: About Page

2) Login Page

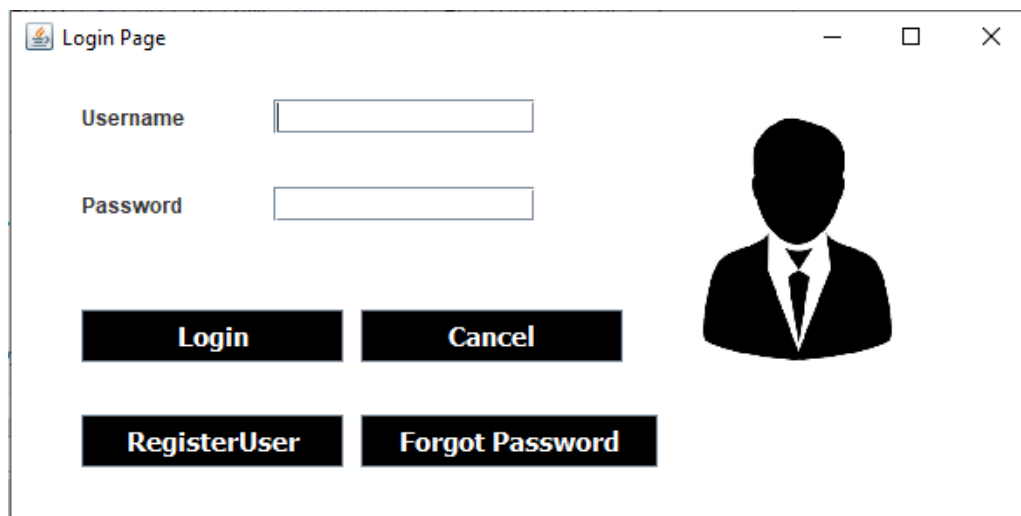
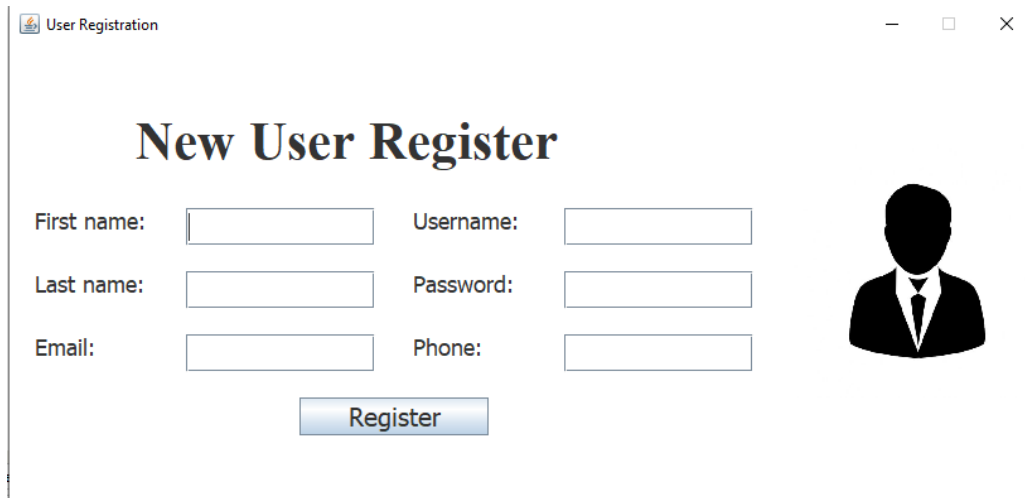


Figure 6: Login Page

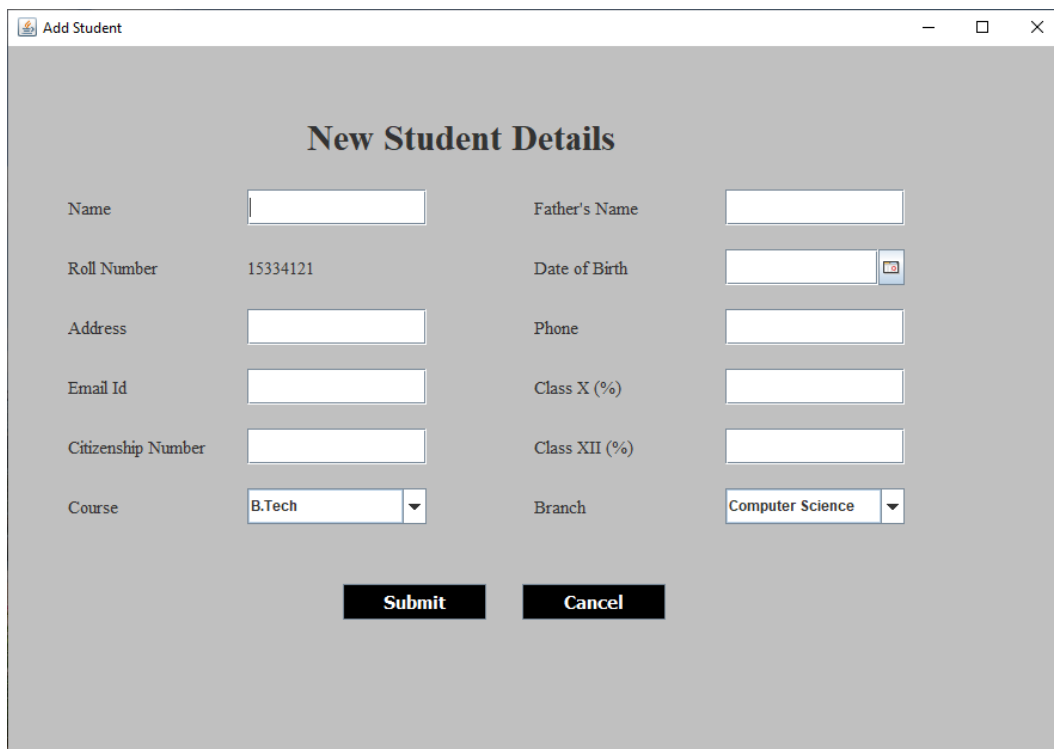
3) User Registration Page



A screenshot of a web application window titled "User Registration". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a white background. At the top, the text "New User Register" is displayed in a large, bold, black serif font. Below this, there are six input fields arranged in two columns. The left column contains "First name:", "Last name:", and "Email:". The right column contains "Username:", "Password:", and "Phone:". Each label is followed by a white rectangular input box with a thin black border. Below the input fields is a blue button with the text "Register" in white. To the right of the input fields is a black silhouette icon of a person wearing a suit and tie.

Figure 7: User Registration

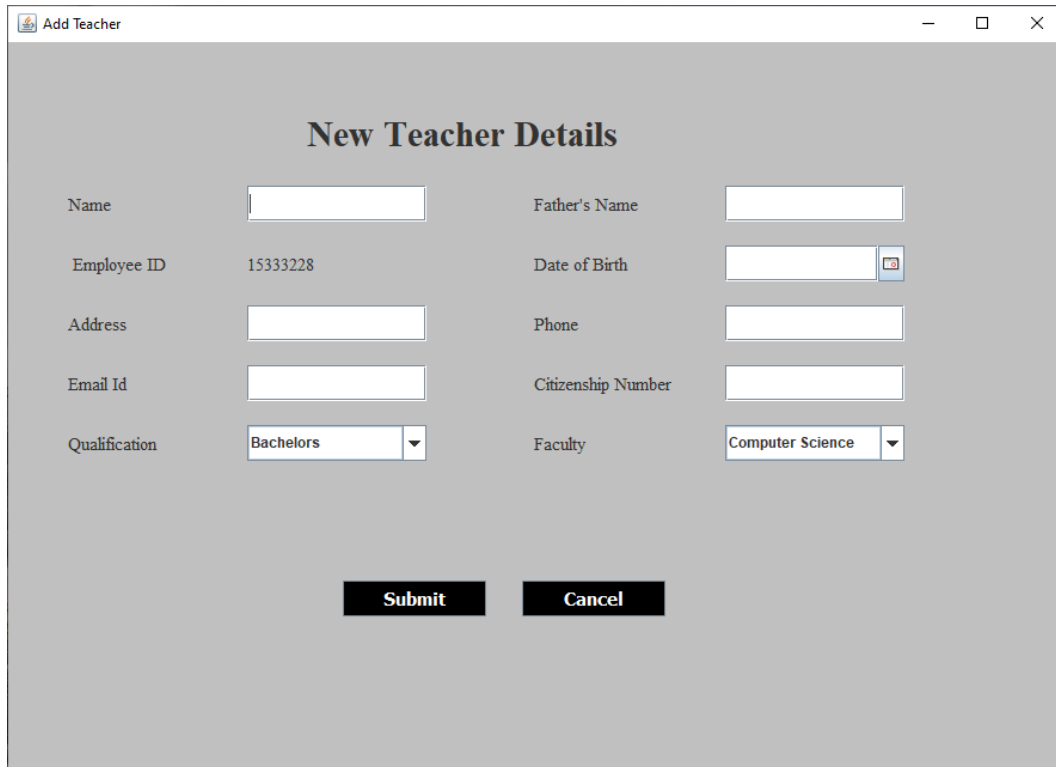
4) Add Student Page



A screenshot of a web application window titled "Add Student". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a light gray background. At the top, the text "New Student Details" is displayed in a bold, black serif font. Below this, there are ten input fields arranged in two columns. The left column contains "Name", "Roll Number", "Address", "Email Id", "Citizenship Number", and "Course". The right column contains "Father's Name", "Date of Birth", "Phone", "Class X (%)", "Class XII (%)", and "Branch". Each label is followed by a white rectangular input box with a thin black border. The "Roll Number" field contains the text "15334121". The "Date of Birth" field has a small calendar icon to its right. The "Course" field is a dropdown menu with "B.Tech" selected. The "Branch" field is a dropdown menu with "Computer Science" selected. At the bottom of the form are two black buttons with white text: "Submit" and "Cancel".

Figure 8: Add Student

5) Add Teacher Page

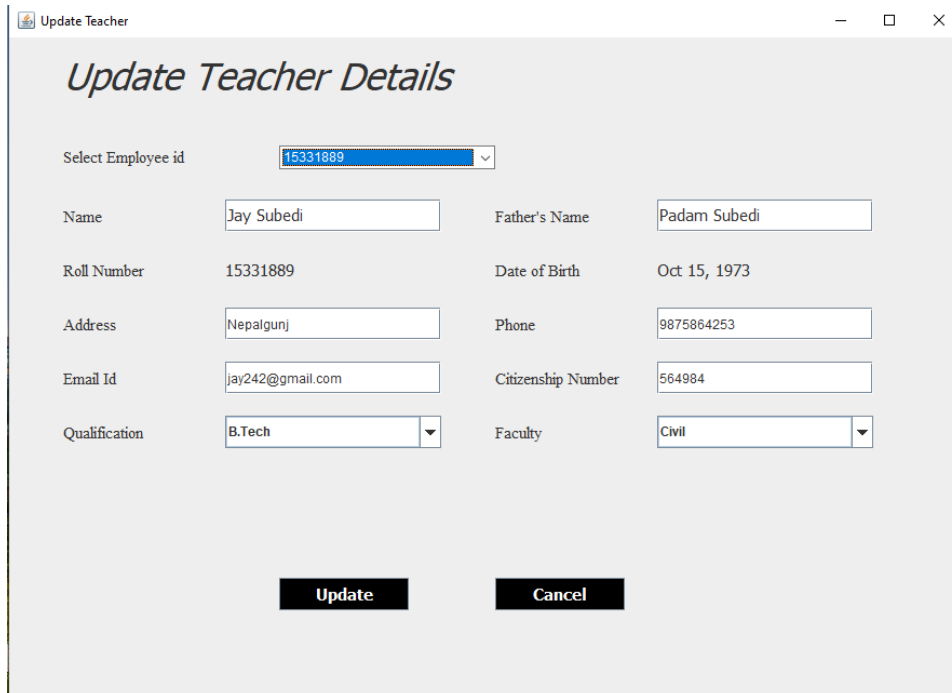


The 'Add Teacher' form is a web application window titled 'Add Teacher'. It contains a section titled 'New Teacher Details'. The form has two columns of input fields. The left column includes 'Name', 'Employee ID' (with the value '15333228'), 'Address', 'Email Id', and 'Qualification' (a dropdown menu with 'Bachelors' selected). The right column includes 'Father's Name', 'Date of Birth' (with a calendar icon), 'Phone', 'Citizenship Number', and 'Faculty' (a dropdown menu with 'Computer Science' selected). At the bottom, there are two buttons: 'Submit' and 'Cancel'.

Name	<input type="text"/>	Father's Name	<input type="text"/>
Employee ID	15333228	Date of Birth	<input type="text"/>
Address	<input type="text"/>	Phone	<input type="text"/>
Email Id	<input type="text"/>	Citizenship Number	<input type="text"/>
Qualification	Bachelors	Faculty	Computer Science

Figure 9: Add Teacher

6) Update Teacher Page

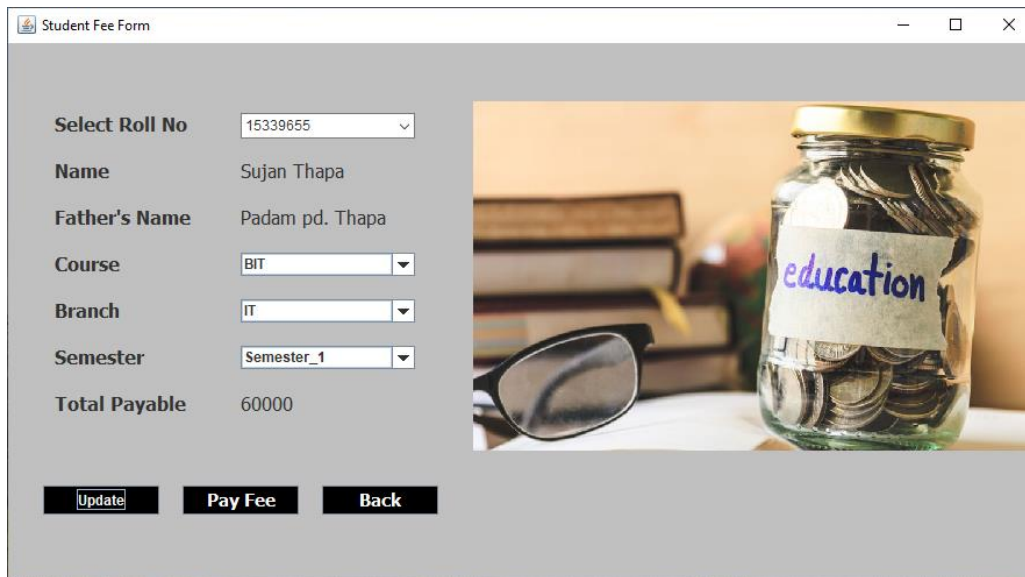


The 'Update Teacher' form is a web application window titled 'Update Teacher'. It contains a section titled 'Update Teacher Details'. The form has two columns of input fields. The left column includes 'Select Employee id' (a dropdown menu with '15331889' selected), 'Name' (with the value 'Jay Subedi'), 'Roll Number' (with the value '15331889'), 'Address' (with the value 'Nepalgunj'), 'Email Id' (with the value 'jay242@gmail.com'), and 'Qualification' (a dropdown menu with 'B.Tech' selected). The right column includes 'Father's Name' (with the value 'Padam Subedi'), 'Date of Birth' (with the value 'Oct 15, 1973'), 'Phone' (with the value '9875864253'), 'Citizenship Number' (with the value '564984'), and 'Faculty' (a dropdown menu with 'Civil' selected). At the bottom, there are two buttons: 'Update' and 'Cancel'.

Select Employee id	15331889	Father's Name	Padam Subedi
Name	Jay Subedi	Date of Birth	Oct 15, 1973
Roll Number	15331889	Phone	9875864253
Address	Nepalgunj	Citizenship Number	564984
Email Id	jay242@gmail.com	Faculty	Civil
Qualification	B.Tech		

Figure 10: Update Teacher

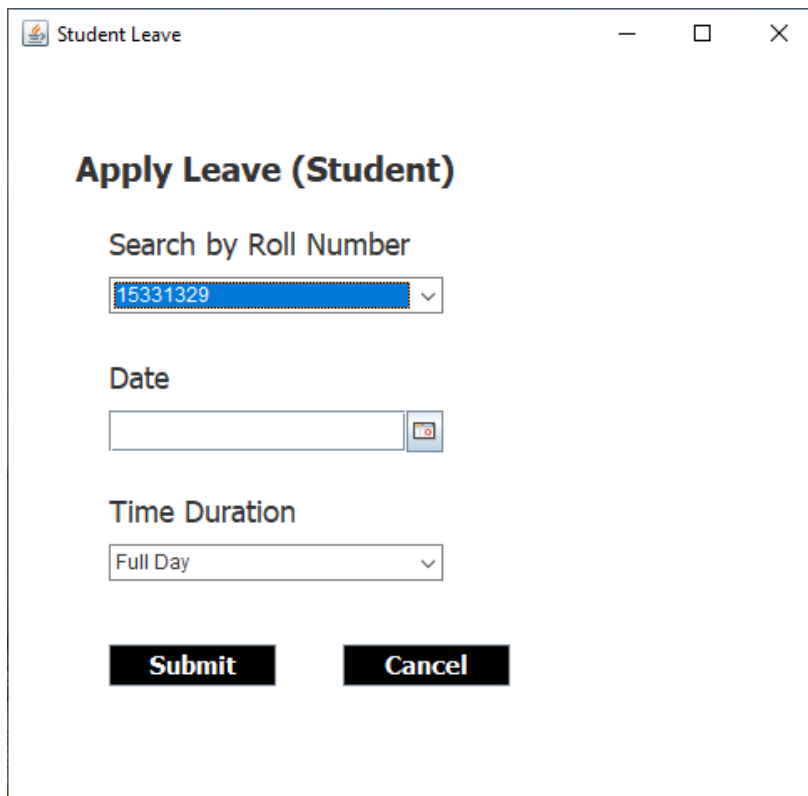
7) Student Fee Form



The screenshot shows a web application window titled "Student Fee Form". On the left, there is a form with the following fields: "Select Roll No" (a dropdown menu showing "15339655"), "Name" (text input "Sujan Thapa"), "Father's Name" (text input "Padam pd. Thapa"), "Course" (dropdown menu showing "BIT"), "Branch" (dropdown menu showing "IT"), "Semester" (dropdown menu showing "Semester_1"), and "Total Payable" (text input "60000"). To the right of the form is a photograph of a glass jar filled with coins, with a label that says "education". Below the form are three buttons: "Update", "Pay Fee", and "Back".

Figure 11: Student Fee Form

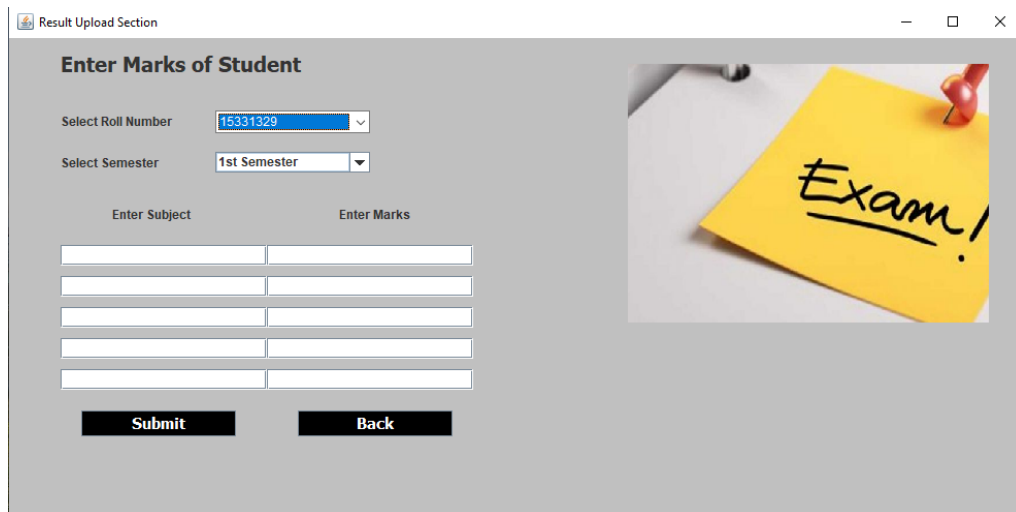
8) Student Leave Apply Page



The screenshot shows a web application window titled "Student Leave". The main heading is "Apply Leave (Student)". Below this, there is a section "Search by Roll Number" with a dropdown menu showing "15331329". Below that is a "Date" field with a text input and a calendar icon. Then there is a "Time Duration" field with a dropdown menu showing "Full Day". At the bottom are two buttons: "Submit" and "Cancel".

Figure 12: Student Leave Apply

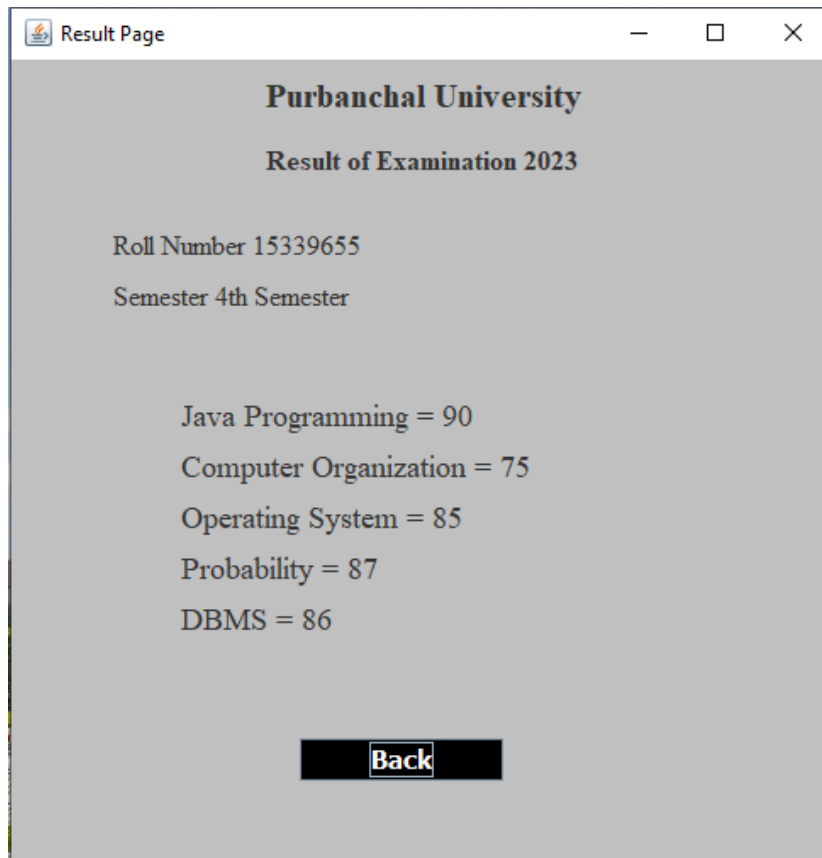
9) Result Upload Page



The screenshot shows a web application window titled "Result Upload Section". It features a form for entering student marks. At the top, there's a header "Enter Marks of Student". Below this, there are two dropdown menus: "Select Roll Number" with the value "15331329" and "Select Semester" with the value "1st Semester". To the right of these is an image of a yellow sticky note with the word "Exam!" written on it. Below the dropdowns, there are two columns of input fields: "Enter Subject" and "Enter Marks". Each column has five empty text boxes. At the bottom of the form, there are two buttons: "Submit" and "Back".

Figure 13: Result Upload

10) Result Page



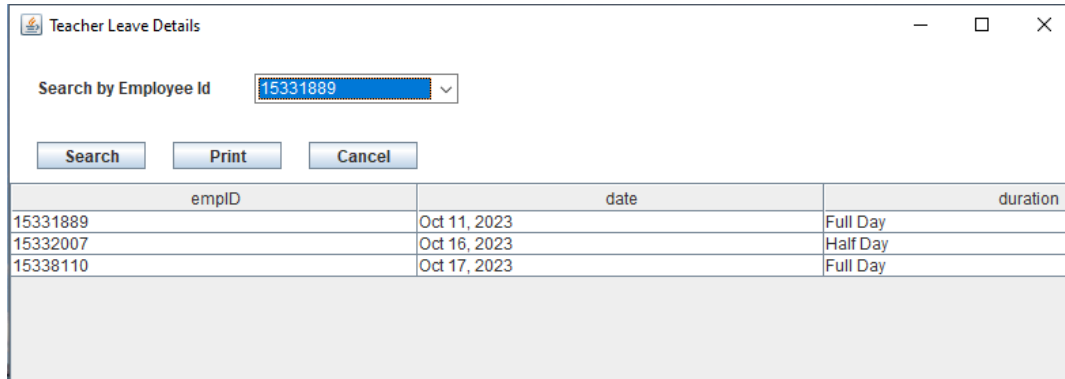
The screenshot shows a web application window titled "Result Page". It displays the results for a student. At the top, it says "Purbanchal University" and "Result of Examination 2023". Below this, it shows the student's "Roll Number 15339655" and "Semester 4th Semester". The results are listed as follows:

- Java Programming = 90
- Computer Organization = 75
- Operating System = 85
- Probability = 87
- DBMS = 86

At the bottom of the page, there is a "Back" button.

Figure 14: Result Page

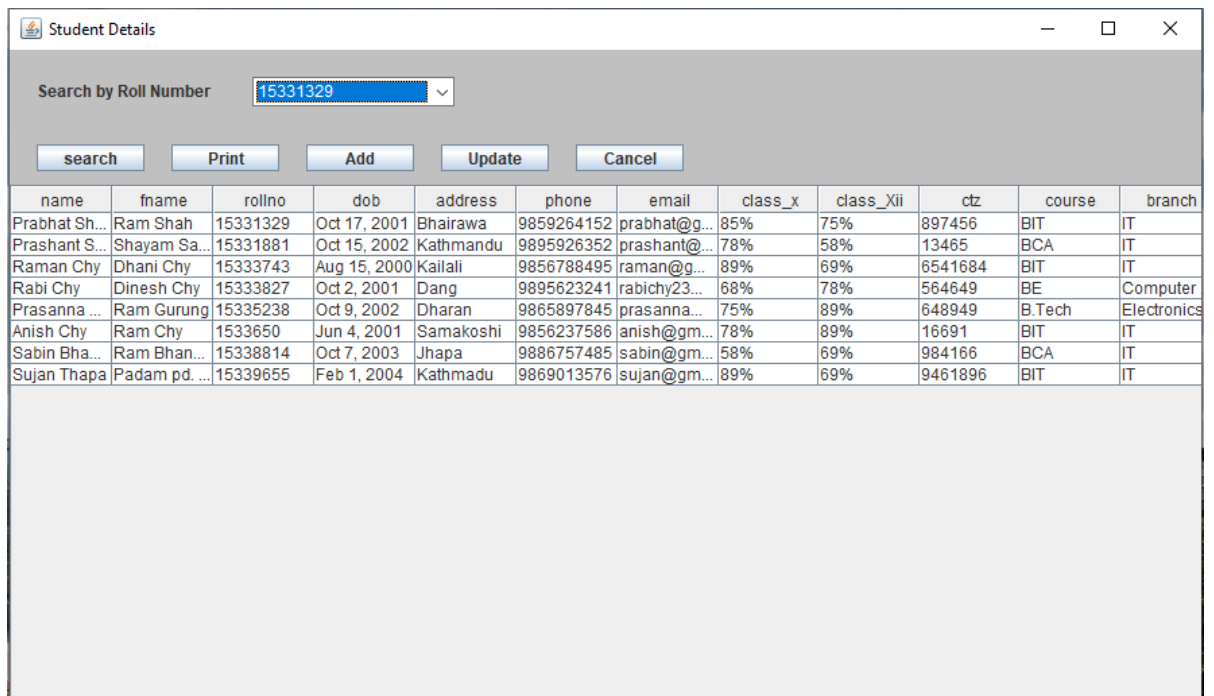
11) Teacher Leave Details



emplID	date	duration
15331889	Oct 11, 2023	Full Day
15332007	Oct 16, 2023	Half Day
15338110	Oct 17, 2023	Full Day

Figure 15: Teacher Leave Details

12) Student Details Page



name	fname	rollno	dob	address	phone	email	class_x	class_Xii	ctz	course	branch
Prabhat Sh...	Ram Shah	15331329	Oct 17, 2001	Bhairawa	9859264152	prabhat@g...	85%	75%	897456	BIT	IT
Prashant S...	Shayam Sa...	15331881	Oct 15, 2002	Kathmandu	9895926352	prashant@g...	78%	58%	13465	BCA	IT
Raman Chy	Dhani Chy	15333743	Aug 15, 2000	Kailali	9856788495	raman@g...	89%	69%	6541684	BIT	IT
Rabi Chy	Dinesh Chy	15333827	Oct 2, 2001	Dang	9895623241	rabichy23...	68%	78%	564649	BE	Computer
Prasanna ...	Ram Gurung	15335238	Oct 9, 2002	Dharan	9865897845	prasanna...	75%	89%	648949	B.Tech	Electronics
Anish Chy	Ram Chy	1533650	Jun 4, 2001	Samakoshi	9856237586	anish@gm...	78%	89%	16691	BIT	IT
Sabin Bha...	Ram Bhan...	15338814	Oct 7, 2003	Jhapa	9886757485	sabin@gm...	58%	69%	984166	BCA	IT
Sujan Thapa	Padam pd. ...	15339655	Feb 1, 2004	Kathmadu	9869013576	sujan@gm...	89%	69%	9461896	BIT	IT

Figure 16: Student Details

13) Fee Structure

Fee Structure								
course	semester_1	semester_2	semester_3	semester_4	semester_5	semester_6	semester_7	semester_8
BIT	60000	60000	60000	60000	60000	60000	60000	60000
BCA	50000	50000	50000	50000	50000	50000	50000	50000
BE_Computer	80000	60000	60000	60000	60000	60000	60000	60000
BBA	40000	40000	40000	40000	40000	40000	40000	40000
MBA	45000	45000	45000	45000	45000	45000	45000	45000
MIT	80000	60000	60000	60000	60000	60000	60000	60000

Figure 17: Fee Structure

14) User Account Table in Database

	first_name	last_name	user_name	password	email_id	mobile_number
▶	Anish	Chaudhary	anishcdy	anishc	anish@gmail.com	9874859674
	Raman	Chaudhary	raman123	nisha123	raman@gmail.com	9856234152
	Sujan	Thapa	sujaan123	sujaan123	sujaan@gmail.com	9869013576
*	NULL	NULL	NULL	NULL	NULL	NULL

account 16 x

Figure 18: User Accounts Database

15) Student Table in Database

	name	fname	rollno	dob	address	phone	email	class_x	class_Xii	ctz	course	branch
▶	Prabhat Shah	Ram Shah	15331329	Oct 17, 2001	Bhairawa	9859264152	prabhat@gmail.com	85%	75%	897456	BIT	IT
	Prashant Sapkota	Shayam Sapkota	15331881	Oct 15, 2002	Kathmandu	9895926352	prashant@gmail.com	78%	58%	13465	BCA	IT
	Raman Chy	Dhani Chy	15333743	Aug 15, 2000	Kailali	9856788495	raman@gmail.com	89%	69%	6541684	BIT	IT
	Rabi Chy	Dinesh Chy	15333827	Oct 2, 2001	Dang	9895623241	rabichy23@gmail.com	68%	78%	564649	BE	Computer Science
	Prasanna Gurung	Ram Gurung	15335238	Oct 9, 2002	Dharan	9865897845	prasanna@gmail.com	75%	89%	648949	B.Tech	Electronics
	Anish Chy	Ram Chy	1533650	Jun 4, 2001	Samakoshi	9856237586	anish@gmail.com	78%	89%	16691	BIT	IT
	Sabin Bhandari	Ram Bhandari	15338814	Oct 7, 2003	Jhapa	9886757485	sabin@gmail.com	58%	69%	984166	BCA	IT
	Sujan Thapa	Padam pd. Thapa	15339655	Feb 1, 2004	Kathmadu	9869013576	sujaan@gmail.com	89%	69%	9461896	BIT	IT
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

< student 17 x Apply

Figure 19: Student Info. Database

16) Teacher Table in Database

	name	fname	Empid	dob	address	phone	email	ctz	qualification	branch
▶	Jay Subedi	Padam Subedi	15331889	Oct 15, 1973	Nepalgunj	9875864253	jay242@gmail.com	564984	B.Tech	Civil
	Suman Subedi	Ram Subedi	15332007	Jun 7, 1992	Lalitpur	9858749685	sumansubedi@gmail.com	97494	Masters	IT
	Sudhir Guraghain	Shayam Guraghain	15332331	Oct 19, 1965	Biratnagar	9895624152	sudhir23@gmail.com	5648946	Masters	IT
	Sibendra Karki	Shayam Karki	15333759	Oct 3, 1994	Bhaktapur	9856457812	sibendra@gmail.com	98744	Masters	Computer Science
	Dr. R N Thakur	DN Thakur	15336890	Aug 14, 1978	Janakpur	9851065609	thakurn@gmail.com	84616	PHD	Computer Science
	Rabi Karna	Ram Karna	15338110	May 9, 1995	kathmandu	9856234152	rabikarna@gmail.com	147852	Bachelors	Computer Science
•	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

teacher 18 ×

Figure 20: Teacher Info. Database