TRIBHUVAN UNIVERSITY

FACULTY OF HUMANITIES AND SOCIAL SCIENCES

ONLINE E

A PROJECT PROPOSAL

Submitted to:

Faculty of Humanities and Social Sciences

Mahendra Morang Adarsh Multiple Campus, Biratnagar, Morang

In partial fulfillment of the requirements for the Bachelors in Computer Application

Submitted By:

Bisesh Adhikari

Anuj Neupane

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Table of Contents

1 Introduction

In today's modern world, technology is a big part of our lives, changing how we talk, work, and study. It has made things faster and more convenient. With the rise of online learning platforms and systems, education is no longer limited to just classrooms . Our project proposal is about creating a simple and easy-to-use website for learning online. It will help students with their studies, making learning more enjoyable.

Our online learning platform is designed to help students learn in an easy and interactive way. It allows you to access educational materials whenever and wherever you want. Whether you're a full-time student, a working professional, or someone with a busy schedule, our platform is here to support your unique learning needs and give you the freedom to manage your education.

Additionally, our online learning portal will offer a wide range of course materials to support students in their learning journey. You will have access to study materials and other resources related to your courses. Having easy access to these materials will help you better understand and grasp the subjects you are studying.

To sum up, our project proposal is all about building an easy-to-use online learning platform that meets the needs of students in today's tech world. We want to make education accessible, flexible, and fun by using the benefits of online learning.

2 Problem Statement

Traditional classrooms and existing online learning platforms fall short of meeting the diverse needs of students. Fixed schedules and limited access to study materials make it difficult for students to learn effectively, while usability challenges hinder their ability to locate essential resources. These limitations result in a lack of understanding of complex subjects and insufficient skill development.

To address these issues, we propose the development of a user-friendly online learning platform. Our platform will provide a simple and intuitive interface, ensuring effortless navigation and quick access to comprehensive study materials, assignments, and additional resources. By offering flexibility, students can learn at their own pace, fitting their studies into their busy lives. Clear and straightforward navigation will guide them, fostering an engaging and enjoyable learning experience. Our goal is to create an accessible and convenient online learning environment that empowers students to succeed, irrespective of their backgrounds or circumstances.

3 Objectives

The objective of the online learning portal is as follows:

- Develop an online learning platform that solves the problems of traditional classrooms and existing online platforms.
- Create an easy-to-use interface for students to navigate and access study materials, and resources.
- Offer flexibility in learning, allowing students to study at their own pace and fit education into their busy lives.
- Ensure the platform is accessible to all students, regardless of their background or circumstances.

4 Methodology

4.1 Requirement Identification

4.1.1 Study of Existing System

The study of existing online learning platforms provided valuable insights. We found variations in course offerings, flexibility, and quality control. Some platforms lack structured courses and consistent quality, while others focus on specific topics with limited interactivity. Our project aims to address these gaps by prioritizing comprehensive materials, interactive features, communication tools, structured learning paths, and quality control.

i. Udemy.com

Udemy is an online learning platform known for its vast course catalog covering various subjects. It offers well-structured content with videos, quizzes, and assignments, and has an active community for collaboration. The platform has a user-friendly interface, flexible learning options, and intuitive navigation. However, quality control varies as anyone can become an instructor, and there may be limited interaction and communication features, as well as some courses lacking comprehensive study materials. [1]

ii. GeeksForGeeks.com

GeeksforGeeks specializes in computer science and programming topics, providing extensive articles, tutorials, and coding practice problems. It regularly updates content and has active discussion forums for community support. However, there's limited multimedia content, a lack of structured courses with progress tracking, and inconsistencies in the quality of materials. [2]

iii. W3Schools

W3Schools is an online learning platform specializing in web development and programming languages. It offers easy-to-understand tutorials, interactive code examples, and comprehensive documentation. However, its focus is primarily on web development, with limited coverage of advanced topics and a lack of interactive elements beyond code examples. [3]

4.1.2 Requirement Analysis

i. Functional Requirements

Functional requirements outline the specific features and capabilities that our online learning platform should have. They define what the system needs to do regarding user registration, course management, user interface, communication tools, and other essential functionalities. By fulfilling these requirements, our platform will provide students with an engaging and user-friendly learning experience.

- User Registration and Authentication
- Course Management
- User-Friendly Interface
- Communication and Collaboration

ii. Non-Functional Requirements

Non-functional requirements specify how our online learning platform should perform and what user experience it should provide. These requirements cover areas such as usability, performance, security, compatibility, and scalability. By meeting these requirements, our platform will deliver smoothly, securely, and efficiently.

- User-Friendly Interface
- Performance and Responsiveness
- Security and Privacy
- Compatibility
- Scalability

iii. System Requirements

Software Configuration

Operating system: Windows
Technology:

Front end: HTML, CSS, JavaScript, Bootstrap

Back end: Django, SQLite

Server: WSGI

Hardware Configuration

Processor: Intel P-IV System
RAM: 8.00 GB RAM

Hard Disk: 512 GB

4.2 Feasibility Study

A feasibility study assesses if our project is practical and achievable. It helps us decide if the online learning platform is worth pursuing within the constraints. Tasks include evaluating time, budget, and resources for project viability.

The feasibility analysis for our project is as follows:

Technical feasibility

In terms of our project, the technical feasibility involves assessing the resources and technology required to develop the online learning platform. With the necessary infrastructure, suitable software and hardware components, and the skills of a capable developer, we have the means and capabilities to successfully create the platform as a group project.

Operational feasibility

Our online learning platform seamlessly integrates into our operations, prioritizing user experience and resource management. It aligns perfectly with our needs, providing accessible and convenient education while ensuring a flexible and enjoyable learning experience for students.

Economic feasibility

We have conducted a thorough analysis of the project's finances, considering development and maintenance costs, as well as potential revenue from platform advertising. Our assessment confirms that the project is economically feasible and has the potential to generate sustainable revenue through advertisements.

4.3 Gantt chart

A Gantt chart is a visual representation of task schedules over time. It is commonly used for project planning, regardless of the project's size. The chart provides a clear view of the work scheduled for each day, including start and end dates.

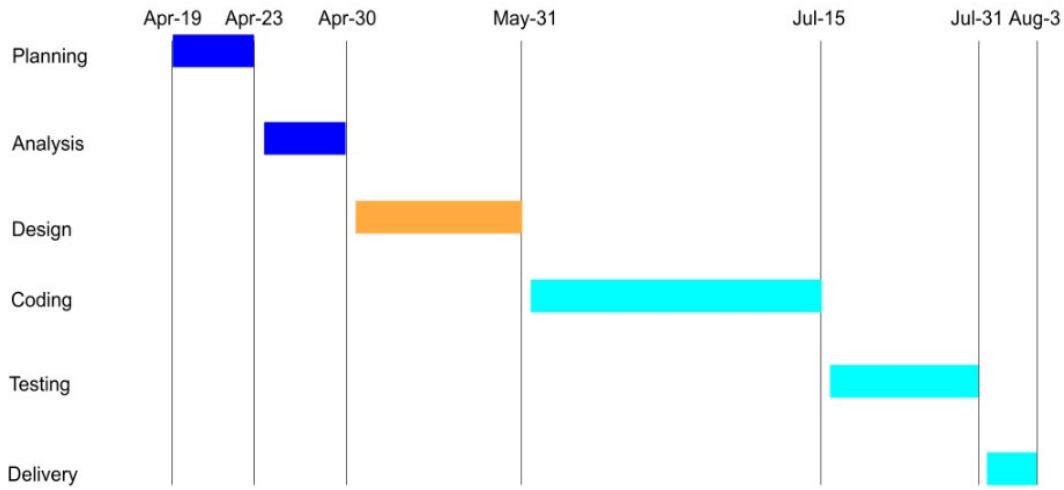


Figure: Gantt chart for online learning portal

4.4 High-Level Design of System

For our online learning platform, the High-Level Design (HLD) will outline the system architecture and design to provide an overview of how the platform will function and its key features. The system will be developed using modern web technologies such as HTML, CSS, and JavaScript. Here are the high-level components of the system design: on. Following is the system design of the system.

- Log in to the system
- Change password
- Admin panel
- Manage user (Add, Update, Delete)
- Manage course (Add, Update, Delete)
- View details
- Watch Course later

4.4.1 Use Case Diagram

A case diagram, also known as a use case diagram, is a graphical representation that depicts the interactions between actors (users or external systems) and a system. It illustrates the different use cases or functionalities of a system and how actors interact with those use cases. A case diagram helps in understanding the system's behavior, identifying system requirements, and facilitating communication between stakeholders. It provides a high-level view of the system's functionality and the relationships between actors and use cases. [4]

The Use Case diagram for our system is as follows:

- Administrator (use case)

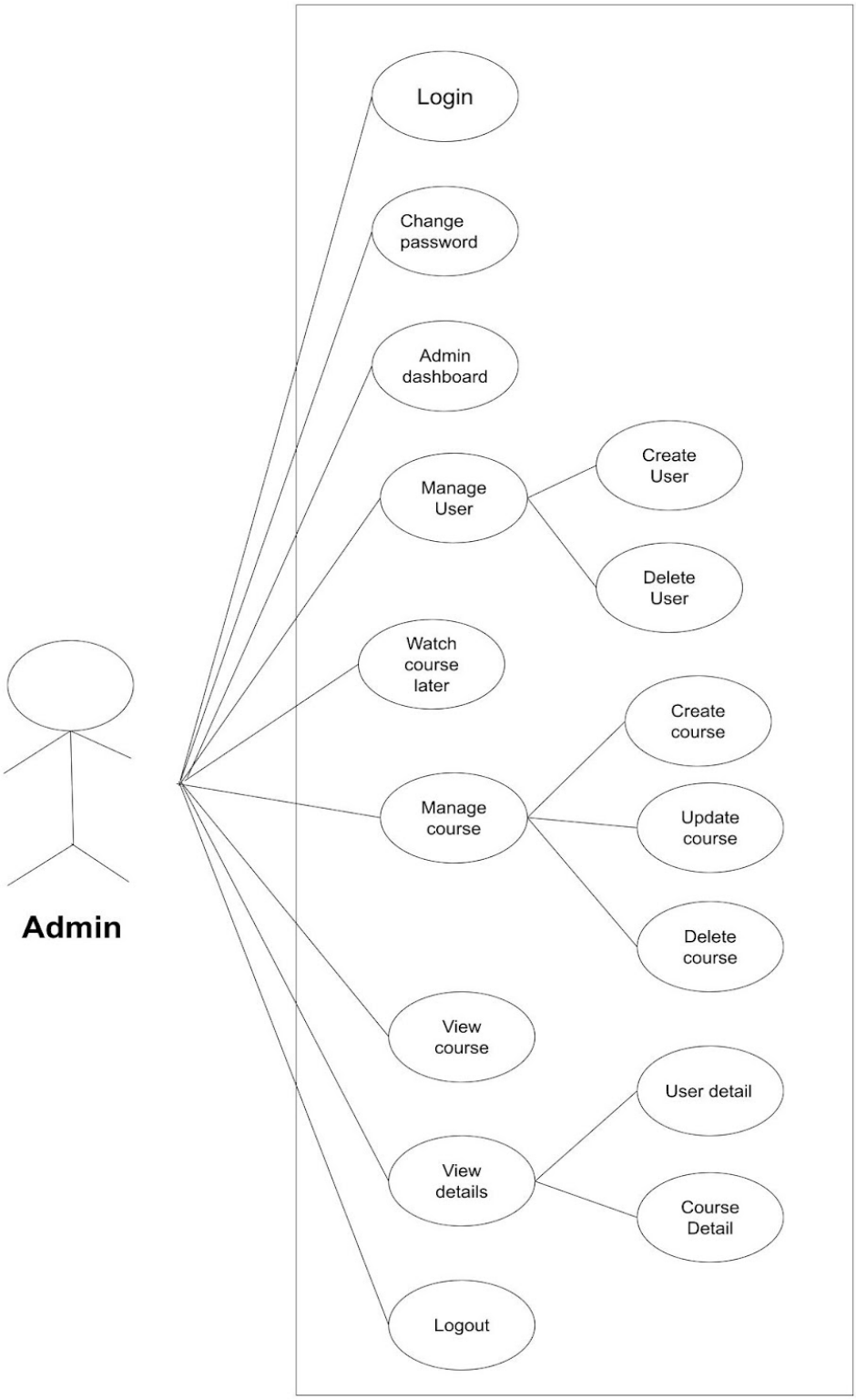


Figure: Use Case diagram of student

- Teacher (use case)

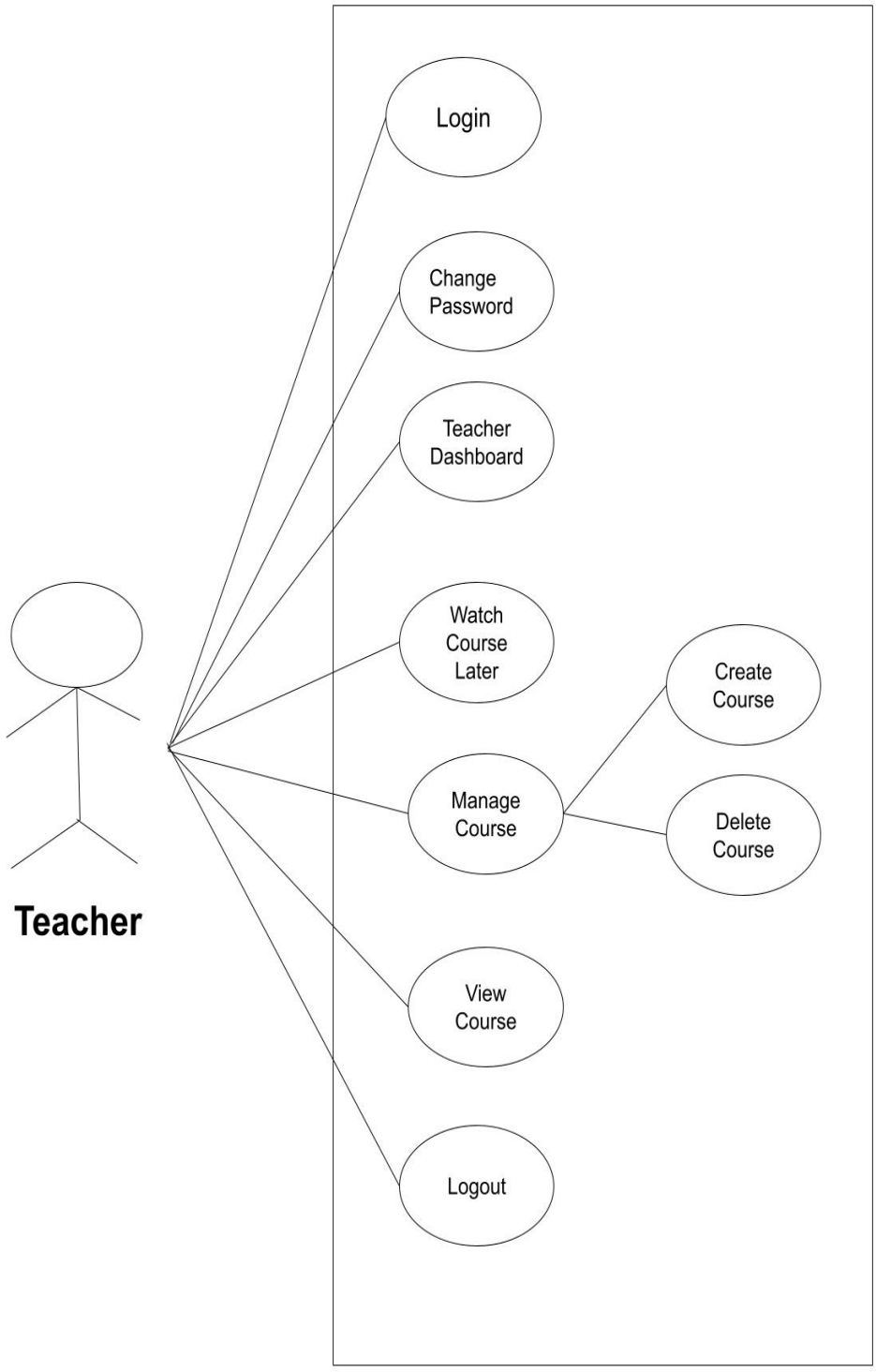


Figure: Use Case diagram of teacher

- Student (use case)

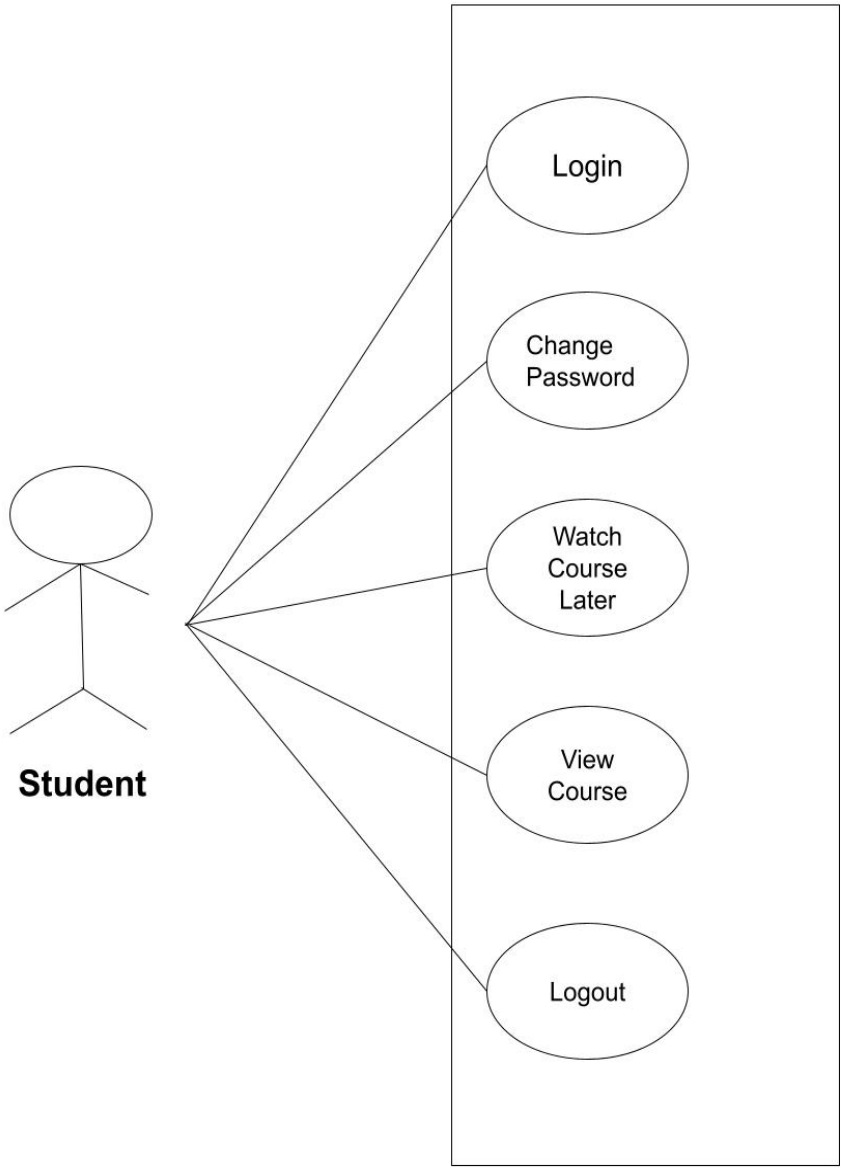
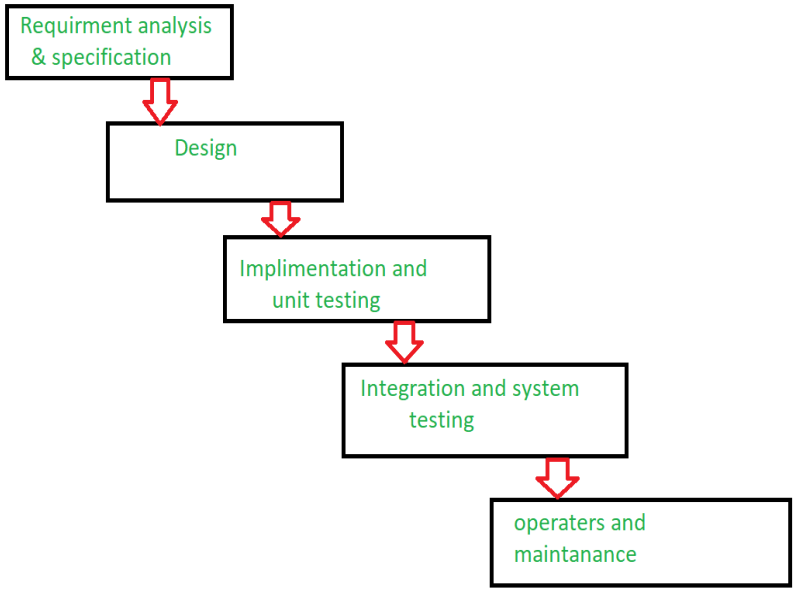


Figure: Use Case diagram of student

4.4.2 Software Development Model

The waterfall model is a traditional way of developing software. It follows a step-by-step approach, where each step depends on the completion of the previous one. It's called "waterfall" because the progress moves steadily downwards, like a waterfall.



- Requirement gathering and analysis: Collecting and documenting all the necessary system requirements.
- System design: Creating a plan for the system based on the gathered requirements.
- Implementation: Developing and testing the system in small parts.
- Testing: Combining the developed parts into a complete system and testing it for any issues.
- Deployment of the system: Making the system available to customers or releasing it in the market.
- Maintenance: Fixing any problems that arise in the customer environment and releasing updates to improve the system.

4.4.3 Flow chart Diagram

The flow chart diagram for our online learning portal is as follows:

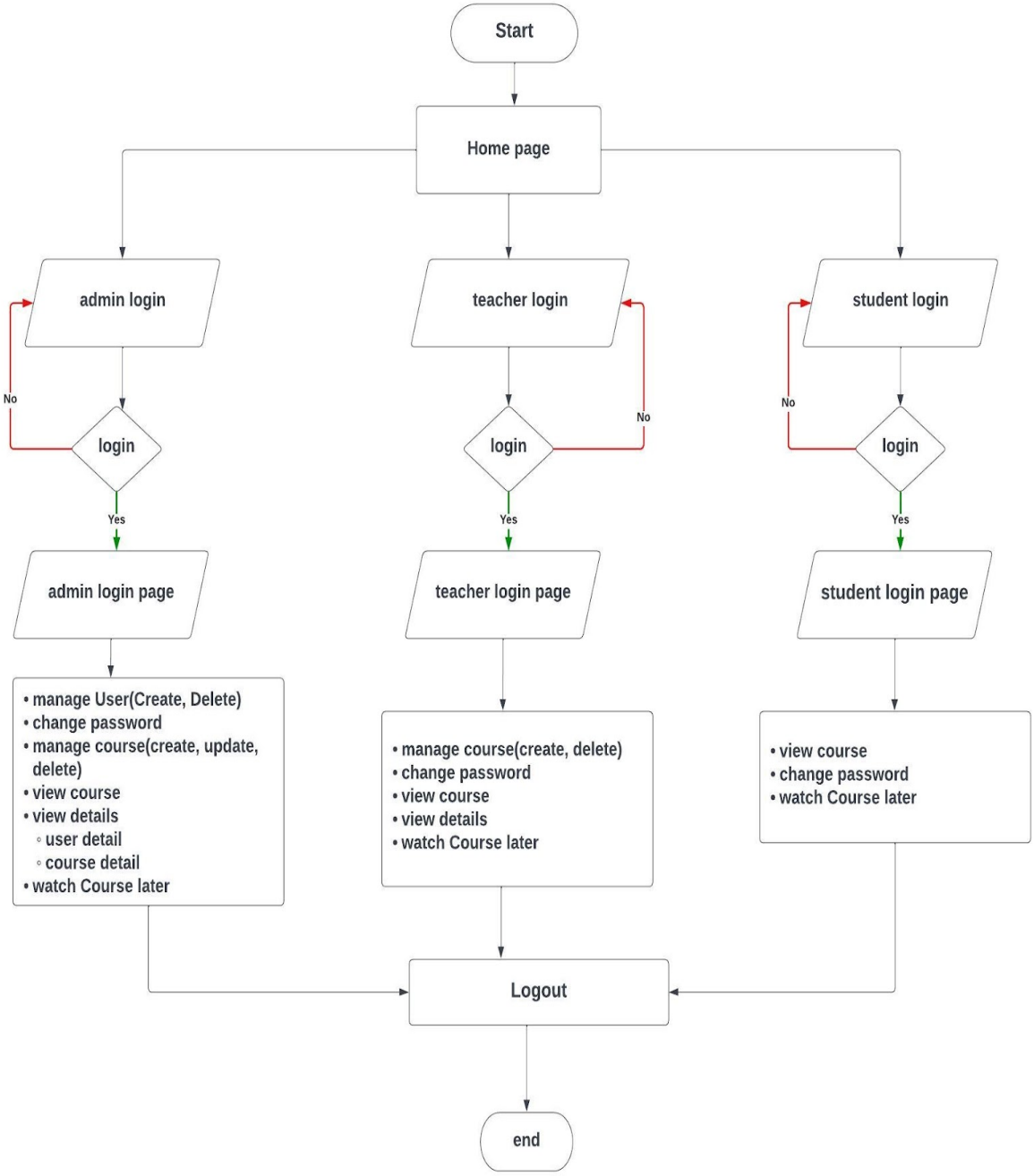


Figure: Flowchart for online learning portal

5 Expected Output

Our online learning platform aims to enhance the learning experience by replacing the manual system with an automated solution. It will provide the following features:

- Login: Users can securely access their accounts.
- User Management: Administrators can manage user accounts.
- Course Management: Administrators can handle courses.
- User Details: Administrators can view user information.

References

[1] "Udemy" [Online]. Available: https://www.udemy.com. [Accessed: May 22, 2023].

[2] "GeeksforGeeks." [Online]. Available: https://www.geeksforgeeks.org. [Accessed: May 22, 2023].

[3] "W3Schools" [Online]. Available: https://www.w3schools.com. [Accessed: May 22, 2023].

[4] TechTarget. “Use case diagram (UML use case diagram)”.[online] Available: echtarget.com/whatis/definition/use-case-diagram [Accessed: May 22, 2023]