Leading University
Department of Computer Science and Engineering
CSE 4800

ProjectHub

Name: Enamur Rabbi Ferdausi ID:2012020144
Name: Arpita Chowdhury Puja ID:2132020071

Department of Computer Science and Engineering

Submitted To

Rumel M. S. Rahman Pir
Associate Professor & Head

Department of Computer Science and Engineering

6th April, 2023

ABSTRACT

'ProjectHub' is a web based application. This application will work to solve varsity project related problems. When students come up with new project ideas, they don't know if similar projects have been done before. The main objective of this project is to avoid this problem.

The purpose of this project is to develop an online platform that will allow students to collect and manage resources for their projects. The platform will also enable group-wise registration for 3rd year and 4th year projects, and after proposal submission, one supervisor will be assigned to each group. Students and supervisors can interact with each other, see work updates and give feedback accordingly.

'ProjectHub' application will help us save time, and generate new ideas.

Acknowledgements

We would like to thank the Department of Computer Science and Engineering, Leading University, Sylhet3112, Bangladesh, for supporting this coursework.

Dedication

We would like to dedicate our work to our parents, our teachers and CSE department of Leading University, relatives and friends.

Contents

List of Figures

Chapter1

Introduction:

Background:

Currently, the number of students studying cse is increasing day by day. Every student has to face 3rd year and 4th year project. Also we do different projects in different courses. Then it can be seen that they bring back the previously made project ideas. Due to this, the old projects are repeated again and again, the old projects are not updated. Our project system will help to solve the problem. This system will have previous project and project related information. Also, 3rd year , 4th year project proposals can be submitted from here, work updates can be reported to your supervisor. So the project will help to reduce the suffering of the students and
save the user's time.

Motivation:

In today's era, it is essential to create a platform where students and supervisors can collaborate and work efficiently. Currently, most universities use traditional methods, such as physical meetings and communication, to manage projects. These methods are time-consuming and do not allow for real-time communication and updates. As a result, there is a need for an online platform that can streamline the project management process and provide a centralized location for students and supervisors to interact.

Our system is practically solved by realizing the problem. My team and I have been researching the problems of students in new projects and have found that students have problems with how to do and what type of projects to do. Students often suffer because of this. Not only that, many times there is a timing problem to communicate with the teachers. The application allows students to provide work updates to supervisors and teachers to provide their feedback.

So, our team members decided to create an application to solve this problem very easily. And this application will help students to save time and come up with new ideas inshaAllah.

Objectives:

The primary objectives of this project are:

To develop a web-based platform that facilitates group-wise registration for 3rd and 4th-year projects.To provide a platform for students to submit proposals and be assigned a supervisor who will oversee their project.To enable users to interact with each other and share updates on project progress.

To provide access to resources from previous projects to aid in the development of new projects.

Features:

The proposed application will include the following features:

1. Home Page: The home page will include three options for 3rd year, 4th year, and previous projects. students can choose their respective option and resources related to their project.

2. Group Registration: Students will be able to register as a group for their projects. They will provide details of their project and team member's information.

3. Proposal Submission: After group registration, students will submit their project proposals. The proposals will be reviewed by the platform administrators, and one supervisor will be assigned to each group.

4.Supervisor Interaction: Students and supervisors will be able to interact with each other through the platform. They will be able to see work updates, share documents, and communicate with each other.

5.Feedback System: Students and supervisors will be able to give feedback to each other, allowing for constructive criticism and improvement.

Chapter 2

Background Study

2.1 Review previous work:

The use of online platforms to support student learning has become increasingly popular in recent years. These

Platforms provide a range of features and tools that support various aspects of student projects, including collaboration, and knowledge sharing. Several studies have highlighted the benefits of these platform

In enhancing student learning and performance (e.g.,Kircaburn et al.,2019; Zarei et al.,2020).

In terms of project management, online platforms have been shown to facilitate collaboration and communication among team members (Gómez-Zermeño et al., 2020). They also provide a centralized location for storing and sharing project-related documents, making it easier for team members to access and use these resources. Moreover, online platforms can help students stay on track with their project timelines and provide support for project monitoring and evaluation.

2.2 Technology Stack:

The proposed application will be developed using the following technology stack:

Front-end: HTML, CSS, JavaScript, ReactJS
Back-end: Node.js, Express.js
Database: MongoDB

Chapter 3

Methodology

Requirements Gathering:
The first step in the development of the platform is to gather requirements. This will involve meeting with students, professors, and other stakeholders to identify their needs and expectations. We will also conduct market research to determine the competition and identify best practices.

Design:
After gathering requirements, we will design the platform's user interface and user experience. The design will include wireframes and prototypes, which will be tested with focus groups and refined based on feedback.

Development:
Once the design is finalized, the development of the platform will begin. We will use a combination of frontend and backend technologies to develop the platform. The frontend will be developed using React, while the backend will be developed using Node.js and MongoDB.

Testing:
Once the development is complete, we will perform extensive testing to ensure that the platform is bug-free and performs as expected. We will also test the platform's security to ensure that user data is protected.

Deployment:
After successful testing, we will deploy the platform on a server that is accessible to students and supervisors. We will also provide documentation and training to ensure that students and supervisors can use the platform effectively.

Chapter 4

Structural Design

In this ‘ProjectHub’ web application, there would be user side and admin side. The Case Diagram of the project is given bellow-

4.1 Use Case Diagram

Use Case Diagram for the Online Project Platform

The above use case diagram illustrates the primary actors and use cases for the online project platform. The primary actors are students and supervisors. The main use cases include registering for 3rd or 4th year projects, submitting proposals, assigning supervisors, and interacting with supervisors. Additionally, students can browse and collect resources from previous projects.

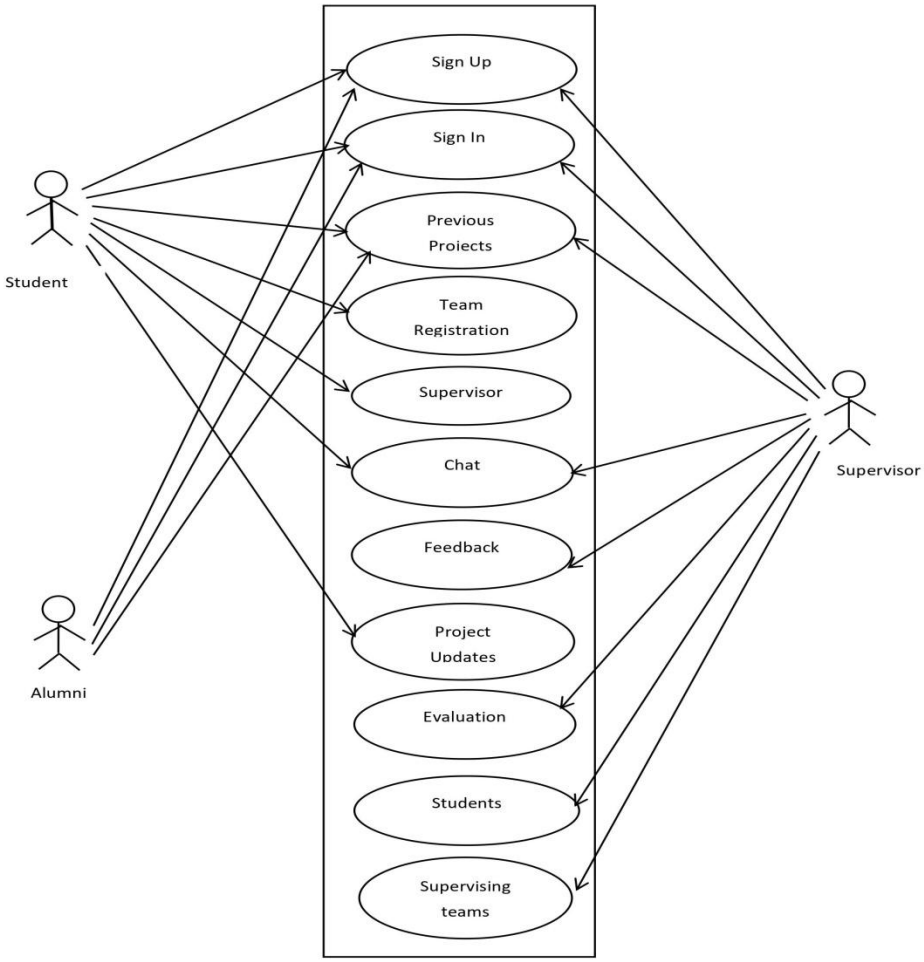

Figure-4.1 : Use Case Diagram

Figure1: Case Diagram

4.2Data Flow Diagram

Data Flow Diagram for the Online Project Platform

The data flow diagram above illustrates the flow of data in the online project platform. The data sources include the previous projects repository, the project proposals, and student information. The data is processed through the registration and proposal submission process, where supervisors are assigned, and work updates are tracked. The data is then presented to students and supervisors through the platform's interface.

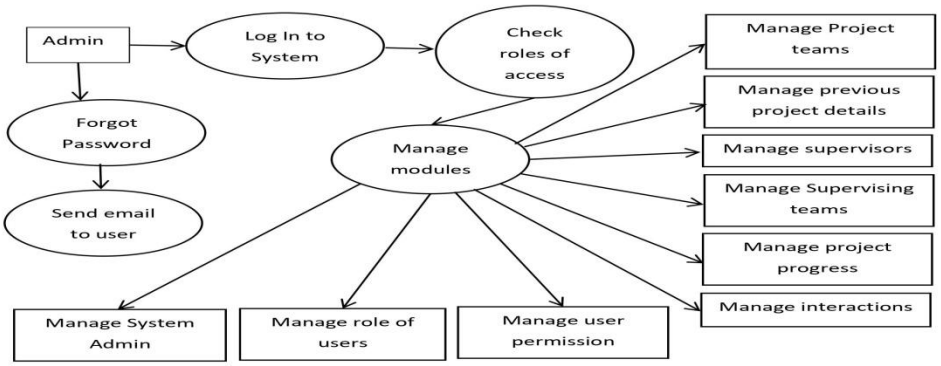

Figure2:Data Flow Diagram

Chapter 5

Limitation and Future Work

Limitation:

One of the potential limitations of this project is that it may require a significant amount of time and resources to develop and maintain. Additionally, there may be challenges in ensuring that the application is user-friendly and accessible to all users, regardless of their technical expertise. Another limitation may be the need to ensure the security and privacy of user data.

Future work:

Future work for this project could include the integration of additional features, such as a task management system, where students can create and assign tasks to team members. Additionally, the application could incorporate machine learning algorithms to provide insights and recommendations based on project progress and user feedback.

Chapter 6

Conclusion

This project aims to develop an online platform that will enable students to collect and manage resources for their projects, as well as allow group-wise registration for 3rd year and 4th year projects. The platform will also assign one supervisor to each group, who can interact with students, see work updates, and give feedback. By incorporating use case and data flow diagrams, we can ensure that the platform is user-friendly, and the data is processed effectively, thereby meeting the requirements and expectations of stakeholders.

References:

[1]Kivunja, C. (2015). Innovative assessment practices in higher education. Springer.

[2]Alharbi, N., & Drew, S. (2014). Using web-based technologies to support group work: A systematic review. Journal of educational technology & society, 17(4), 127-140.

[3]Gómez, F. J., Romero, C., Ventura, S., & Castro, C. D. (2010). A survey on intelligent systems for collaborative learning support. Expert systems with applications, 37(5), 3792-3807.