Advanced FYP Portal

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Session 2020-2024

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Advanced FYP Portal

A project submitted to the
Department of Computer Science
In
Partial Fulfilment of the Requirements for the
Bachelor's Degree in Computer Science
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This is to certify that the project titled "**Advanced FYP Portal**" is the authentic work accomplished by **Hamza Zafar, and Talha Nadeem**, students of the BSCS of the Computer Science Department, Lahore Garrison University, Lahore. Throughout the academic year 2020-2024, in partial fulfillment of the conditions for the award of the degree of Bachelor of Computer Science. So, the project has not formed the basis for the award preceding any other degree, diploma, fellowship, orany other related title.

Hamza Zafar _____

Talha Nadeem _____

DECLARATION

We hereby declare that this project titled **"Advanced Fyp Portal"** is not copied from any other source. This authentic work was done by the signatory, in practical achievement for the degree "Bachelor of Science in Computer Science" at the Computer Science Department, Lahore Garrison University, Lahore. Besides, it is declared that we have designed this project report completely based on our intention under the kind leadership of our internal supervisor Muhammad Hams.

All analysis, design, and development of the system were carried out by the signatory. Also, this project has not been submitted by any other student to any other college or university of Pakistan.

Hamza Zafar _____

Talha Nadeem_____

ACKNOWLEDGEMENTS

First and for most uncounted thanks to ALMIGHTY ALLAH who created us worthy of all praise and who mentor us in crises. Secondly, all salutations are presented to our beloved PROPHET MUHAMMAD (PBUH) who empowers us to recognize our creator and whose life is the best example for us. During this project, we received support, assistance, or practical help from many people and it is bliss to acknowledge their intentions.

Our heartiest prayers go to our parents, siblings, and to all family members for their assistance and moral support. Our success is possible only due to prayers or the support of our mothers who love us and always pray for us in every moment of our life.

We are very thankful to all our family members, and senior fellows and we also feel vastly in debt to our supervisor Muhammad Hams for providing us with precise research-oriented opinions, advice, backing, and assistance during the project and throughout the academic session.

DEDICATION

I dedicated this work to, first of all, ALLAH Almighty who glorified us with the knowledge and bravery to complete this responsibility with elegance. Secondly, my affectionate supportive family whose prayers, advice, and continuous support played a major role in achieving this goal. Finally, to the Lahore Garrison University and Especially, the department of Computer Science

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LIST OF ABBREVIATION

Table 1- LIST OF ABBREVIATION

Short Form	Complete Form	Description
FYP	Final Year Project	
WWW	World Wide Web	
HTTP	Hypertext Transfer Protocol	
DB	Database	
DFD	Data flow diagram	
CSS	Cascading Style Sheet	
SQL	Structure Query Language	

Abstract

This idea suggests an Advanced Fyp Portal that is specially designed to streamline and enhanced the management of final year projects for student and faculty. This Web based platform provides a centralized system for project submission, Tracking, Online documentation maker, Select Fyp supervisor, Book appointments, and aiming to improve the overall efficiency of academic project management in the term of time and resources for both student and faculty. By integrating various functionalities into a single platform. The Advanced fyp portal Project will reduce administrative burdens, better communication and successful completion of projects in a more efficient way.

Chapter 1

Introduction

Background

Accessing information in today's world has taken a leap with the development in technology which given way to online system to be the new management system. The need of online system has increased rapidly during these past years. Online system has been doing a very good task in eliminating the need of hardcopies, spaces, and time. Online system indicates the need of connection between the users and system.

The exchange of information among final year project coordinators, lecturers, supervisors, examiners and students needs an effective communication medium to ensure that no misunderstanding or lack of information that will cause delay in the completion of projects. Thus, the Advanced fyp portal is ideal since it provides the best solutions for the previous fyp management. This system is proposed as the need to enhance the process and management system efficiency. In this project, a web-based software solution will be introduced to provide a comfortable environment for fyp management.

1.1 Overview

The scope for Advanced fyp Portal is very broad in terms of the management system. There are two parts in developing this project. This project will involve the knowledge and experimentation based on Web design, setup and development, Database design and Management.

Objective

System Perspective

The Advanced fyp portal based on Web development with help of frontend, backend and testing techniques.

Usability

To develop an online system that is more systematic and comfortable.

1.2 Gantt Chart

Gant Chart of our APP is given below in table 1.

Activities	**Week/Semester**
Front End	Week 7 & 9 (7th)
Data-Base	Week 10, 11 & 12 (7th)
Reregistration	Week 13 & 14 (7th)
Requirement Gathering	Week 15 (7th) Week 1 (8th)
Back End	Week 2, 3 & 4 (8th)
Learning Dart and designing backend	Week 5, 6 & 7 (8th)
Learning Methodologies and designing front end.	Week 9, 10 & 11 (8th)

Table 2- Gantt Chart

Testing finalization.	Week 12 & 13(8th)
Documentation	Week 7 (7^{th}) – Week 13 (8^{th})

1.3 Report Organization

This report presents the Chapter wise organization of the project as individual chapters explain tasks that were crucial for the deed of the project. A list of chapter-wise report is given as follow.

Chapter 1: In the first chapter, the backstory and overview of the advanced fyp portal were also addressed.

This chapter also featured a Gantt chart that depicted the project's evaluation time.

Chapter 2: This chapter defines the project problem definition.

Chapter 3: The Software Requirements Specification, as well as functional and non- functional requirements, were covered in this chapter.

Chapter 4: This chapter discusses the project's methodology, tools, and technology.

Chapter 5: The structure and behaviour of the system are explained using diagrams in this chapter.

Chapter 6: This chapter covers how to conduct tests, as well as test strategies and project maintenance information.

Chapter 7: This defines the evaluation of results.

Chapter 8: This chapter wraps up the project's whole working and post-work phases.

Chapter 2

Literature review

Introduction

The word wide web is a platform for all the people from all around the world to gain and deliver knowledge and information. The web is also becoming more popular because of the effectiveness in the use as an administrative and management tool in many institutions. This technology is the main key in the idea of developing an online system. In defining the structure of web system, web programming is used to manage the behavior of the pages while web design technique will give it a user-friendly interface. It reviews existing research and technologies that can be useful in the development of a Fyp portal based on the mern stack including the selection of supervisor, appointments and supervisor lists etc.

2.1. Overview of MERN Stack

Research One of the highly adopted technology stacks for full-stack web application development is MERN, consisting of MongoDB, Express.js, React, and Node.js. MongoDB is a NoSQL database that is noted for its flexibility and high scalability. Express.js is a minimalist web framework for Node.js, which simplifies server-side development. React is a JavaScript library to build user interfaces that make it easy to build dynamic and responsive web applications. Node.js provides the runtime environment for server-side scripting, supporting JavaScript.

2.2. Supervisor Selection Module

Supervisor selection is an important process within the academic environment, as students select a mentor based on interests and expertise. Earlier systems have done this by integrating profiles and information on expertise to help with the choice process. These are often recommendation systems powering things, allowing them to use and take advantage of the very many kinds of functionality within the Advanced FYP Portal. This module allows matching between students and supervisors according to various criteria. Choice of an effective supervisor is important in ensuring that the students are given suitable help and support in pursuing the project.

2.3. Appointment Booking Module

The Scheduling an appointment is an important thing in the aspects of academia and the work field. Sometimes, the availability management of most earlier systems faced difficulty sometimes, the system is based on a very complex design, and so, a drawback is about the user interface. Most recent innovations bring the most complex booking systems that are real-time based and have excellent user interfaces. Real-time scheduling algorithms and conflict resolution mechanisms should actually be integrated to enhance user experience features in getting appointments for larger classes of applications for which it is intended.

2.4. Conclusion

The traditional management system of FYP through a manual tradition is inefficient, prone to errors, and less scalable and flexible for changing requirements and needs. These deficiencies can be overcome by shifting to a digital, automated system that will entail efficient processes, improved communication and collaboration, better accessibility and longevity of data, and insight generation for decision-making. There is a rich body of research and technological advancements in the development of the Advanced FYP Portal using the MERN stack, from literature that will be drawn from. It shall focus on improving the management of final year projects efficiently with respect to selection, appointment scheduling, and listing under supervisors by drawing some best practices from available systems, incorporating state-of-the-art technologies. Further work in this direction may be conducted for more improvements in user experience and system scalability.

Chapter 3:

Problem Definition

3.1. Problem Statement

Current methods and systems for managing final year projects face several limitations that impact the efficiency and effectiveness of the supervisor allocation process .There are several critical tasks to be managed associated with final-year projects within institutions of academic excellence, including choosing appropriate supervisors, fixing appointments, and updating a record of the available supervisors. These are very critical activities that ensure that students have proper guidance and advice for their projects. However, with the existing systems and traditional methods, these seem to pose fairly significant challenges to project management.

3.2. Project Background

In academic institutions, one of the most critical aspects of the educational process is FYP management. This is very important in undergraduate and graduate programs. These successfully completed projects call for a good time scheduling of appointments, which eases communication between students and supervisors. Traditionally, with old systems, manual processes, and inefficiencies, it has been quite hard to manage the components of these projects. The Advanced FYP Portal has been developed to meet these challenges, based on the adoption of recent technologies in the automation of final year project management.

Students mostly lack information about the interests, expertise, and availability of potential supervisors, hence making an informed decision under difficult circumstances.

One can also conceive of circumstances when the time slots for meetings could not be found mutually convenient, thus leading to scheduling conflicts and delays.

This is often combined with the lack of real-time updating regarding a supervisor's availability, complicating things even more in previously designed systems.

DESIGN POCESS:

For this project, we follow the design process.

Discovery: we performed formative research to understand our problem space more

Define: We defined our problem

Develop: We explored different ideas

Deliver: We focused on a single idea and developed our final prototype.

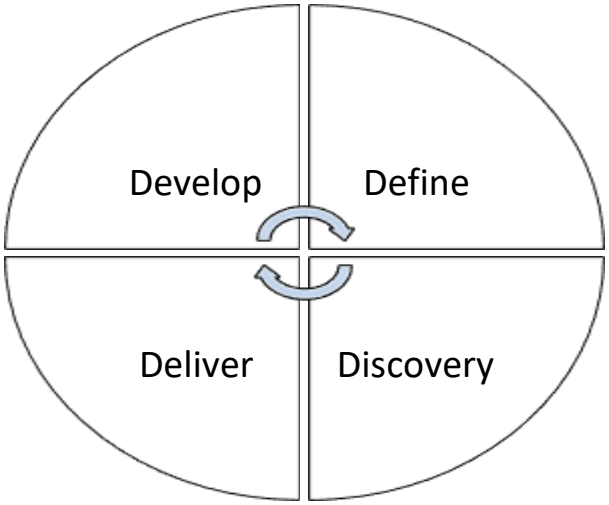

Figure 2.1 Design Process 1

3.3. FORMATIVE RESEARCH

3.3.1. Formative Research Methods:

To refine your concept and ensure "Advance Fyp Portal" meets user needs, consider these formative research methods:

- **User Interviews:** Quantitatively collect data about students', supervisors', and administrative staff'sneeds, preferences, and pain points by distributing questionnaires and surveys among them.
- **Key Areas:** Discuss topics ranging from the issues faced in choosing a supervisor, problems associated with appointment scheduling, to the features one would want in a project management portal.

- **Research Insights:** Based on the formative research methods suggested, here are some potential research insights you mightuncover

3.3.2. *Target User Needs*:

- Information about supervisors should, therefore, be made available to the students, particularly regarding their research interests, areas of expertise, publication record, and current projects. This will help students in making an informed choice of supervisor.

- Clear information on supervisors' availability and their areas of expertise is important in ensuring that student projects are aligned with appropriate guidance.

3.3.3. Usability and User Experience:

- The interface should be user-friendly for both students and supervisors. It must provide easy navigation, reducing the learning curve for first-time users.

- The Advanced Fyp portal shall thus be accessible and functional on various devices, from desktops, tablets, and even smartphones.

3.3.4. Motivation and Engagement:

- Advantages of using the portal should be clearly stated, which will include easy selection of a supervisor, making effective appointments, and even being able to view full supervisor profiles.

- Offering challenges or achievements within the app could boost engagement.

- Advanced Fyp portal improves the final year project experience for students and supervisors by reducing the administrative burden and improving communication.

3.4. Ideation

- The Ideation of the Advanced FYP Portal is about conceptualizing the features and functions supporting the proposed final year project management system to enhance user experience and administrative process in managing final year projects.

3.4.1. Prototype:

- Prototype is an important development process for the Advanced FYP Portal. It will create a preliminary version of the system to visualize features, test it out, and get user feedback in order to perfect the design.

3.4.2. First Iteration — Other functionalities

- Advanced FYP Portal Iteration 1 includes the development and testing of an initial system version with theaim to validate key functionalities and obtain relevant feedback.

3.4.3. Final Prototype

- The final prototype of the Advanced FYP Portal represents the final effort in terms of iterative design and development, taking into account all feedback from the initial prototypes and testing phases.

3.5. Future Direction:

In the future, Through such a focus, the portal is enabled to keep conferring an important level of support toward final year projects, continue to meet the ever-changing needs of students and supervisors, and stay aligned with both academic and industry standards.And we can also worked to launch as a app also.

Chapter 4:

Software Requirement Specification

4.1. Introduction

4.1.1. Purpose

Our proposed system aims to provide an (online) platform for all people. This SRS document encompasses the entire scope of the Advanced FYP-Portal system and includes requirements and functionalities that shall be catered for by the software product in the successful implementation and running of the FYP-Portal software. This document does not describe a part of the system or a single subsystem; rather, it presents an overview of the entire software product. This shall, of course, cover the following: user authentication, submission of project proposals, project tracking, communication tools, document management, feedback and evaluation mechanisms, calendar integration, search and filter functionality, notifications, analytics, and reporting.

4.2. Document Conventions

Advanced Fyp Portal nearby SRS (Software Requirement System) is constructed and developed under the “Microsoft Word” Version 2019. Twenty-two font size is adopted for the main headings on the right side, while sixteen font size is picked for the subject headings that are specifically aligned on the left side, and last but not least the subheadings are designed under the thirteen font size which is also aligned on the left as well. Time New Roman is specifically adapted for the whole paragraph design in this specific SRS. This SRS of Child Monitoring App System pages are briefly numbered at the lower right of these particular software requirement specification pages and only the main page or cover page is not numbered. The font size selected/ adopted is twelve font size which is specially used for paragraph text which also includes the 1.0 line spacing across the whole format and bold styling is particularly selected for all categories and formats of headings. For the paragraph, we used 6pt before text spacing and 6pt after text spacing.

4.3. Intended Audience and Reading Suggestions

It knows its target audience and makes relevant reading suggestions to ensure the effectiveness of the Advanced FYP Portal's documentation and resources in meeting its needs. Primary users will be students, who have the possibility to use the system for selecting their supervisors, arrangingappointments, and managing their final year projects. Clear guidance on how to use the portal, search for and select supervisors, schedule appointments, and manage project-related tasks.And if we talk about the reading suggestion So, Start with the user guide that explains the basic functionalities, such as how to register, select a supervisor, and book appointments. Follow the guide in updating and maintaining supervisor profiles, including how to manage research interests and project history. By providing these targeted reading suggestions, users of the Advanced FYP Portal can efficiently access and utilize the resources and documentation relevant to their roles, enhancing their overall experience and effectiveness in managing final year projects.

4.1. Product Scope

The Advanced FYP-Portal is a comprehensive online platform designed to streamline the management of final year projects for computer science students. It facilitates the entire FYP lifecycle, from project proposal submission to completion, by offering a suite of tools for efficient supervisor selection, appointment scheduling, and project tracking. The portal integrates features such as a searchable supervisor directory, real-time appointment booking, personalized dashboards for monitoring project progress, and robust administrative tools for user management and reporting. By enhancing collaboration, communication, and oversight, the Advanced FYP-Portal aims to improve efficiency, transparency, and accountability in the FYP process, providing a unified solution for students, faculty advisors, and administrators.

4.2. Overall Description

4.2.1. Product Perspective

The "Advanced FYP-Portal" is envisioned as a sophisticated software platform tailored specifically for computer science students undertaking final year projects (FYPs). It serves as a centralized hub where students, faculty advisors, and administrators can seamlessly collaborate and manage various aspects of the FYP lifecycle. The portal's core functionalities encompass project proposal submission, progress tracking, communication tools, document management, and reporting features. By consolidating these functionalities into a unified platform, the portal aims to enhance the efficiency, transparency, and accountability of the FYP process. It empowers students to navigate their projects more effectively, facilitates better communication and collaboration between students and advisors, and provides administrators with valuable insights into project progress and outcomes.

4.1.1. Product Functions

4.1.1.1. Users should register their Profile and Personalization.

4.1.1.2. Users should select the Supervisor for Fyp

4.1.1.3. The user should send requests to Supervisor

4.1.1.4. The user should Book Appointments with Supervisor

4.1.1.5. Users should Upload their documentation/files

4.1.1.6. Receive Notifications & Streams

4.1.2. User Classes and Characteristics

Admin Section

The major target Admin section.

4.1.2.1. Users should have basic knowledge of using Web-based Applications.

4.1.2.2. Users should know about access to e-mail.

4.1.2.3. Users should have basic knowledge of how to use the Web Applications.

4.1.2.4. Users should be able to understand standard documentation.

4.1.2.5. Users should be responsible for confidential data.

4.1.3. User Section

The major target is the user section.

4.5.4.1. Users should have basic skills in using Web Application.

4.5.4.2. Users should be responsible for not doing unauthorized actions

4.5.4.3. Users should be able to understand standard documentation.

4.5.4.4. Users should be responsible for confidential data.

4.2. External Interface Requirements

4.2.1. User Interfaces

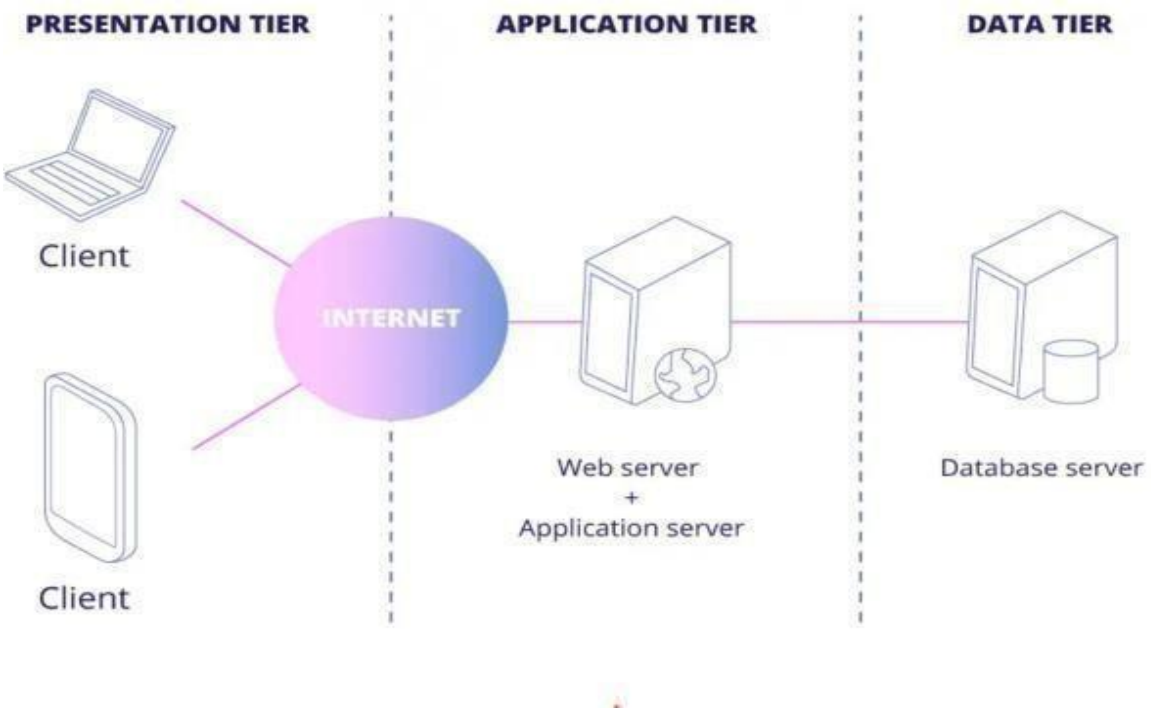

Figure 1 - External Interface Requirements

4.7.2. Admin Side:

For the admin side of the Advanced FYP-Portal is designed to provide administrative users with comprehensive tools and functionalities for managing the portal's overall operation.

Figure 2- Admin Side/Business owner

User Side: For the user side first of the Advanced FYP-Portal provides students, supervisors, and other users with tailored interfaces and functionalities to manage their final year projects efficiently. Students can submit project proposals, search for and select supervisors, schedule appointments, and track their project's progress through personalized dashboards.

4.7.4. Software Requirements

Table 3- Software Requirements

Software	**Description**
Operating system	We selected Windows OS and visual studio code to makethis application.
Database	The software should store user information and user-submitted info in a Google MongoDB database to enable communications in the middle of the database and the application.
API	We use custom APIs.

4.7.4. Communications Interfaces

This application Support and work on all kind of devices and can easily operate from any kind of Browser and no need require a high-level smartphones or Laptop and No need of high Ram and Rom.

4.7.4.1. Android smartphone
4.7.4.2. 3G/LTE Internet Connection
4.7.4.3. Wi-Fi Internet Connection

4.8. Functional Requirements

4.8.1. User

Every users Users (students, supervisors, and administrators) must be able to create accounts with personal details and authentication credentials.

4.8.2. Role based Access

The Differentiated access levels and permissions based on user roles (e.g., student, supervisor, admin).

4.8.3. Login

The Secure login with multi-factor authentication (MFA) to ensure user identity and data security.

4.8.4. Supervisor Selection

Students must be able to search for and filter supervisors based on criteria such as research interests, expertise, and availability.

4.8.5. Appointment Scheduling

A user-friendly interface for students to request and schedule appointments with supervisors. Supervisors can set and manage their availability, including open time slots and *scheduling preferences.*

4.8.6. Project Proposal Management

Students must be able to submit project proposals with necessary details and supporting documents. Supervisors and administrators can review, comment on, and approve or reject project proposals.

4.8.7. Edit Personal Info

The Creation and management of detailed user profiles for students, supervisors, and administrators. Ability for users to update personal information, project details, and preferences.

4.9. Other Nonfunctional Requirements

4.9.1. Performance Requirements

The performance requirements for the Advanced FYP-Portal mandate that the system operate efficiently and reliably under various conditions. It must handle a significant number of concurrent users with minimal latency, ensuring that page loads and actions are completed swiftly, typically within 2-3 seconds. The portal should maintain 99.9% uptime, with robust scalability to manage peak usage and high data volumes. System resources must be optimized for efficiency, and data integrity must be preserved with regular backups.

4.9.2. Safety Requirements

The moving of the data/information in the Advance Fyp Portal is secured by assuring the integrity and protection of the entire data that circulates through this system. A secured and fully authorized structure is developed specially and specifically keeping in view the security of the whole system including smart signature-based permission. Meanwhile, information moving linking two applications that you own or control use signature-based permissions. These permissions do not require user confirmation and the data is signed with the same signing key. Therefore, these permissions provide a streamlined and more secure user experience.

4.9.3. Security Requirements

As an web-application security measure, users must be authenticated to access application content. Authentication is via email and authentication and password are required. The passwords are encrypted on the server and not even the database administrator can read them. Accounts can be managed by the database administrator and moderated if abuse of the system occurs. Every phase/section in this project is enabled and protected in such a manner that no third-party user can modify data/information or neither can have any sort of authority that might create a problem for the system's performance.

4.9.4 Software Quality Attributes

The "Advanced FYP-Portal" prioritizes key software quality attributes to ensure its reliability, usability, performance efficiency, security, maintainability, portability, interoperability, and testability. It incorporates fault tolerance and high availability for reliability, intuitive UI design and accessibility features for usability, responsive performance and scalability for efficiency, robust security measures for data protection, modular design and documentation for maintainability, platform independence and deployment flexibility for portability, integration capabilities and adherence to standards for interoperability, and comprehensive test coverage with automated testing for testability.

Chapter 5

Methodology

Introduction

The process is used to achieve the goal of the project that produces a perfect result. To evaluate this project, the methodology is based on the System Development Life Cycle (SDLC). The Major three Steps are Implementing, planning, and analysis as shown in Fig 7.

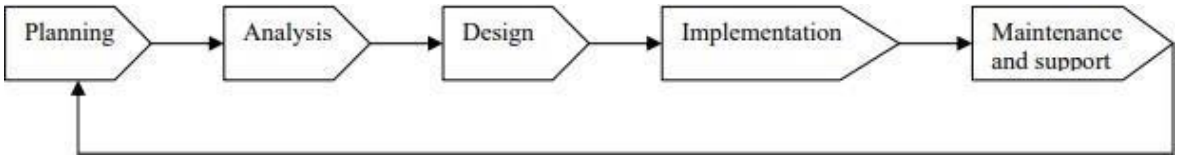

Figure 3- SDLC

Three Major steps are used in this project, starting with Planning, Implementing, and testing. All these steps use for finding and analyzing data according to the fulfillment of the requirements of the project.

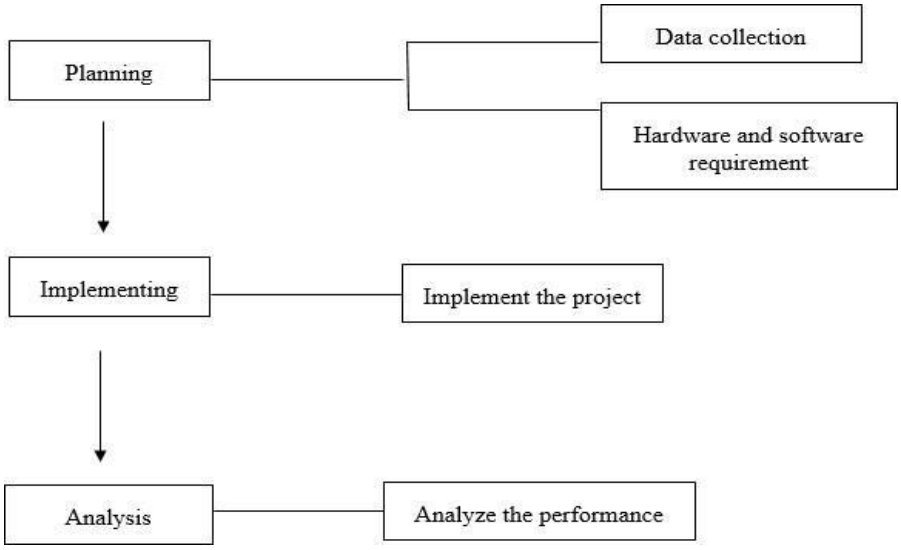

Figure 4- Steps of methodology

5.1 Planning

In order to analyze all the information and requirements such as hardware and software related to the project, planning must be done correctly. It has two main elements: data collection and hardware and software requirements.

5.1.1 Data Collection

This is an important phase of any project. In that stage, I planned to collect the requirements, and resources to gather all the necessary information from the internet, research, books, etc.

Within the time the data gathered from all the resources are filtered to get important things that are necessary to develop the project.

5.1.2 *Implementing*

In this phase, all the data gathering from the first phase is implemented using software requirements to build the Advance Fyp Portal. After successfully building the requirements that are supposed to meet the main objective and going to the final process.

5.1.3 Technologies Used

In this phase, different technologies are used which is used as backend(Node JS,Express JS) while we used React JS as frontend. MongoDB is used as Database and the JSON and Web Tokens are used as authentication.

Chapter 6

Detailed Design and Architecture

6.1. System Architecture

The detailed design and architecture of the Advanced FYP-Portal encompass various layers and components to ensure a robust, scalable, and efficient system.

6.1.1. ***Presentation layer (Frontend*****):** In this module, react for building dynamic and responsive user interfaces, with html and css for structuring and styling. Includes user dashboards, supervisor profiles, appointment scheduling forms, and project tracking interfaces.

6.1.2. ***Application Layer (Backend):*** Sign Node.js and Express.js for handling server-side logic and routing.

6.1.3. ***Detailed Design:*** This detailed design and architecture ensure that the Advanced FYP-Portal is well-structured, scalable, and capable of meeting user needs effectively while maintaining security and performance standards.

- Frontend design (navigations, forms, dashboard)
- Backend design (Apis design, Endpoint, authentication)
- Database design (schema design)
- Security design (data encryption, Access control)
- Integration (Testing, End to End Testing)

6.1.6. Architecture Design

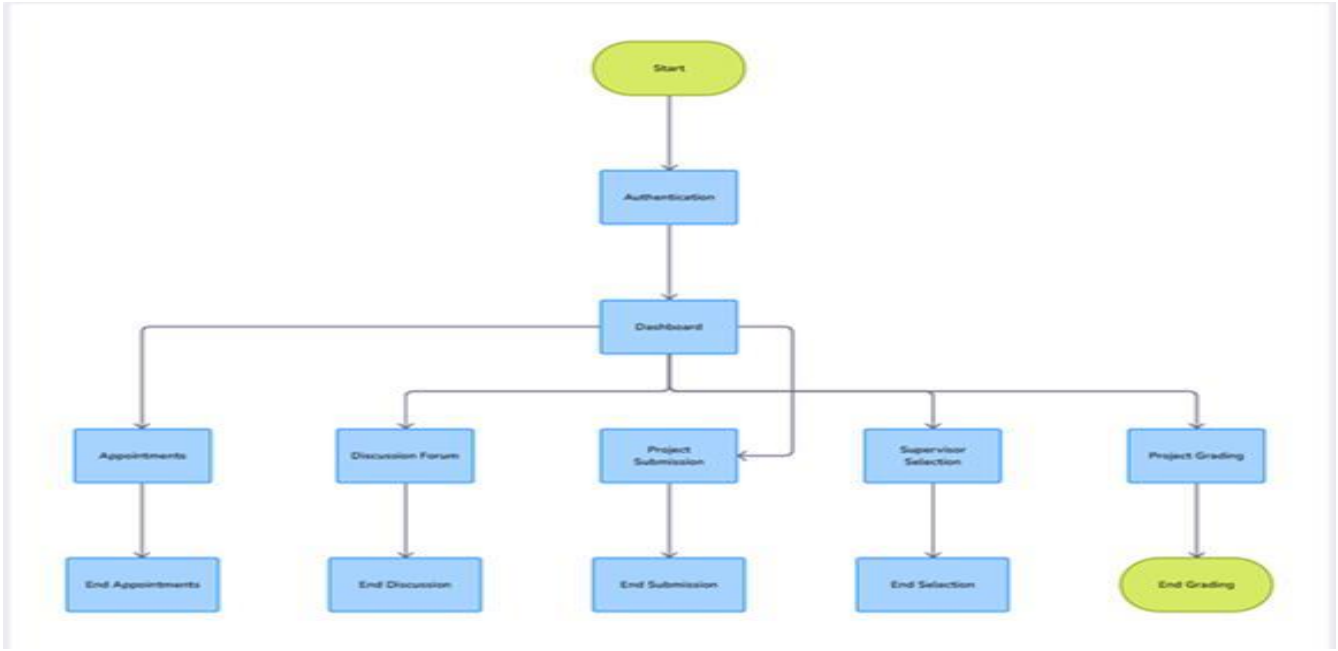

Figure 5- System Architecture Design

This system is linked with one another to perform the functions and if one of the following is decomposed or unlinked with the other then the functions are not going to perform if there is no validation for the user then the whole system is false to breach the security feature working proof that user cannot perform that function that is not necessary to do.

6.1.7. Subsystem Architecture

Subsystem Architecture is described with a Functional description.

6.1.7.1. Functional Description

It provides an overview of all components/modules of the **Advanced Fyp Portal** that are working together to perform the task and each single module working is also described in a smaller overview as shown in Fig 10.

- This portal will enhance the user experience
- This web Application structure is flexible, the features are expected to change in the future.
- Better internet connectivity is required for better functioning.

6.3. Diagrams

- Use-case diagram.
- Use-case diagram 2
- Prototype diagram.
- dataflow diagram.
- Sequence diagram

Use Case Diagram

Figure 7- Use case Diagram

Description: The following use case is briefly explained in chap 3 SRS.

Use Case: Login/Signup

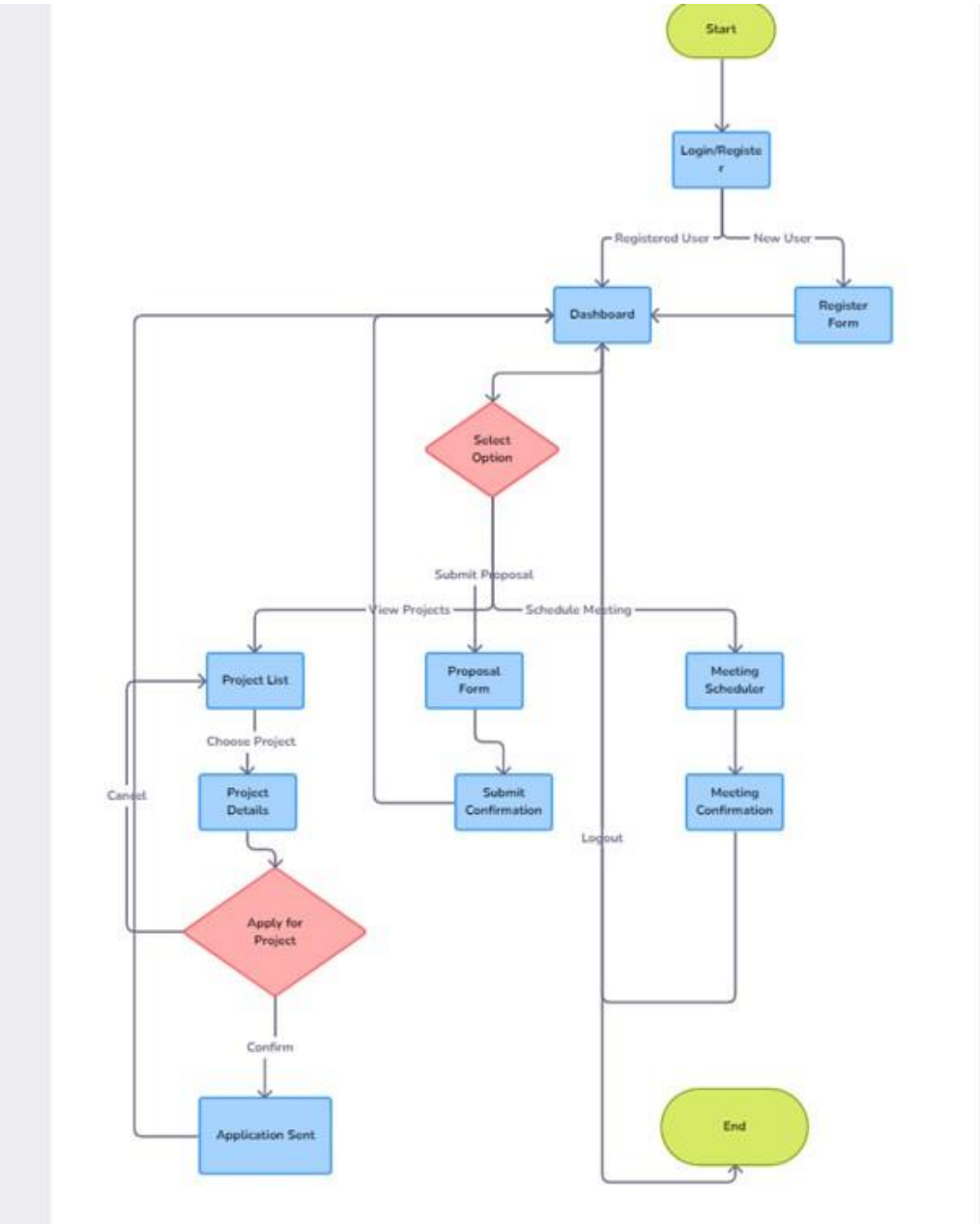

Figure 8- Login/ signup

Description: The following use case is briefly explained in chap 3 SRS.

Use Case: Complete Module

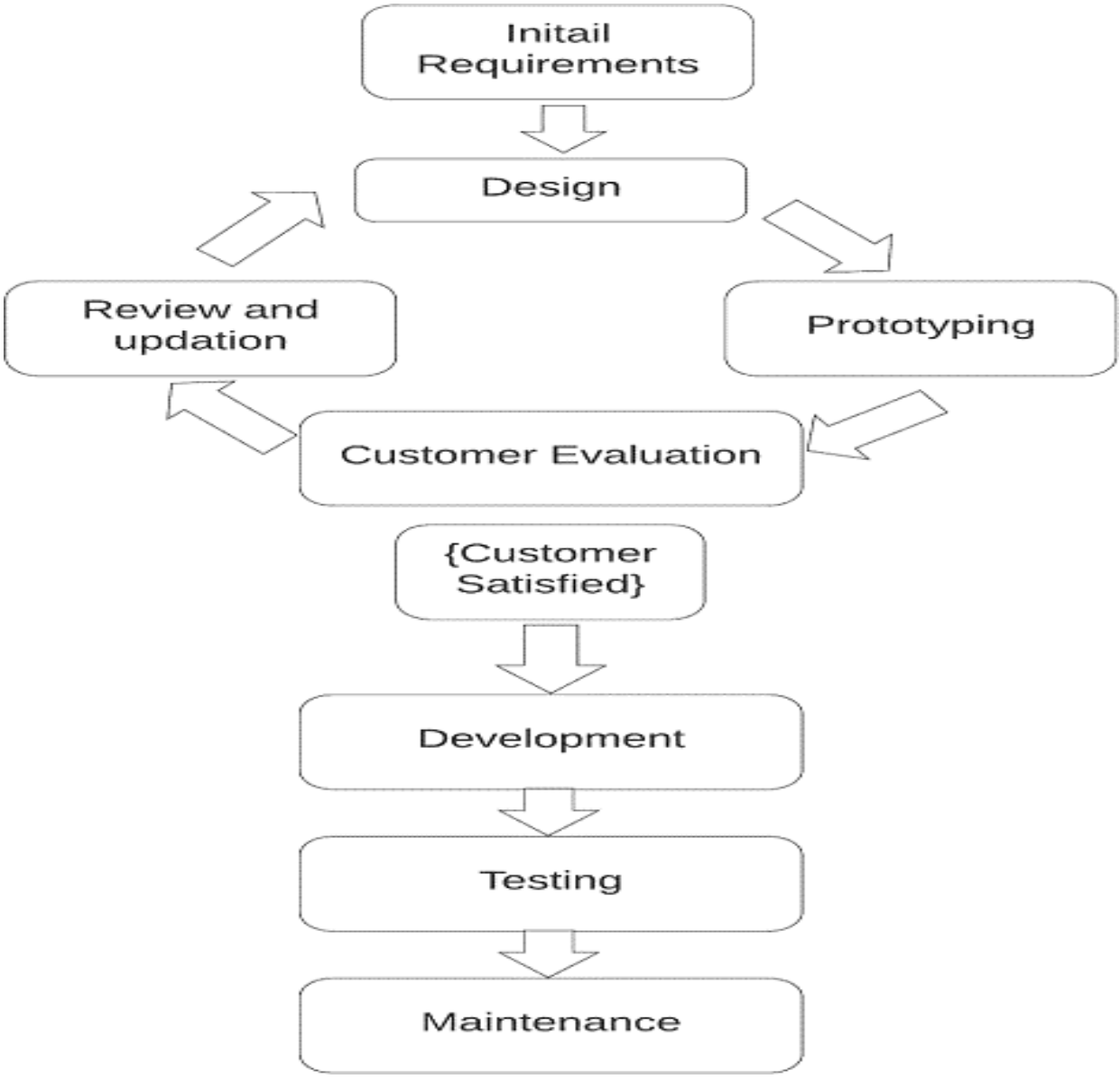

Figure 9- Prototype Diagram

Description: The following use case is briefly explained in chap 3 SRS

Prototype Diagram

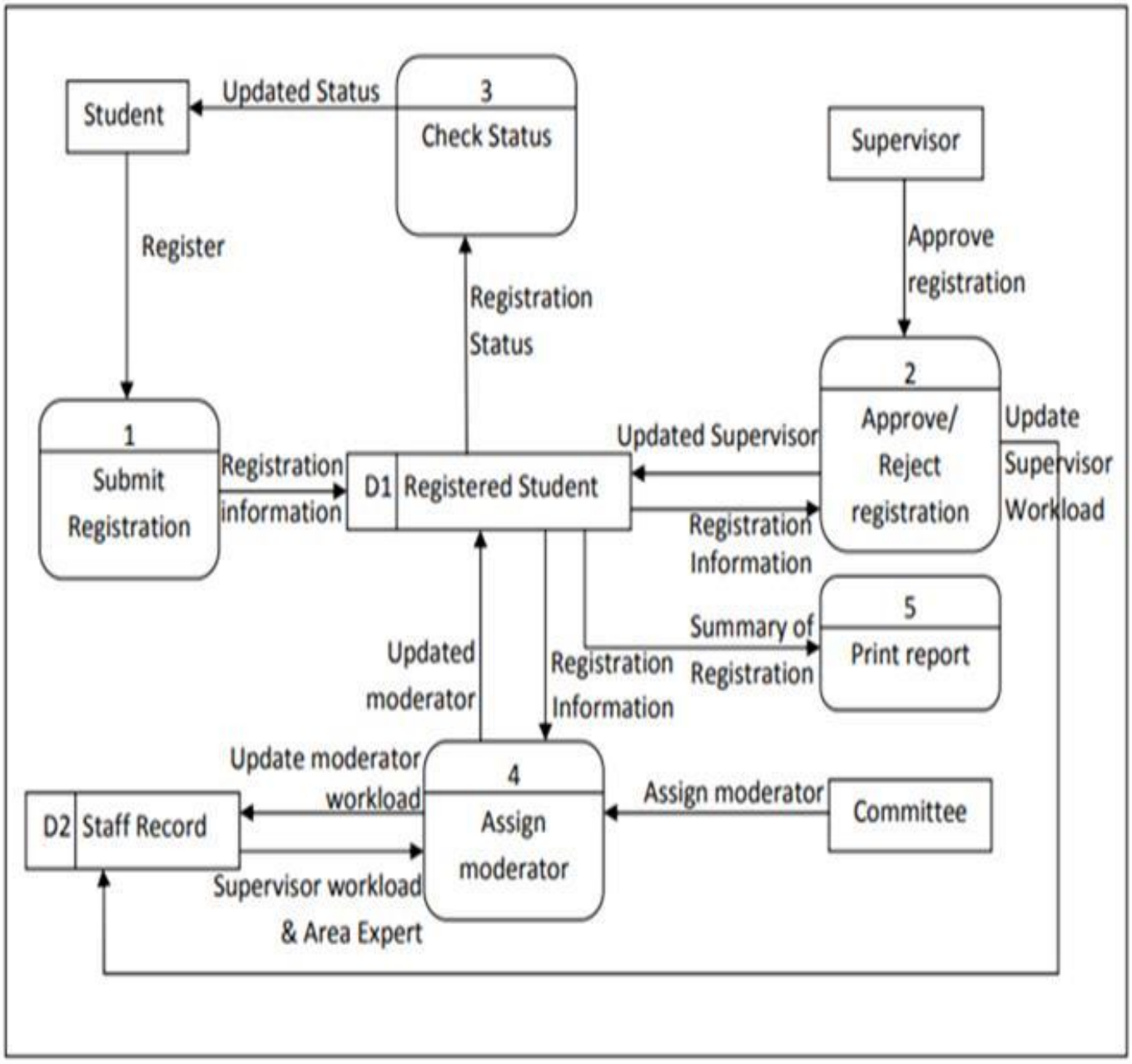

Figure 10- DFD

Description The following use case is briefly explained in chap 3 SRS.

Data Flow Diagram

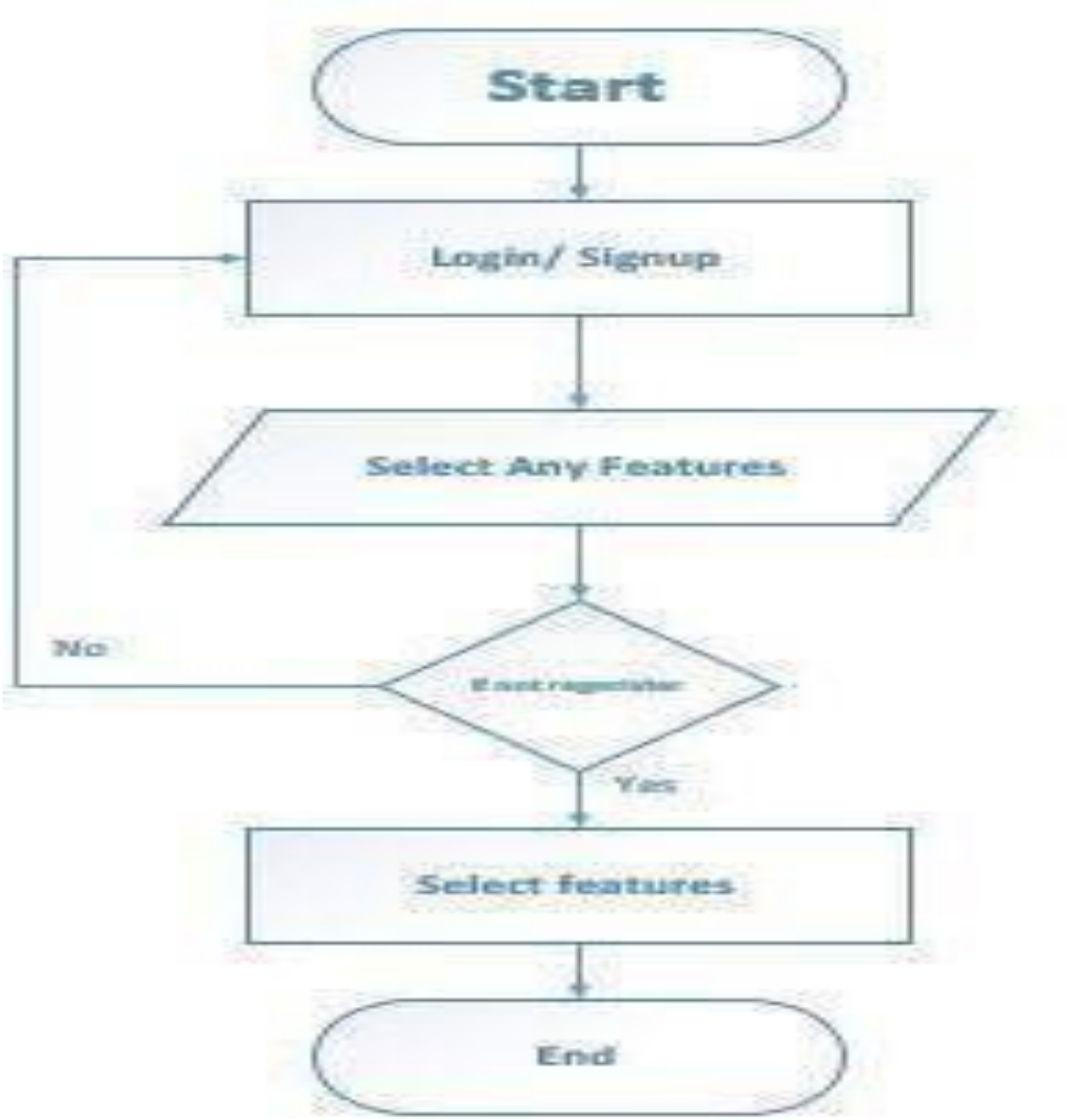

Figure 14- Sequence Diagram

Chapter 7

Implementation and Testing

A quality assurance plan is a plan that ensures that the product is the best. It ensures the quality of the product and also information on software programs. Its purpose is to fulfill the objectives that they have been designed to offer.

7.1.1. Documentation

A distinctive preview of the project could be provided inside the documentation.

- Planning should be done to make the challenge objectives and for its management.
- Training is essential for the users to meet the goals and objectives
- To attain every objective then every component will be evaluated and communicated correctly

7.1.2. *Standard*

- Mern Stack
- ReactJS/NodeJS

7.2. Testing

Testing is verification and validation or reliability estimation. The Principal objective of analyzing comprises:

- To identify flaws in the web application.
- The main project of testing is just to provide information.
-

7.2.1. Black Box Testing

By using this kind of testing we can examine the:

- Incorrect or lost functions in outward structure.
- Glitches in data arrangement or external database access
  Performance errors

7.2.2. White Box Testing

By using this kind of testing we can examine the:

- Most independent path execution.
- Deploy all possible decisions on their own.
- Execute internal advice arrangements to earn a certain amount of performance

7.3. Tools

- Visual Studio Code
- Postman
- Package Management(npm)

Chapter 8

Results and Discussion

8.1. Results of Test Evaluation

From the previous chapter testing evaluation results are shown in figures

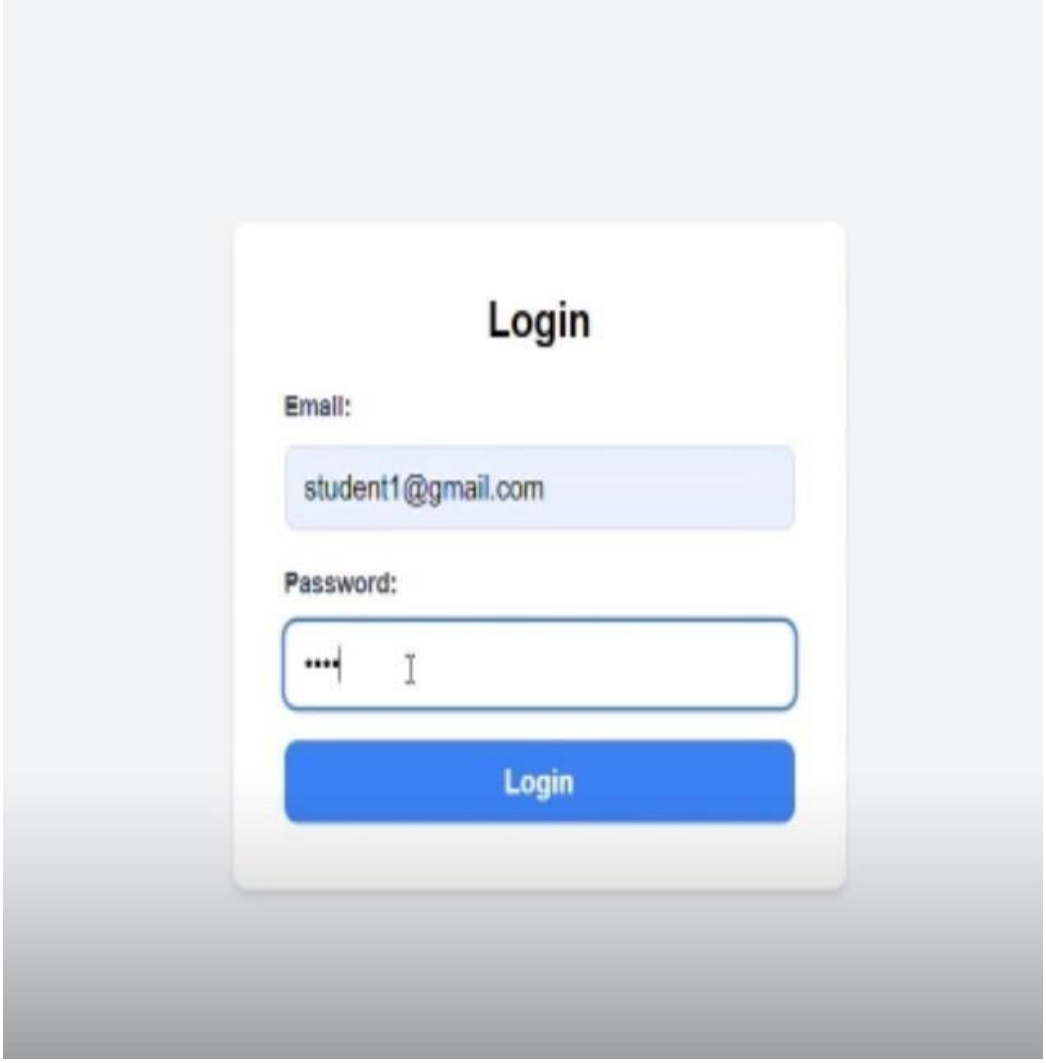

Figure 24- 7.1 (a) Login Result

The following screen is used to check the login screen that successfully created a user.

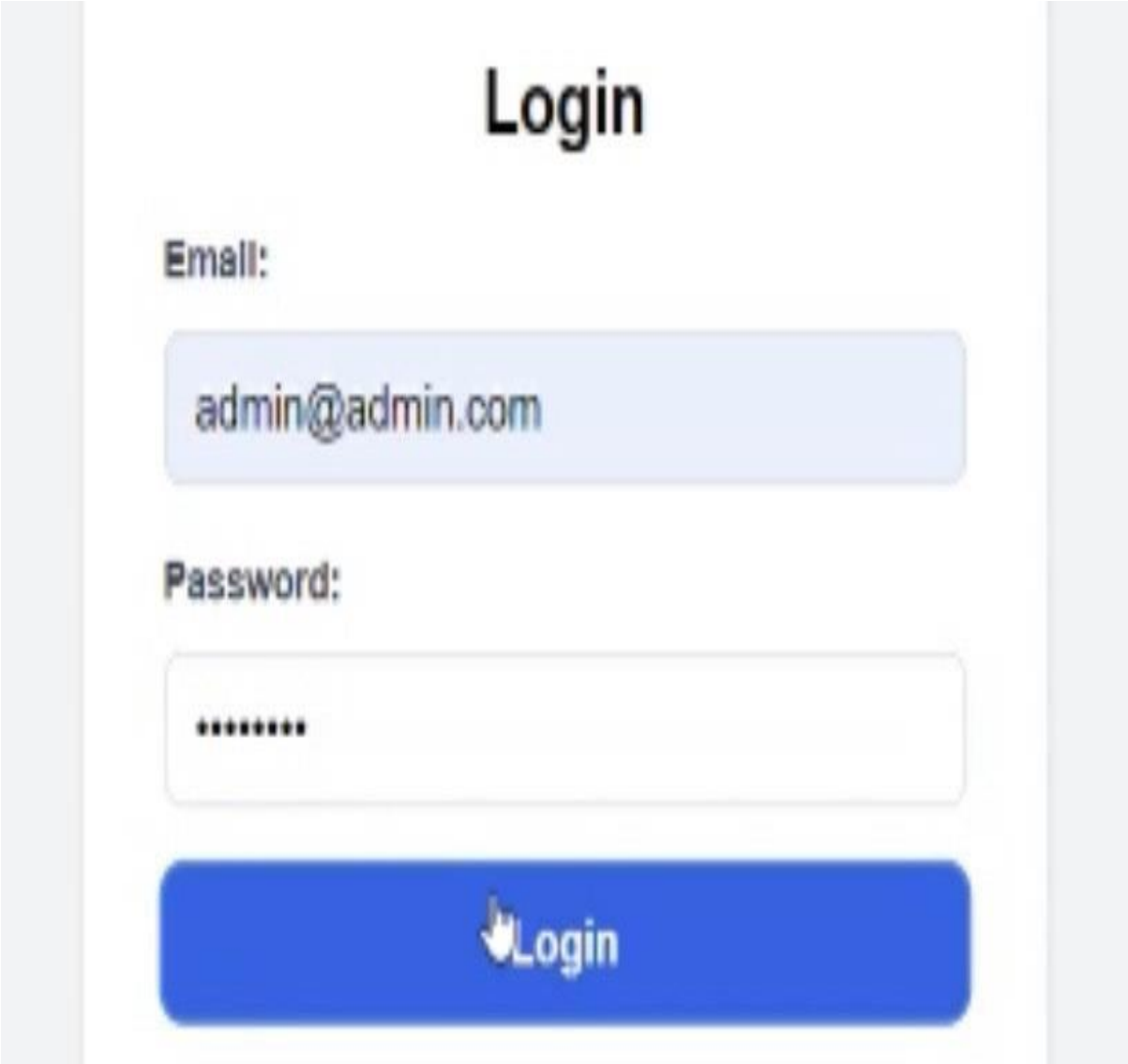

Figure 25- 7.2 (b) Login Testing II

Login is created via filling that form and submitting the data by clicking the signup button which then transfer it to email verification process.

Sign-up is created via filling that form and submit the data by clicking the signup button which then transfer it to email verification process.

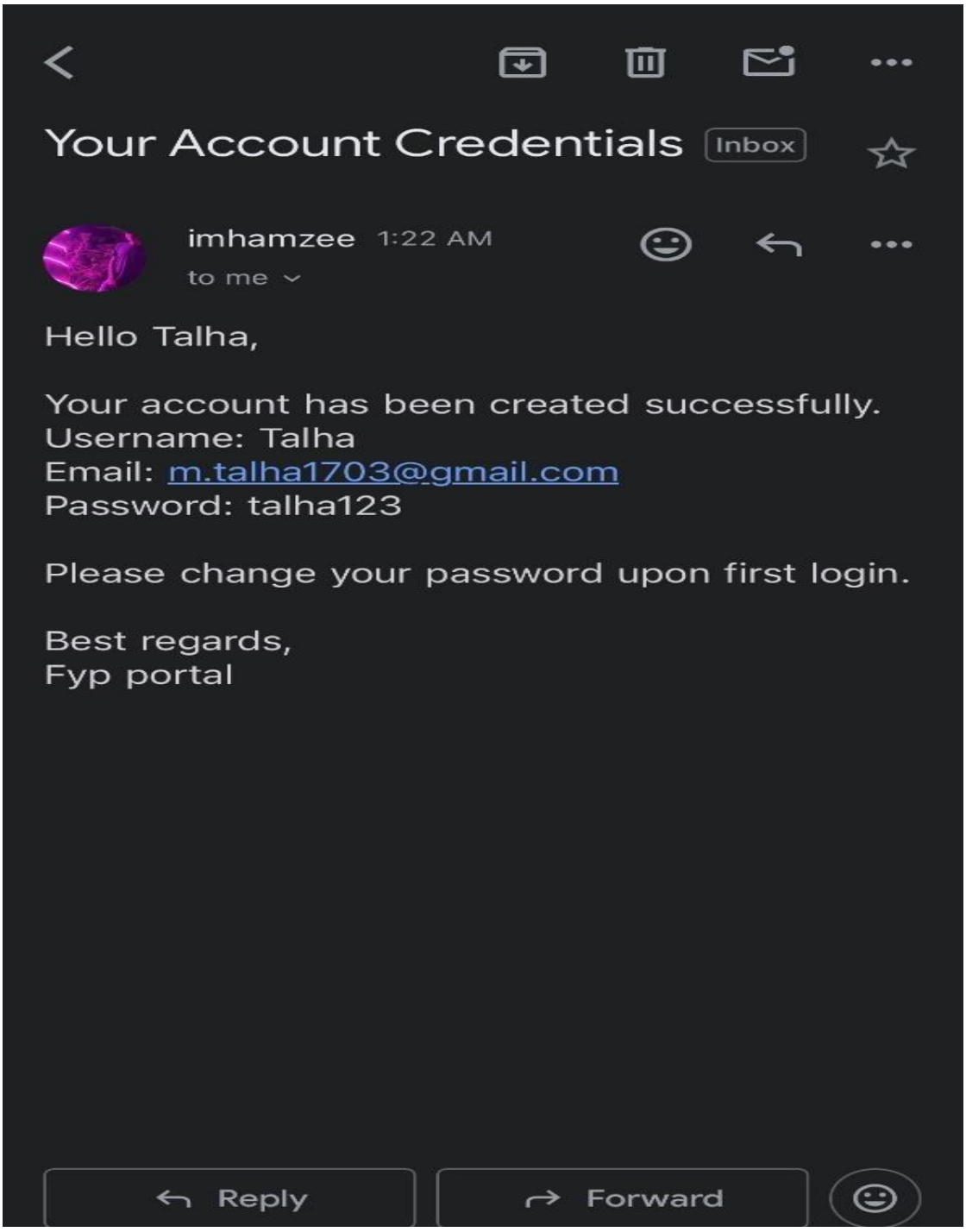

Figure 27 7.4 (d) Email Verification

Chapter 9

Future Work and Conclusion

Future Work

While the current version of Advanced Fyp Portal has achieved its initial goals, there are opportunities for further enhancement or get a chance, Future work could involve the advanced analytics and reporting, Enhanced Collaboration and Features and the last one is integration with external tools.

Conclusion

One major milestone toward enhancing the final year project experience of students has been the development and implementation of the Advanced FYP Portal. Through all the planning, execution, and improvements, it has been successful in attaining the objectives and delivering a comprehensive platform covering most of the diversified needs of students and academics. Advanced FYP Portal provides accessibilities, usabilities, securities, and scalabilities to ensure that the environment is inclusive, user-friendly, and safe for all. Conclusion: The Advanced FYP Portal speaks much about innovation, collaboration, and excellence in the management of academic projects. As we go into the future, the portal remains open to further fine-tuning and changes towards the evolving needs of students..

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