A Project Report

on

Project Pulse

Submitted by

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MEERA MUKESHBHAI DOBARIYA (210303108075)

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Under the Guidance of

MR. SHALEEN SHUKLA

Assistant Professor

In partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

PARUL INSTITUTE OF ENGINEERING AND TECHNOLOGY,

PARUL UNIVERSITY,

VADODARA, GUJARAT

[2024-2025]

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October 2024

CERTIFICATE

This is to certify that the Project Report entitled, **Project Pulse** submitted by **Harsh Ajay (210303108048)** to **Parul University, Vadodara, Gujarat**, is a record of bonafide Project work carried out by him under my supervision and guidance, and is worthy of consideration for the award of the degree of **Bachelor of Technology** in **Information Technology** of the University.

Date :

Place :

Supervisor	Project Co-ordinator
Mr. Shaleen Shukla Assistant Professor	Mrs. Dhenuka Patel Assistant Professor
Head, Dept. of Information Technology	External Supervisor
Dr. Pooja Sapra	Name: Designation:

CERTIFICATE

This is to certify that the Project Report entitled, **Project Pulse** submitted by **Aman Ravindra Bariya (210303108055)** to **Parul University, Vadodara, Gujarat**, is a record of bonafide Project work carried out by him under my supervision and guidance, and is worthy of consideration for the award of the degree of **Bachelor of Technology** in **Information Technology** of the University.

Date :

Place :

Supervisor	Project Co-ordinator
Mr. Shaleen Shukla Assistant Professor	Mrs. Dhenuka Patel Assistant Professor
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Dr. Pooja Sapra	Name: Designation:

CERTIFICATE

This is to certify that the Project Report entitled, **Project Pulse** submitted by **Meera Mukeshbhai Dobariya (210303108075)** to **Parul University, Vadodara, Gujarat**, is a record of bonafide Project work carried out by her under my supervision and guidance, and is worthy of consideration for the award of the degree of **Bachelor of Technology** in **Information Technology** of the University.

Date :

Place :

Supervisor	Project Co-ordinator
Mr. Shaleen Shukla Assistant Professor	Mrs. Dhenuka Patel Assistant Professor
Head, Dept. of Information Technology	External Supervisor
Dr. Pooja Sapra	Name: Designation:

CERTIFICATE

This is to certify that the Project Report entitled, **Project Pulse** submitted by **Dhaval S Bavda (210303108263)** to **Parul University, Vadodara, Gujarat**, is a record of bonafide Project work carried out by him under my supervision and guidance, and is worthy of consideration for the award of the degree of **Bachelor of Technology** in **Information Technology** of the University.

Date :

Place :

Supervisor	Project Co-ordinator
Mr. Shaleen Shukla Assistant Professor	Mrs. Dhenuka Patel Assistant Professor
Head, Dept. of Information Technology	External Supervisor
Dr. Pooja Sapra	Name: Designation:

ACKNOWLEDGEMENT

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Last but not the least, our humble thanks to the Almighty God.

Place : Vadodara

Date :

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ABSTRACT

Almost in every university the process associated with undergraduate final year projects is manual process which includes lots of paperwork and it becomes very frustrating and burdened task for all the people associated with it. This process leads to wastage of time and becomes hinderance on project completion. The students need to chase down their professors during college hours in case of any query related to project and not able to find them creates a blockage to their work. They need to wait for professors feedbacks or replies making them feel unheard. Due to lack of proper communication students do not get regular updates. Faculties also do not get regular progress updates or reports on the projects. In addition to these faculties must manage their academics tasks so, not getting proper updates on the project work they get tired and frustrated. All these issues lead to decrease in the efficiency, quality, and completion rate of the project.

Project Pulse eliminates such issues faced during this period. It is user-friendly platform that supports in various activities related to final year project. It provides with proper communication channel for both students and mentors. Both students and mentors get consistent and regular updates regarding the project. Faculty can directly track or review project work done by the students. They can also provide guidance based on the submitted work. It helps in many more tasks related to final year project.

Keywords: *Undergraduate final year project, Project management platform, Student-mentor communication, Project tracking.*

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LIST OF SYMBOLS AND ABBREVIATIONS

RWD	Responsive Web Design
SEO	Search Engine Optimization
AW	Adaptive Website
RW	Responsive Website
ICT	Information and Communications Technology
PM	Project Management
RAD	Rapid Application Development
SMS	Short Message Service
SCM	Supply Chain Management
TPOs	Training and Placement Officers
I/O	Input/Output
API	Application Programming Interface
HTTP	Hypertext Transfer Protocol
CSS	Cascading Style Sheets
HTML	Hyper Text Markup Language
DOM	Document Object Model
UI	User Interface
CDN	Content Delivery Network
IJNRD	International Journal of Novel Research and Development
ICACCS	International Conference on Advanced Computing and Communication Systems
PPMIS	Project Portfolio Management Information Systems
IEEE	Institute of Electrical and Electronics Engineers
CIST	Colloquium on Information Science and Technology
MARCOS	Measurement of Alternatives and Ranking According to Compromise Solution
ATI	Advanced Technological Institute

INCITEST	International Conference on Informatics Engineering, Science & Technology
SCESCAL	Standing Conference of Eastern, Southern and Central African Library
PPT	PowerPoint Presentation
*	Asterisk

CHAPTER-1 INTRODUCTION

1.1 PROBLEM STATEMENT

1.2 MOTIVATION

1.3 AIM & OBJECTIVE

1.4 SCOPE

1.1 PROBLEM STATEMENT

Our online platform aims to tackles the common frustrations faced by both employee and project manager or student and faculty during project-based learning. We aim to fill the gap by eliminating administrative burdens and creating a transparent workflow. No more chasing, no more delays, just seamless connection and empowered learning. Letting everyone focus on what truly matters - progress, impact, and shared success.

Nowadays, every third-year student has to give a project related to their field in which they have to submit reports, flow-chart, use-case diagram, progress report to the mentor, acceptance letter, and many more things. Also student and mentor have to manage their free time in which both can communicate with each other and this for the mentor and the student is not possible to meet every time, and to manage all the stuff of the project into a single platform is not possible for any of them to retrieve the data of the progress and the meeting happened so to overcome this over project pulse will come in play this will provide an easy way to communicate with each other, it will manage the project progress report and many other detail regarding work done by the student and the mentor.

During the supervision phase, scholars are often required to meet with their advisor regularly to discuss their progress, as it is mandatory to document all interactions between students and tutors. Managing these meetings can be challenging, and miscommunication often arises, which hinders the production of a quality final project. It is not always easy to ensure that students stay connected with their tutors. One key responsibility of a tutor is to monitor the progress of each student, but this can be difficult to manage, especially when schedules conflict. Students frequently struggle to meet with their tutors due to limited availability, and tutors themselves may have multiple students to oversee, making it challenging to allocate sufficient time for each. As a result, project completion rates tend to be lower, leading to reduced academic performance and lower credit scores for students. So to improve the success rate of project to complete the taken project by the student our

platform will help and with this there will be maximum effectiveness on the project progress.

A system that automatically tracks and visualizes each student's progress, including milestones achieved and upcoming deadlines, both students and mentors can have a clear overview of the project's status without the need for manual updates. This feature can send timely reminders for important milestones, submission deadlines, and scheduled meetings, ensuring that all the group stay informed and on track with the project timeline with the mentor. Moreover, integrating a notification system that alerts students and mentors of any changes or updates in the project plan can help improve communication and a more efficient workflow. The platform can significantly reduce administrative burdens on mentor, enhance transparency for mentor, project coordinator, student , and promote a more seamless and productive collaboration between students and mentor in project-based learning environments with the project Pulse.

1.2 MOTIVATION

When the problem is found regarding project submission that how student and mentor have to go through with the struggle, stress of completing project, submission, academics, burden of administration on mentors, etc. This problems lead us to bring a way that can cancel out this problems of student and mentor.

Student with their Frustration with inefficient feedback loops, Waiting ages for email replies or chasing down professors during college hours can be demotivating, hindering progress and leaving students feeling unheard. Struggling through a project without immediate support can be discouraging, leading to wasted time and missed opportunities for course correction. Limited visibility into progress, Relying on updates or presentations still an incomplete picture, making it difficult to provide tailored feedback and support.

Faculty with their Reduced administrative burden, the platform can automate tasks like scheduling meetings, collecting submissions, and tracking progress, freeing up time for faculty to focus on higher-level aspects of teaching, like providing feedback and supporting individual student needs. Faster and more organized feedback.

The platform can facilitate easier and quicker communication with students, allowing for more frequent and timely feedback, which can improve learning outcomes. Difficulty offering personalized feedback, Time Management, Communication & Collaboration, Assessment and Evaluation.

1.3 AIM & OBJECTIVE

Project-Based Learning online portal is a teaching method where students work on real-world projects to gain practical skills and knowledge. The main goal of our portal is to engage students with the mentor to build skills like group discussion, communication with mentor and the member of the team, leadership quality, the way of approaching the project that promote critical thinking and collaboration.

By working on projects related to their field, students can build and improve their skills, technique to build an project and indirectly improves the project success rate, Increase project completion rates, Improve project quality, Boost student/mentor engagement and motivation. Develop essential skills. Strengthen relationships with students, Gain deeper insights into their progress.

Overall, our aim and objectives are ambitious, but achievable. We believe that by building a comprehensive and user-friendly platform, we can create a transformational experience for both students and faculty and this will affect the overall improvement at the university level. Project Pulse is a user-friendly and impact-driven platform designed to assist students in managing the various tasks involved in their final-year projects. It facilitates seamless

communication and collaboration, ensuring that students stay actively connected with their team members, faculty advisors, and industry mentors.

Now that the project is complete, it provides a streamlined solution for maintaining efficient interactions throughout the project development process. The aim is to create a transformative learning experience for both students and mentor by providing a comprehensive and user-friendly platform that facilitates seamless communication and collaboration.

1.4 SCOPE

The online platform, Project Pulse, addresses common challenges faced by students and mentors during project-based learning by streamlining administrative tasks and enhancing communication. It aims to improve project management, progress tracking, and collaboration between students and mentors.

- Facilitating seamless communication between students, mentors, and project teams.
- Automating administrative tasks such as scheduling meetings, tracking progress, and collecting submissions.
- Enhancing project management, progress tracking, and feedback mechanisms.
- Improving collaboration, engagement, and motivation among students and mentors.
- Providing a user-friendly platform for transformative learning experiences in project-based environments.

CHAPTER-2 LITERATURE REVIEW

2.1 CRITICAL EVALUATION OF RESEARCH PAPERS

Table 2.1.1 Research Papers

Sr. No.	Title	Author	Approach (Methodology)	Advantages	Limitations
1	Importance of responsive web design for education of students using faculty website 2016	Pavle Dakić, University Singidunum, Stefan Kocić, Union University Belgrade, Miloš Popović, University Singidunum	The paper analyzes the importance of responsive web design(RWD) in the context of education institutions, focusing on Belgrade Business School's faculty website.	Improved user experience and accessibility across devices. Enhanced mobile-friendliness, catering to the dominant mobile browsing trend.	It lacks empirical data or case studies to directly demonstrate the impact of RWD on Belgrade Business School's website.
			It draws upon existing research and trends in mobile device usage and SEO to advocate for RWD implementation.	Strengthened visual communication and aesthetics on different platforms. Potential boost in SEO ranking and	The paper does not delve into the specific implementation process or technical details of RWD.

				website visibility.	
2	Responsive or Adaptive Educational Mobile Websites: The Impact of Different Designs on Students' Preferences at Jouf University – Saudi Arabia 2019	Assist. Prof. Dr. Mohammed H. Ragab Khalaf	Developed two mobile learning websites: responsive (RW) and adaptive (AW). Divided students into two groups: RW and AW users.	Provided insights for designing mobile websites that cater to diverse device characteristics. Highlighted the importance of effective design in enhancing student preference for mobile learning platforms.	The current research limited to designing the third chapter entitled "communication skills in university environment" in the course named "university life skills" by Dr. Abdul Majid El Grewy, the major reference to the course.
			The quasi-experimental methodology was followed; two experimental	Single responsive design for multiple devices: Eliminates the	Did not explore long-term impact of design preferences on learning

			groups with no control group design, to examine the following research hypothesis	need for separate designs for each device. Dynamic resizing and rearrangement of content: Adapts to different screen sizes and resolutions.	outcomes. Focused solely on student preferences, neglecting other factors like learning effectiveness or technical complexities
3	Project Managers' Competencies in Collaborative Construction Projects 2020	Sina Moradi, Kalle Kahkonen, Kirsi Aaltonen	The study employed two different data collection techniques, including a web-based questionnaire and semi-structured interviews.	Collaborative delivery methods create an operational environment conducive to enhanced interaction and cooperation among diverse project stakeholders.	Collaborative construction projects and their managerial solutions are relatively new fields, resulting in limited prior research on aspects such as project managers' competencies.

			The web-based questionnaire was utilized to identify project managers' competencies by evaluating the frequency and type of their behaviors related to their everyday work.	The use of a web-based questionnaire and semi-structured interviews facilitates comprehensive data collection from case projects, ensuring a thorough analysis of project managers' behaviors and competencies.	Data collection relies on project managers' self-reported behaviors and experiences, which may introduce bias or subjectivity into the analysis.
4	Cloud-based outsourcing framework for efficient IT project management practices 2020	DP Sharma, PhD	The research utilized a mixed data analysis approach to systematically and carefully investigate the adaptation and improvement of ICT-enabled	By adopting cloud-based outsourcing in IT project management practices, organizations can optimize the utilization of human	Successful implementation of cloud-based outsourcing relies heavily on the availability and capacity of ICT

			project management practices in an outsourced environment.	resources, particularly in regions with shortages of high-skilled IT professionals.	infrastructure , which may be limited in developing countries like Ethiopia.
			Salient stakeholders' views were collected and analyzed to inform the design of a cloud-based outsourcing IT project management framework tailored to the Ethiopian IT industry.	Cloud-based outsourcing enables organizations to overcome challenges such as rapid attrition and physical migration of IT professionals by providing a flexible and adaptable working environment.	Outsourcing IT project management to the cloud may raise concerns about data security and privacy, particularly when sensitive information is involved.
5	Evaluating the effects of responsive design on the usability of	Alaattin Parlakkiliç	The approach involved conducting a questionnaire survey among	Responsive design facilitates usability across various	Findings may be limited to the specific demographic of university

	academic websites in the pandemic 2021		university students using a five-point Likert scale to assess the impact of responsive design on usability.	devices, allowing students to access academic websites seamlessly, which is particularly crucial during the COVID-19 pandemic.	students surveyed and may not fully represent other user groups or contexts.
			Demographic analysis was performed to evaluate correlations between students' characteristics (age, gender, internet access method) and their attitudes towards responsive design.	Implementing responsive design reduces the need to create and maintain multiple versions of websites for different devices, thus saving costs and time associated with design, updates, and maintenance.	The usability and effectiveness of academic websites may also be influenced by external factors beyond responsive design, such as internet connectivity, device performance, and

					individual preferences
6	A Systematic Review of Web-Based Project Management Systems for Construction Projects 2020	Yi Peng, Yu Liu, Yujia Zhou, and Weiguo Yan	The paper employed a structured and transparent systematic review approach, ensuring comprehensiveness and minimizing bias.	Real-time Communication Channels. discussion boards facilitate smooth interaction among team members	Cloud-based systems are vulnerable to hacking, data breaches, and malware attacks
			published within a specific timeframe, focusing on construction projects, and	Project documents, plans, reports, and drawings are readily accessible to	Mastering a new system with complex features requires user-friendly interfaces

			analyzing web-based PM systems	all authorized users.	
7	A Cloud-Based Collaborative Project Management System for Higher Education Institutions 2021	Muhammad Atif Nadeem, Muhammad Faizan Khan, Muhammad Aamir Cheema	Limited communication, inefficient document sharing, and difficulty tracking progress.	Provides a single platform for all project interactions, eliminating communication silos	Integrating the system with existing institutional platforms might require technical expertise
			Features like online forums, chat rooms, and integrated video conferencing to facilitate efficient communication	Efficient task allocation, deadline reminders, optimize project workflows	Requires significant time commitment for instructors to prepare prerecorded lectures and supplementary materials.
8	Data-Driven Project Management: A Literature Review 2022	Amirhossein Oskouei, Seyed Mohammad Javad Mirabi,	Authors would search relevant databases with targeted keywords based on their	Data-driven approaches minimize the influence of personal biases and	Poor data quality leads to misleading insights and ineffective decisions

		Amir Hossein Ghazanfari, and Saeed Paydarfar	research question.	subjective judgments.	
			Cost data, schedule data, risk data, earned value management metrics, and team performance data	Identifying potential risks early through data analysis allows for timely mitigation and risk management strategies.	Difficulty accessing relevant data from silos or incompatible formats can hinder comprehensive analysis.
9	Design and Implementation of a Web-Based Management System for Advanced Technological Institute (ATI) 2021	D.N.P Attanayake, R.G.S. Thilanka	RAD is chosen as the methodology due to its emphasis on rapid prototyping and iterative development, suitable for projects with strict deadlines	Automates various institute operations related to students, academics, and nonacademic staff	Access to personal devices might be necessary for some students.
			RAD's flexibility enables adaptation to	Enables communication between parents,	Overreliance on automated tools can hinder critical

			changes in requirements, minimizing risks associated with extensive pre-planning.	lecturers, and students through various channels like SMS and online messages	thinking and problem-solving skills
10	Web-Based Student Information Management System 2020	Mr.Ritesh Ramchandra Landage, Ms.Pranjal Navnath Daphal, Mr.Gaurav Madhukar Dafal, Mr.Abhishek Balasaheb Daphal, Dr.Aniruddha S. Rumale	Methods for storing, organizing, and securing student data like demographics, academic records, attendance, and fees.	Students, parents, and authorized personnel can access information from anywhere and gets timely updates	Technology Dependence and Accessibility, Digital literacy gap, Reliable internet access
			Secure access to academic information, real-time updates, and improved communication with the institution	Online communication channels facilitate interaction between students, faculty, and administrators.	Choosing a specific vendor can limit future flexibility and potentially raise costs.

11	Review of supply chain management within project management 2021	Xinyu Wei, Victor Prybutok, Brian Sauser	It identifies key antecedents of successful SCM implementation in project-based industries.	The use of a system gram offers a visual depiction of the complex SCM strategy adoption pathway, making it easier for stakeholders to comprehend and analyze.	Limited Scope: The research primarily focuses on SCM implementation in project-based industries, potentially overlooking insights from other sectors
			The conceptual integration of SCM with project management is expanded by considering application areas beyond the construction industry.	Factors are categorized into distinct areas, facilitating easier analysis and interpretation of their inter-relationships.	External factors beyond the identified categories may influence SCM implementation but are not extensively explored.
12	Web Portal for Effective Student	K. Aravindhan, K.	It was designed to address grievances	Enhances the overall organizational	Requires effective promotion

	Grievance Support System 2020	Perriyakaru-Pan, K. Aswini, S. Vaishnavi, L. Yamini	arising within an educational organization, particularly focusing on the student community.	climate by promoting open communication and feedback.	and awareness efforts to ensure students are aware of the grievance support system.
			Facilitates communication between students and the Grievance Redressal Committee	Provides a centralized and accessible platform for students to lodge complaints.	Difficulty in resolving grievances that involve complex issues requiring specialized expertise.
13	Project portfolio management information systems (PPMIS) information entropy based approach to	Driss El Hannach, Rabia Marghoubi, Mohamed Dahchour	The approach utilizes an information entropy method for prioritizing PPMIS.	The information entropy method can handle imprecise data and uncertain judgments, which are common in complex	Implementing the information entropy method requires expertise in information theory and data analysis, which may

	prioritize PPMIS 2016			decision problems like PPMIS selection.	be a barrier for some organizations .
			Information entropy is a measure of uncertainty or randomness in data	The approach enables the consideration of multiple criteria, allowing decision-makers to prioritize PPMIS based on various factors such as functionalities , features, and organizational needs	Data requirements: The effectiveness of the method relies on the availability of reliable data for assessing PPMIS criteria.
14	Evaluation software of project management by using measurement of alternatives	Adis Puška, Ilija Stojanović, Aleksandar Maksimović , Nasiha Osmanović	The MARCOS method was used to evaluate project management software.	Systematic approach: MARCOS provides a structured way to evaluate and compare	Complexity: Multicriteria analysis methods may involve complex mathematical models or

	and ranking according to compromise solution (MARCOS) method 2020			project management software based on multiple criteria.	decision matrices, requiring expertise for proper implementation.
			MARCOS stands for Multi-Attribute Rating Technique for Complex Decisions Using Ordered Scoring. It involves systematically assessing multiple criteria to make decisions.	Comprehensive assessment: It considers various factors, allowing for a holistic evaluation rather than focusing solely on one aspect.	Subjectivity: Ratings by users may be influenced by individual preferences or biases, potentially leading to skewed results.
15	Agile versus Waterfall Project Management: Decision Model for Selecting the	Theo Thesing, Carsten Feldmann, Martin Burchardt	The study utilizes a modeling process described by Adam (1996) to develop a	The modeling process provides a structured framework for developing the decision	The decision model's applicability may be limited to the context of the study and

	Appropriate Approach to a Project 2021		decision model for selecting a procedural model for project management	model, ensuring thorough consideration of relevant criteria and factors.	may not fully account for cultural or organizationa l differences in other regions or sectors.
			It involves a systematic and comprehensive analysis of literature to identify research gaps and inform the development process.	Incorporating insights from expert interviews enhances the practical relevance and applicability of the decision model, making it more reflective of real-world project management scenarios.	The insights gained from expert interviews may be influenced by individual perspectives and biases, potentially impacting the validity and generalizabili ty of the findings.
16	Design and Development of a	Abdul-kareem, Ademola,	Assessing needs and gathering	Prevention of duplication/re plication of	Complexity in customizatio

	University Portal for the Management of Final Year Undergraduate Projects 2013	Adeyinka, Adewale, Dike U. Ike	requirements. Defining features like preventing duplication and enabling communication.	final year project. Automation of supervisor allocation to students.	n. Technical challenges (compatibility, security).
			Developing and testing the portal iteratively. Deploying it, providing training, and ensuring ongoing maintenance.	Capability for students to upload initial reports and supervisors to review and update them	User adoption and training needs. Ongoing maintenance requirements.
17	Office Management and HR Portal 2021	Rohit Rajan	Requirement and the solution evolve through collaborating with the client.	Tracking employee activities daily and project progress.	Ensuring data security for sensitive employee and project information.
			It is more powerful and efficient within a short period of time than the other model	Centralizing the project data.	Integrating the tool with existing systems and processes

			and it incorporate front to front Communication		within the company.
18	Design and Development of Open-Source Capstone Project Management Portal 2022	Divya Prakash Mittal , Ramit Koul , Utkarsh Chauhan, Aryamaan Pandey , Vinay Kumar	Identifying the needs and requirements of the students and the faculty.	Emphasizes teamwork for solving real-world, open-ended technology problems.	Technical Challenges and issues
			Defining the features and functions regarding the project.	Seamless collaboration among stakeholders, including students, mentors, etc.	Providing proper access controls to all stakeholders.
19	Web-Based Placement Portal using C-Sharp 2023	Prabhat Jain, Nishant Kumar Nagar, Piyush Vijay, Abhishek Dadhich	The project follows a web-based automated approach for managing the training and placement process in colleges and universities.	Automates manual tasks, saving time and effort in managing placement processes. Stores all student and company information in	Technical Issues Dependency on Internet Data Security Risks Training Requirements

				one accessible portal.	
			It utilizes a portal where both Training and Placement Officers (TPOs) and students have separate profiles.	Improved Communication Enhanced Record Keeping Real-time Updates	Limited Customization Costly Implementation Accessibility Concerns User Adoption Challenges
20	A Web Application For Examination 2023	Aditya Singh , Chandan Yadav	Purpose and Target Audience Exam Types and Technical Requirements Plan Development Platform Selection Exam Content Management	Accessibility Convenience Time-saving	Technical Issues Cheating Risk Security Concerns
			Pilot Testing Training and Support, Implementation	Ensures accuracy of exams	Access barrier with no internet

			and Monitoring Continuous improvement.	Highly scalable	Assessment authenticity

2.2 SUMMARY OF RESEARCH PAPERS

The various research papers are being studied by us in which there are many issues related to the success rate of this problem as its will contain the necessary details regarding the student, mentor so there will be a chance of getting it attack by the attackers as there is the work of the students idea and with that we came across with the possible solution of this idea and also with the advantages and the disadvantages. People do face issue of implementation in pre-existing system. The older platform do not have communicative platform where students will be able to work together over a specific project from different places respectively. There are chances of internet issue. There will be least chances of cheating and projects getting repeated.

2.3 LIMITATIONS/DRAWBACKS OF EXISTING SYSTEM

2.3.1 ADVANTAGES

Real-time Communication Channels, Project documents, plans report, Real-time dashboards and reports provide clear insights into project progress, identifying potential risks early through data analysis, automates various institute operations related to students, academics, and non-academic staff.

2.3.2 DISADVANTAGES

Poor data quality leads to misleading insights and ineffective decisions, Integrating the system with existing institutional platforms might require technical expertise, Cloud-based systems are vulnerable to hacking, data breaches and attack Mastering a new system with complex features requires user-friendly interfaces.

CHAPTER-3 PROBLEM DEFINITION AND REQUIREMENT ANALYSIS

3.1 PROBLEM DEFINITION

In the current environment, there is a distinct lack of quality care in places such as organizations or schools. There is an urgent need for a central authority that can track project details, monitor progress, and facilitate collaboration between stakeholders such as teams, mentors, and colleagues. Popular book pieces are ineffective and error-prone, leading to frustration and communication gaps. This platform aims to process by providing communication, task management, and progress tracking. The problem definition that our project pulse will deal are inefficiencies and communication gaps faced in project-based learning environments.

Challenges for Students: Difficulty managing project tasks, communication with mentors, and staying on track with deadlines.

Challenges for Mentors: Time management for multiple students, tracking individual progress, and ensuring timely communication.

Overall Issues: Lack of transparency, administrative burden, and potential for project delays or failure due to communication gaps.

3.2 REQUIREMENT ANALYSIS

3.2.1 USER REQUIREMENTS

- **Easy Registration and Login:**
  - Easily register for an account and log in to the system
  - Recover their password if they forget it

- **Intuitive Project Creation and Management:**
  - Create new projects and set project details
  - Manage existing projects in a straightforward and intuitive way
- **Clear Task Management:**
  - Enables users to create tasks and assign them to specific team members
  - Set deadlines and monitor progress effortlessly
- **Effective Collaboration Tools:**
  - Provides built-in communication channels for seamless team interactions
  - Allows file sharing and the ability to leave comments on tasks or projects for better coordination
- **Accurate Time Tracking:**
  - Log time spent on tasks
  - View reports on their time usage
- **Timely Notifications and Reminders:**
  - Receive notifications and reminders about upcoming deadlines
  - Customize which notifications they receive
- **Useful Reporting and Analytics:**
  - Generate reports and view analytics on project progress
  - Easy to understand and help users make informed decisions
- **Seamless Integration:**
  - Integrate the system with other tools that they use
  - Seamless and not require manual data entry
- **Strong Security and Compliance:**
  - Feel confident that their data is secure
  - The system is compliant with relevant regulations.

- **High Accessibility and Usability:**
  - User-friendly and accessible to all users
  - Regardless of their abilities
  - Easy to navigate with clear labels and instructions
  - Customize their interface to suit their preferences
- **Other Notes:**
  - Integration with existing university systems (e.g., Student Information System).
  - Version control file uploads.
  - Plagiarism detection tool and plagiarism remover tool(optional).

3.2.2 FUNCTIONAL REQUIREMENTS

- **User Authentication:**
  - Secure user registration
  - Login functionality
  - Password recovery
- **Project Management:**
  - Allow users to create, edit, and delete projects
  - Store project details (like name, description, start date, end date, etc.)
  - Provide functionality for managing project status and progress
- **Task Management:**
  - Allow users to create, edit, and delete tasks
  - Store task details (like name, description, assignee, due date, etc.)
  - Provide functionality for tracking task status and progress
- **Collaboration:**
  - Team communication
  - File sharing
  - Task or project commenting

- **Time Tracking:**
  - Log time spent on tasks
  - Provide reports on time usage
- **Notifications and Reminders:**
  - Send notifications
  - Reminders about upcoming deadlines
  - Other important events
  - Users should be able to customize their notification preferences
- **Reporting and Analytics:**
  - Generate reports and analytics on project progress
  - Team performance
  - Other key metrics
- **Integration:**
  - Provide APIs
  - Integrating with other software, such as email clients, or other tools
- **Security and Compliance:**
  - Implement appropriate data security measures
  - Comply with relevant regulations
- **Accessibility and Usability:**
  - Accessible to all users
  - Regardless of their abilities or the devices they're using
  - It should follow best practices for user interface design and usability
- **Performance and Scalability:**
  - Perform well under expected load
  - Be scalable to handle increased load
- **Data Management:**
  - Provide functionality for importing and exporting data and for backing up and restoring data

- **Error Handling and Logging:**
  - Handle errors gracefully
  - Log errors for troubleshooting purposes
- **Documentation:**
  - Offers detailed and well-structured documentation for both users and administrators to ensure smooth navigation and effective use of the platform

3.2.3 NON-FUNCTIONAL REQUIREMENTS

- **Performance:**
  - Respond to user requests quickly
  - Handle a large number of concurrent users without performance degradation
- **Scalability:**
  - Be able to scale up to handle increased load
  - larger number of users, projects, or tasks
- **Reliability:**
  - Be reliable and have minimal downtime
  - Handle errors gracefully
  - Recover from failures quickly
- **Security:**
  - Protect user data from unauthorized access
  - Implement appropriate data encryption and user authentication measures
- **Privacy Protection:**
  - Ensures user privacy is fully respected
  - Adheres to all relevant data protection regulations to maintain compliance and safeguard user information

- **Usability:**
  - User-friendly and easy to learn
  - Best practices for user interface design and accessibility
- **Maintainability:**
  - Easy to maintain and update
  - Clear and modular code
  - Provide comprehensive documentation for developers
- **Portability:**
  - Run on different platforms and devices
  - Easy to deploy and configure
- **Interoperability:**
  - Exchange data with other systems
  - Integrate with other software that the team uses
- **Compliance:**
  - Comply with relevant regulations and standards
  - Data protection laws
  - Project management standards
- **Disaster Recovery and Business Continuity:**
  - Implements robust disaster recovery and business continuity strategies
  - Ensures reliable data backup and recovery procedures to protect against data loss and minimize downtime
- **Support and Training:**
  - Support and training resources for users
  - User manuals, tutorials, and a help desk
- **Documentation:**
  - Clear and comprehensive documentation for users, administrators, and developers
  - This includes user manuals, technical documentation, and API documentation

- **Legal and Contractual:**
  - Comply with relevant legal and contractual requirements
  - Licensing level agreements
  - Service level agreements

CHAPTER-4 DESIGN AND IMPLEMENTATION

4.1 DESIGN

4.1.1 FLOW CHART OF SYSTEM

4.1.2 USE CASE OF SYSTEM

4.1.3 SEQUENCE DIAGRAM

4.2 IMPLEMENTATION

4.2.1 IMPLEMENTATION ENVIRONMENT

4.2.2 BACK END TECHNOLOGY

4.2.3 FRONT END TECHNOLOGY

4.2.4 SNAPSHOTS

4.1 DESIGN

4.1.1 FLOW CHART OF SYSTEM

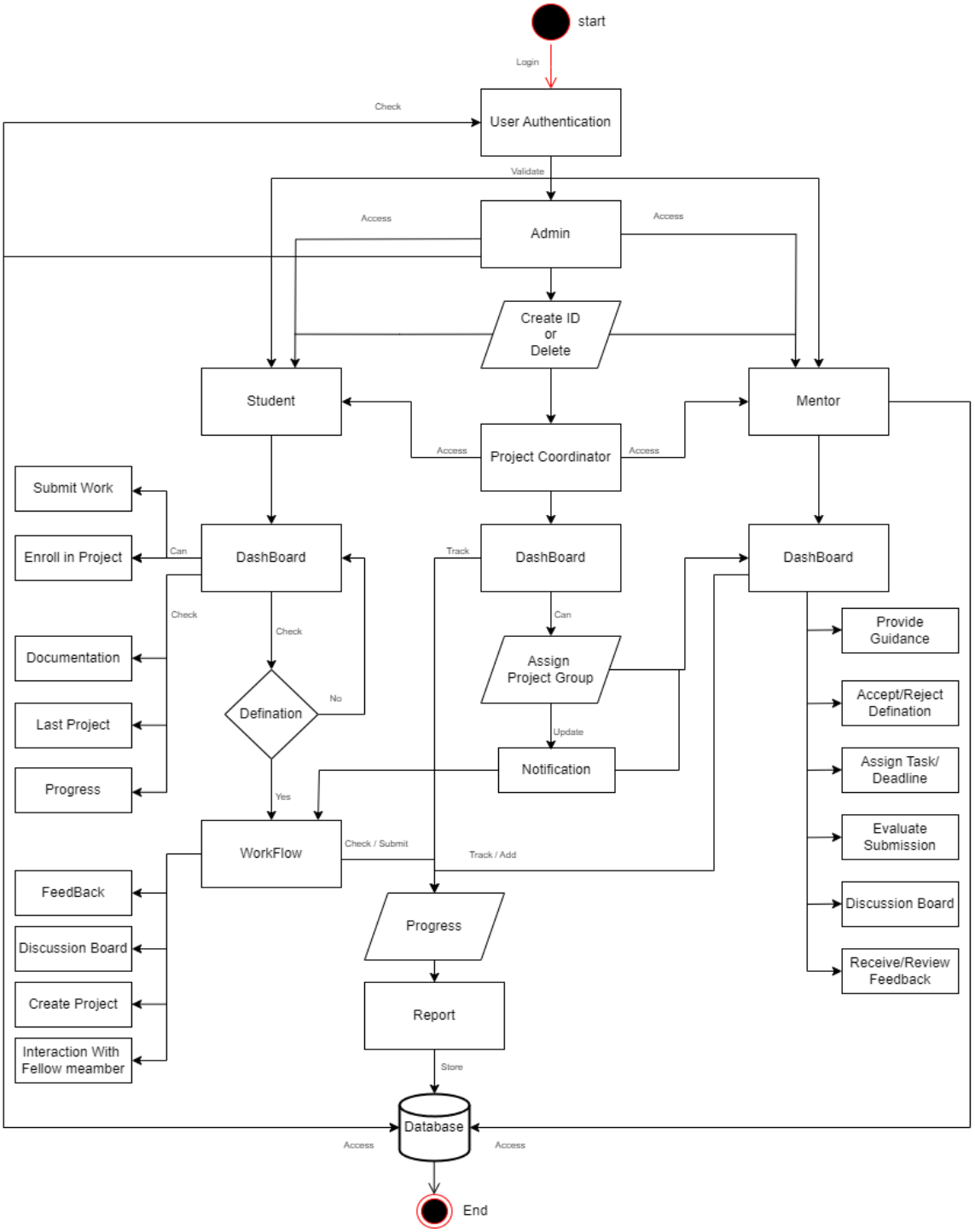

Figure 4.1.1.1 Flow Chart of System

4.1.2 USE CASE OF SYSTEM

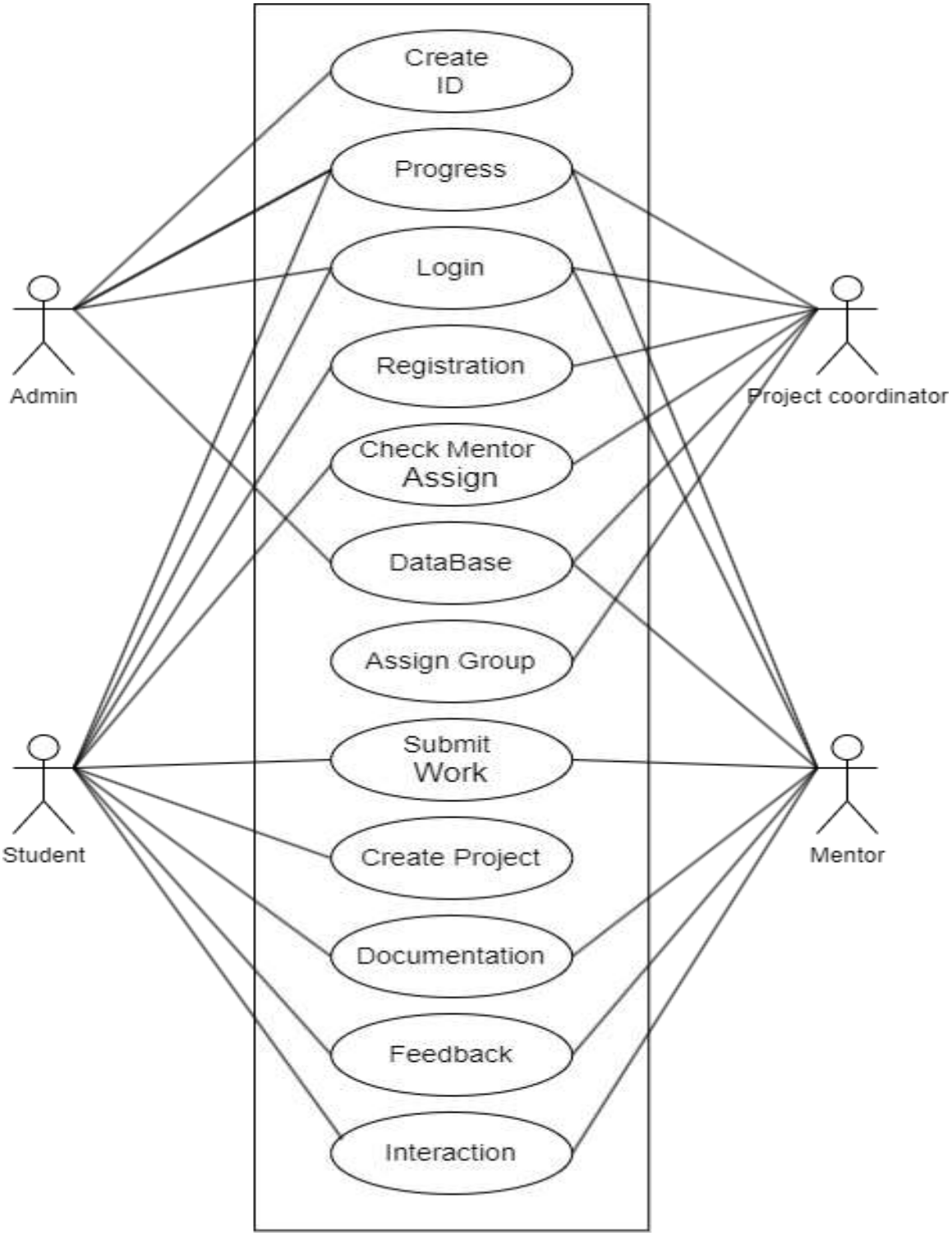

Figure 4.1.2.1 Use case of System

4.1.3 SEQUENCE DIAGRAM

- **Admin Sequence Diagram**

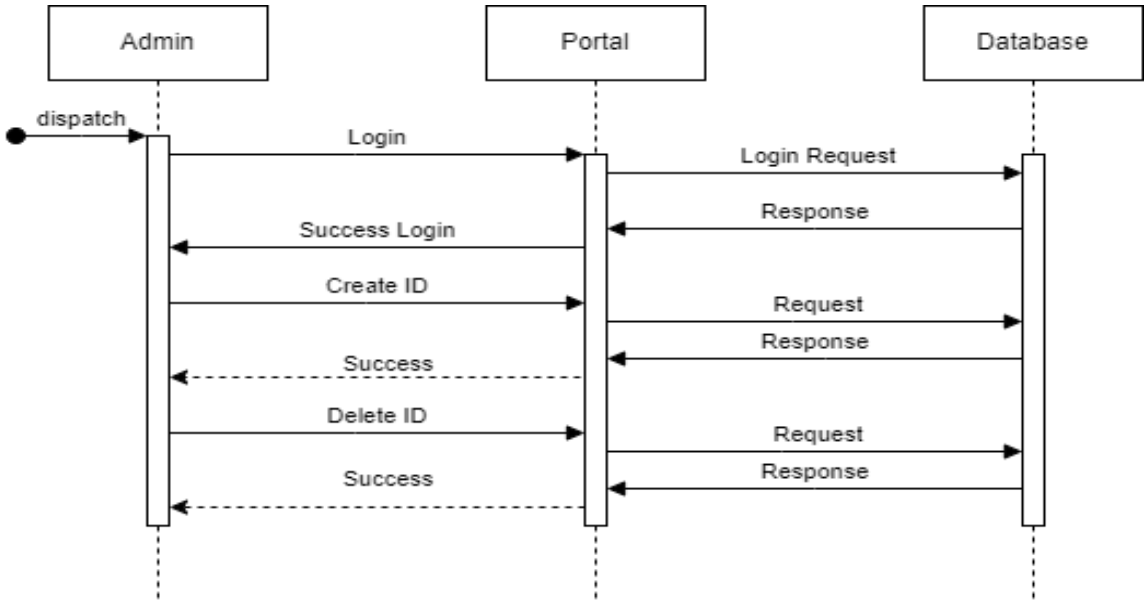

Figure 4.1.3.1 Admin Sequence Diagram

- **Project Coordinator Sequence Diagram**

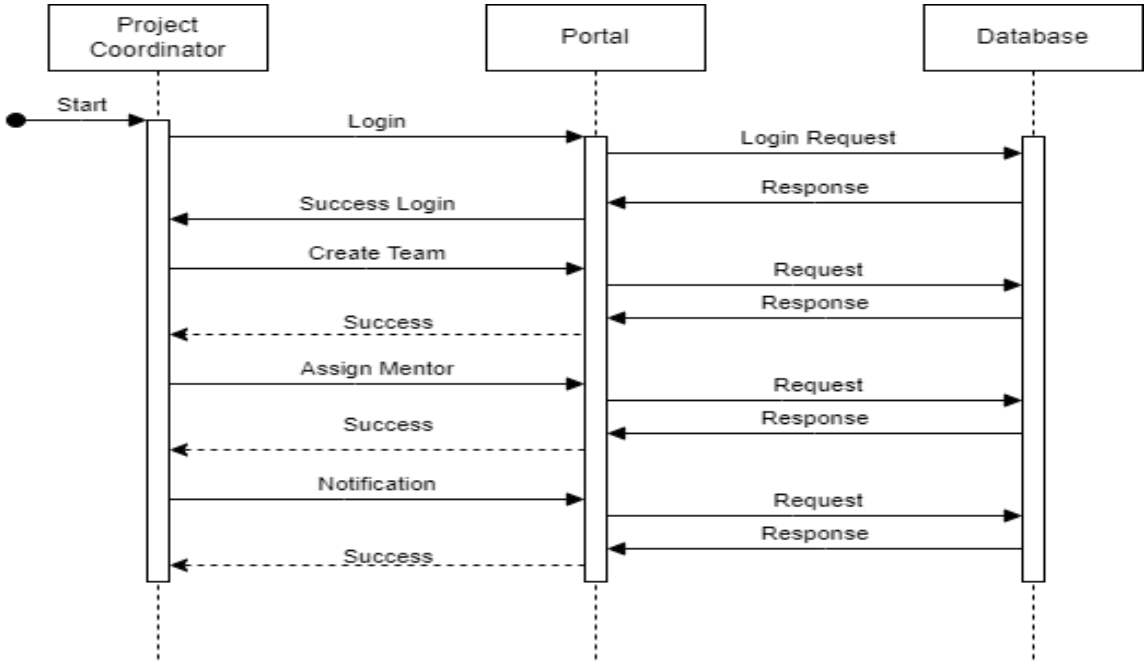

Figure 4.1.3.2 Project Coordinator Sequence Diagram

- **Mentor Sequence Diagram**

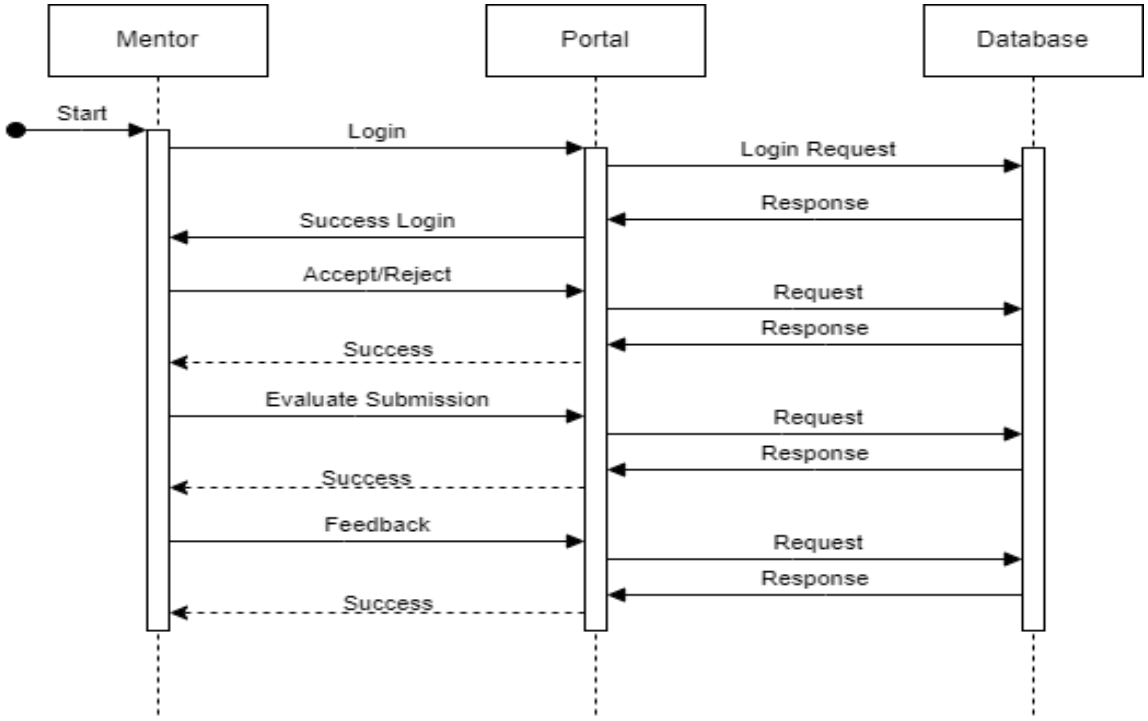

Figure 4.1.3.3 Mentor Sequence Diagram

- **Student Sequence Diagram**

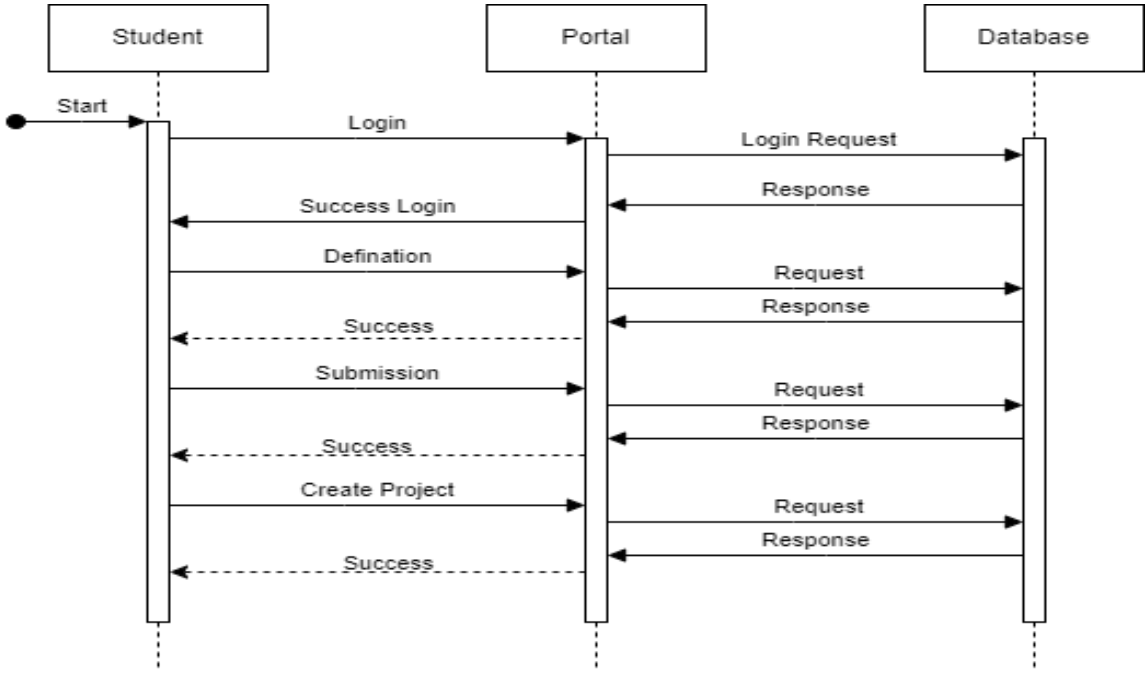

Figure 4.1.3.4 Student Sequence Diagram

4.2 IMPLEMENTATION

4.2.1 IMPLEMENTATION ENVIRONMENT

The React web application resembles Google Assistant but comes packed with more features and innovative concepts. One of its standout aspects is the customization options available to users. This allows them to tailor the application to fit their specific needs and preferences, enhancing the overall user experience.

An implementation environment for a React-Vite project refers to the specific setup and configuration required to run and deploy your React application using the Vite build tool. This includes the necessary hardware, software, and network infrastructure.

- **Key Components:-**

Node.js and npm (or yarn): These are essential for installing and managing dependencies in your project.

Vite: The build tool that provides fast development server and production builds.

React: The JavaScript library used to create user interfaces.

Additional Dependencies: Depending on your project's needs

- **Libraries like:-**

React Router: For managing navigation within your application.

Redux or Zustand: For state management.

Styled Components or CSS Modules: For styling your components.

Testing libraries: For unit and integration testing.

- **FRONT END AND BACK END TECHNOLOGY**

Table 4.2.1.1 Front End and Back End Technology

COMPONENT	TOOLS OR TECHNOLOGY
Operating System	Windows 7-8.0-10
Front End	HTML, CSS, JavaScript, React (Microsoft Visual Studio 2019)
Back End	Node js, Express js, Mongo DB
Application	Microsoft Visual Studio 2012, Microsoft Office 2010/2013, Notepad/Notepad++, HTML with bootstrap
Web browser	Mozilla Firefox, Google Chrome, Microsoft edge

4.2.2 BACK END TECHNOLOGY

Node.js is a JavaScript runtime built on Chrome's V8 engine. It lets developers run JavaScript on the server side, which means you can create scalable and high-performance web applications. One of the cool things about Node.js is its event-driven, non-blocking I/O model. This makes it super-efficient and a great choice for real-time applications that need to handle lots of data across different devices.

Express.js is a minimum and flexible Node.js web operation frame that provides a robust set of features for web and mobile operations. It simplifies the process of structure web waitpersons and APIs by offering a range of HTTP avail styles and middleware, allowing for the creation of dynamic and responsive web operations with ease.

MongoDB is a NoSQL document database that stores data in flexible, JSON- suchlike documents. This allows for easy and effective data modeling, making it well- suited for operations with varying data structures. MongoDB’s scalability and strictness enable

formulators to handle large volumes of data and support real- time analytics, making it a popular choice for modern web operations.

4.2.3 FRONT END TECHNOLOGY

HTML (Hyper Text Markup Language) is the standard markup language used to create the structure of web pages. It provides a framework for embedding multimedia elements and creating links, ensuring content is well-organized and accessible.

CSS (Cascading Style Sheets) is a stylesheet language used to control the presentation and layout of HTML elements. CSS allows developers to apply styles, such as colors, fonts, and spacing, making it essential for creating visually appealing and responsive web designs.

JavaScript is a versatile, high-level programming language that enables interactive and dynamic content on web pages. It allows for client-side scripting, enabling developers to create responsive user interfaces, handle events, and manipulate the Document Object Model (DOM) in real-time.

React is a JavaScript library for building user interfaces, particularly single-page applications. Developed by Facebook, React uses a component-based architecture, allowing developers to create reusable UI components that efficiently update and render as data changes.

Bootstrap is a popular front-end framework that provides a collection of pre-designed HTML, CSS, and JavaScript components. It streamlines the development process by offering responsive grid systems, navigation bars, buttons, and modals, enabling developers to create mobile-first and visually consistent web applications quickly.

4.2.4 SNAPSHOTS

- **Landing Page**

Figure 4.2.4.1 Landing Page

- **Registration page**

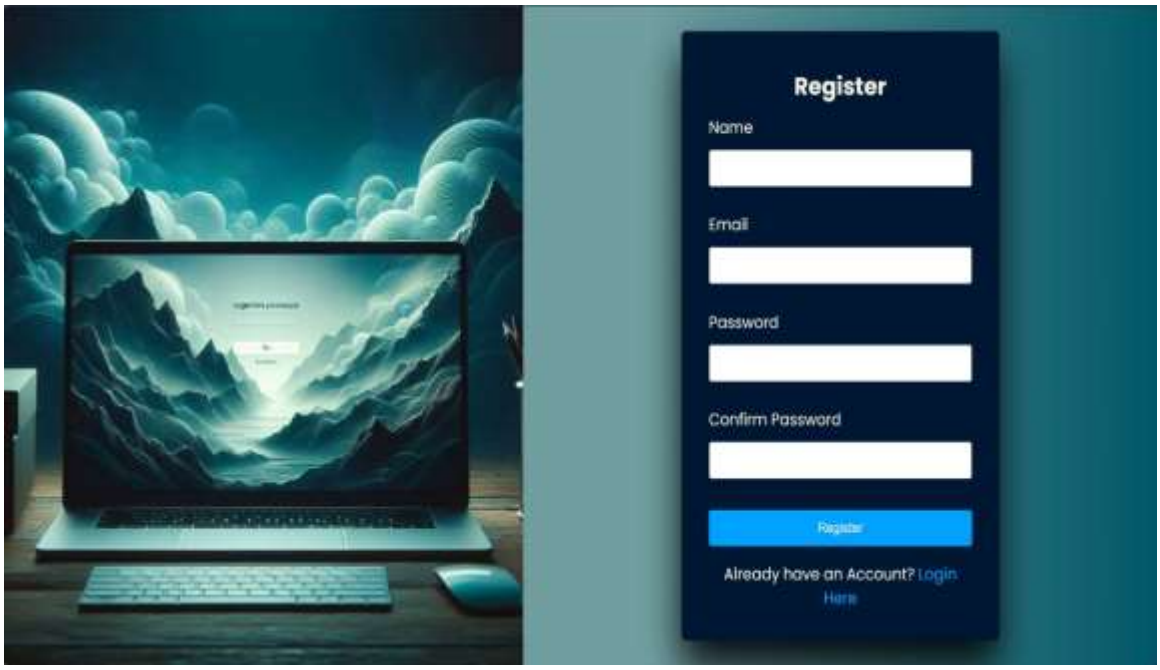

Figure 4.2.4.2 Registration Page

- **Login Page**

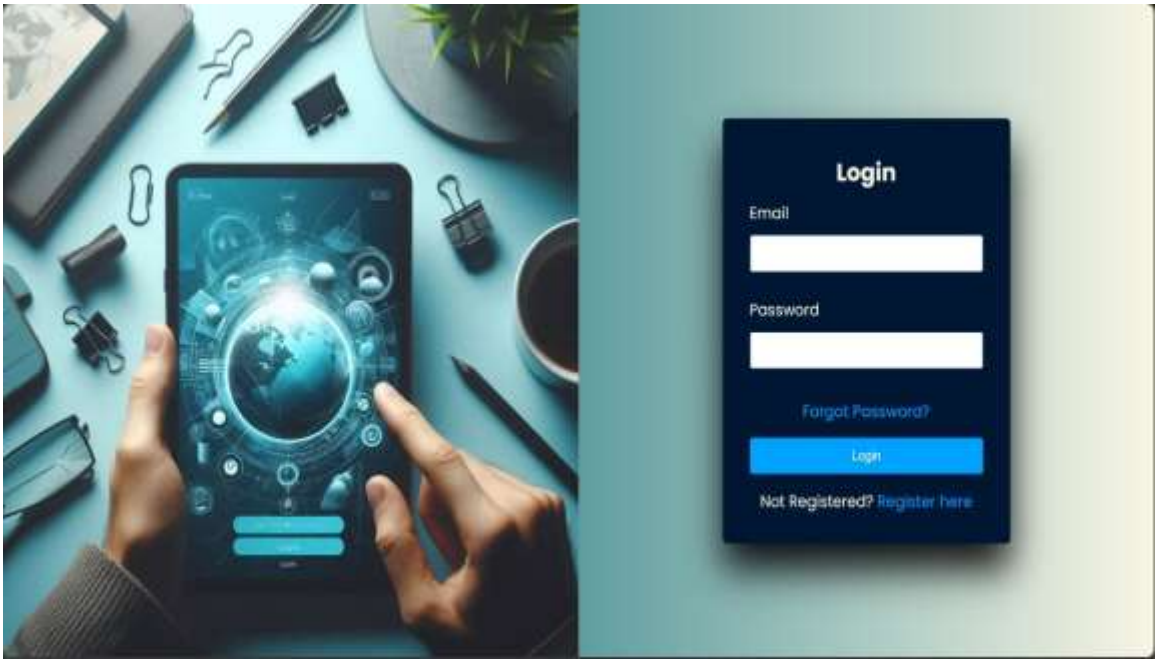

Figure 4.2.4.3 Login Page

- **Forget Password**

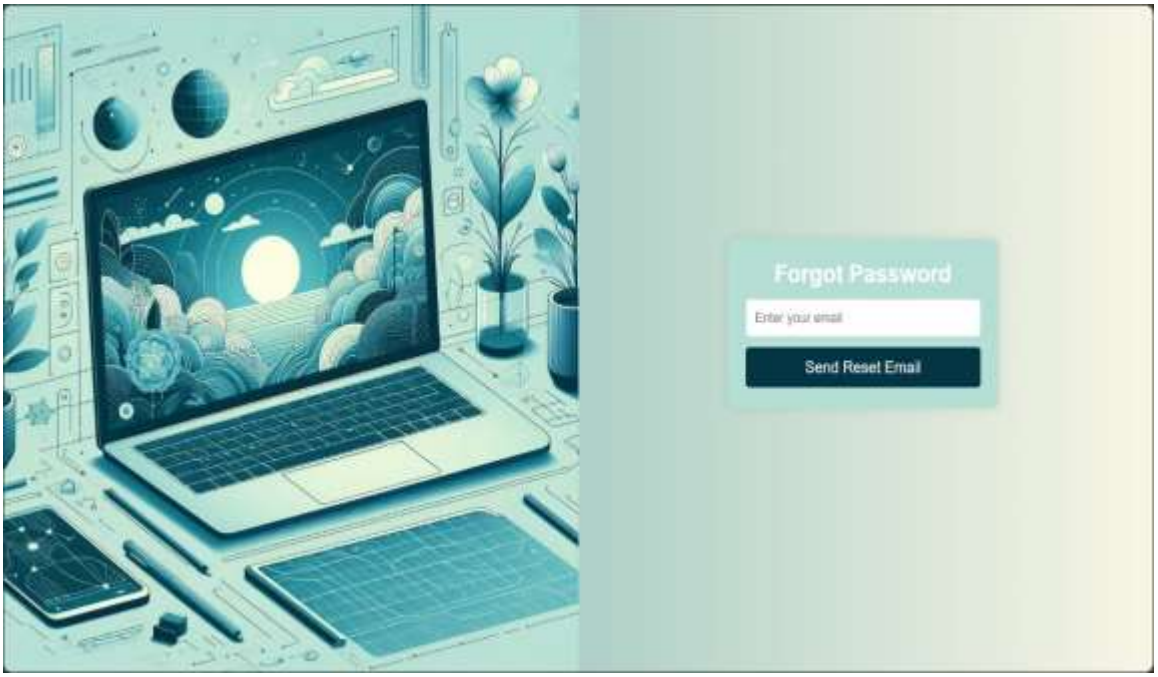

Figure 4.2.4.4 Forget Password

- **Admin Dashboard**

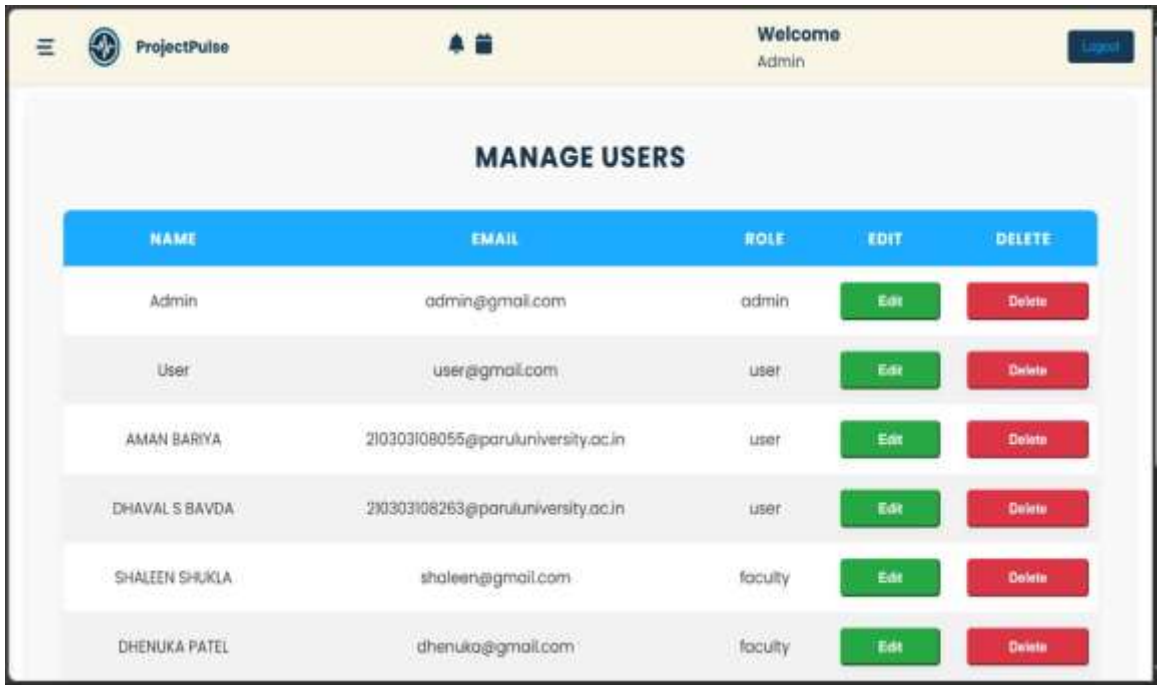

Figure 4.2.4.5 Admin Dashboard

- **Faculty Dashboard**

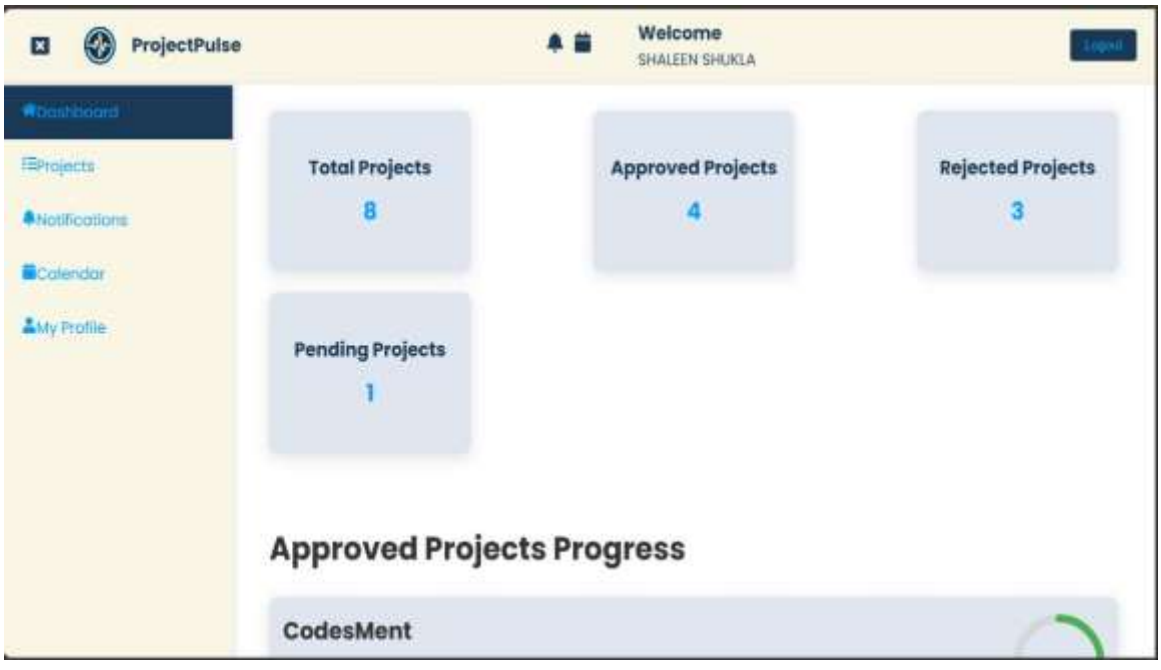

Figure 4.2.4.6 Faculty Dashboard

- **Faculty Notification**

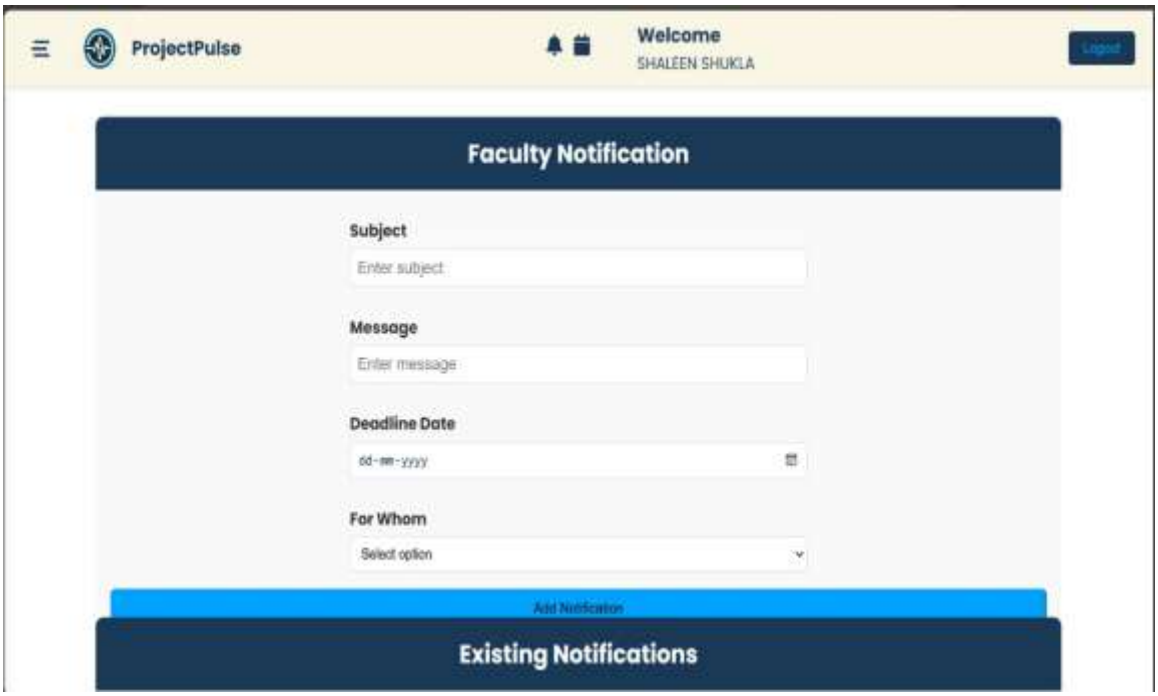

Figure 4.2.4.7 Faculty Notification

- **Faculty Project Management**

Figure 4.2.4.8 Faculty Project Management

- **Student Dashboard**

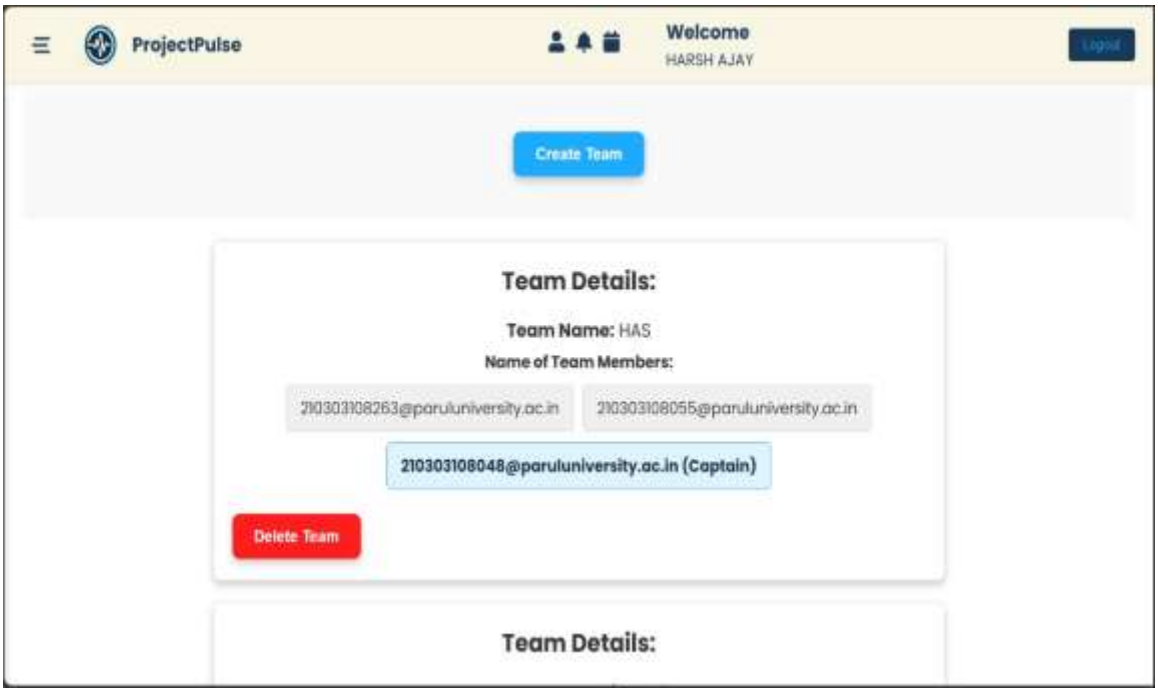

Figure 4.2.4.9 Student Dashboard

- **Student Notification Page**

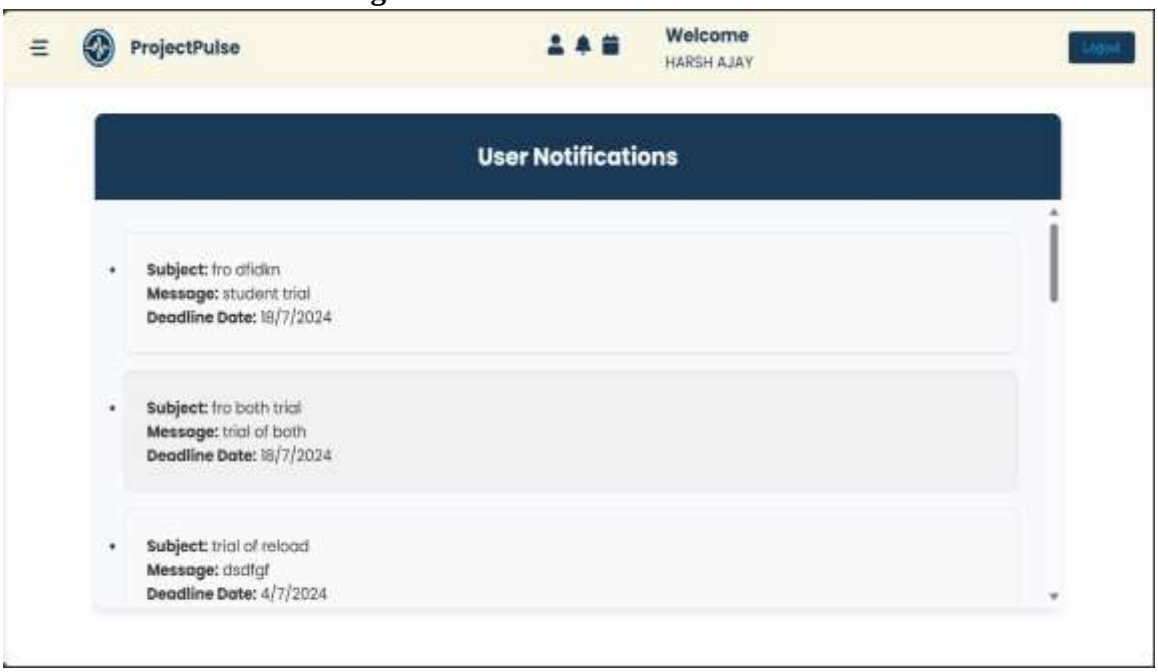

Figure 4.2.4.10 Student Notification Page

- **Option To Create Team**

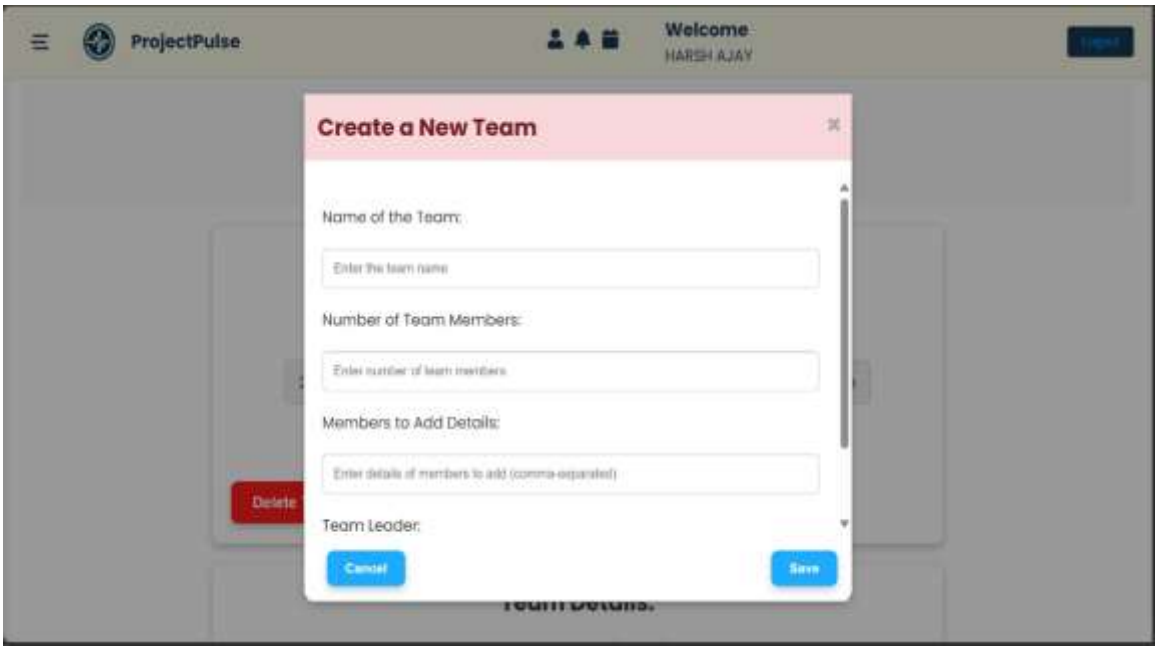

Figure 4.2.4.11 Option To Create Team

- **Option To Create Project**

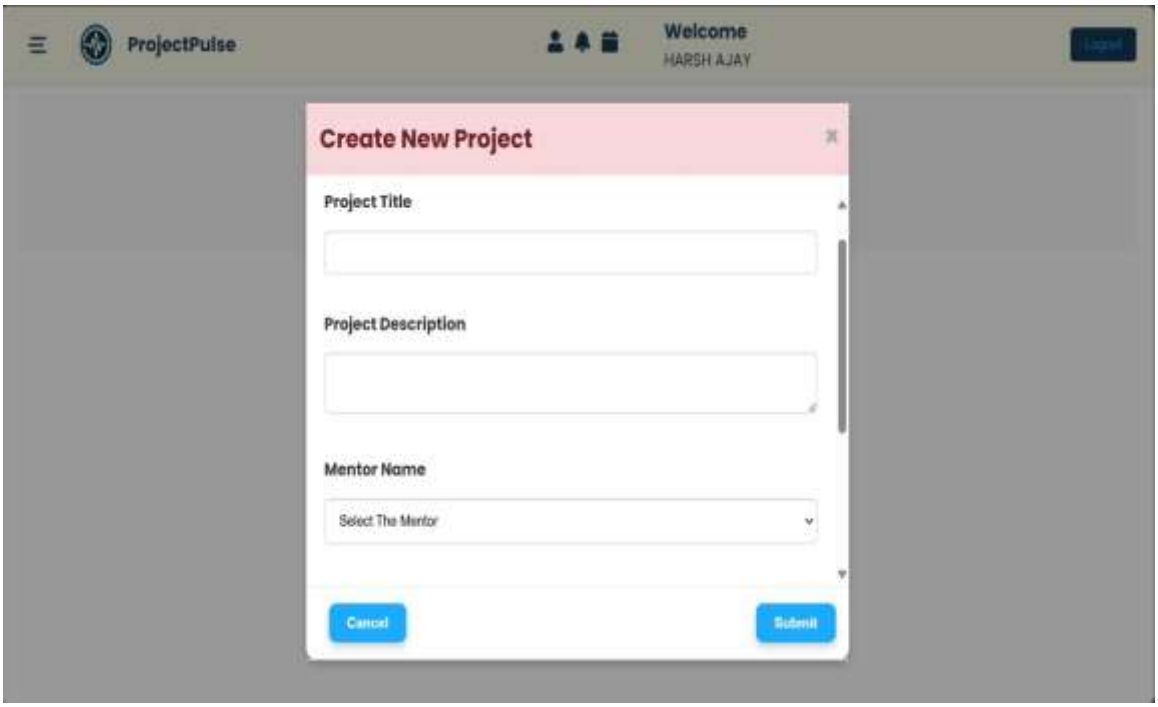

Figure 4.2.4.12 Option To Create Project

- **Create Project**

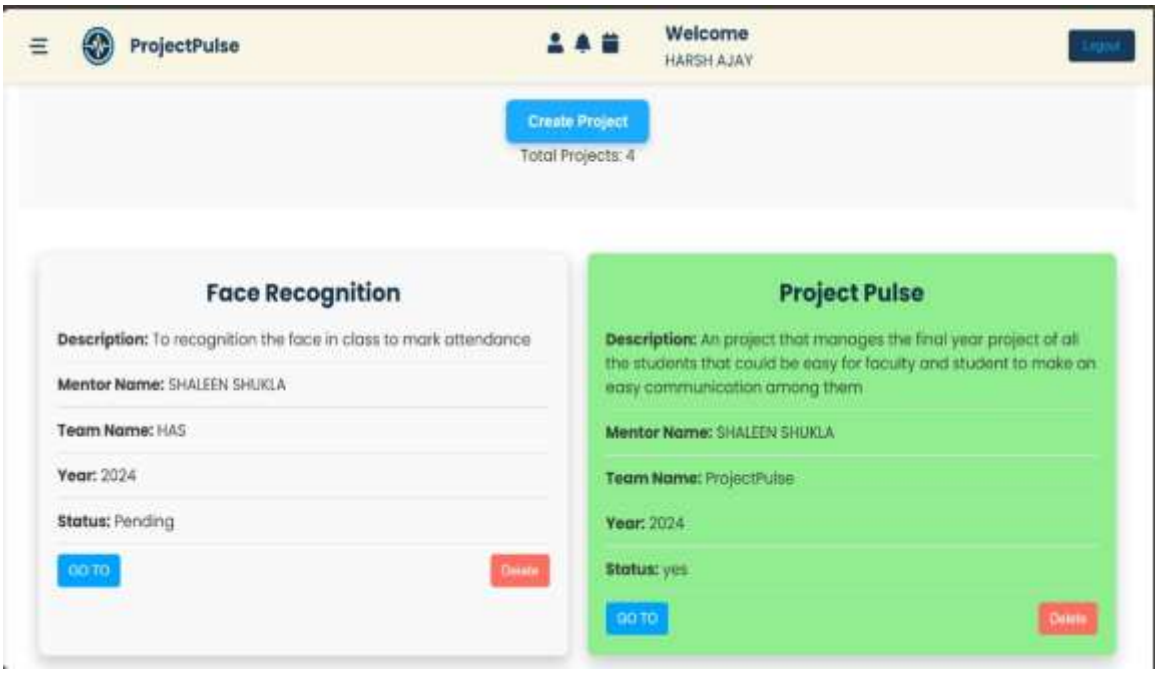

Figure 4.2.4.13 Create Project

- **Calendar**

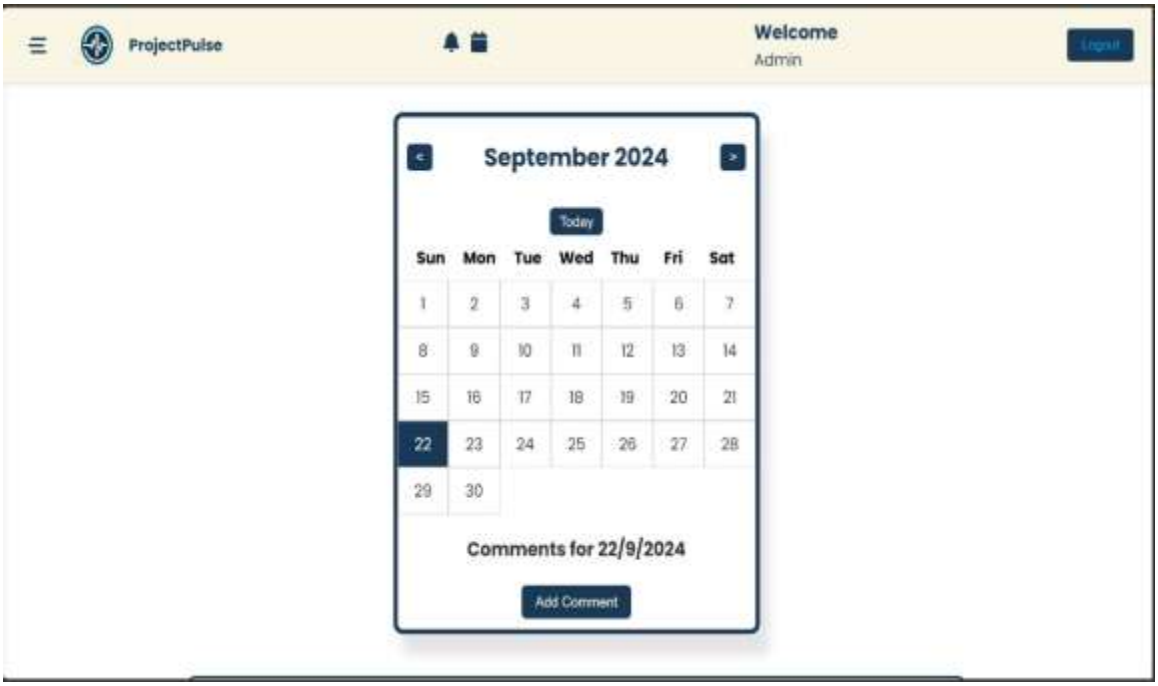

Figure 4.2.4.14 Calendar

CHAPTER-5 TESTING AND DEPLOYMENT

5.1 TESTING

5.2 DEPLOYMENT

5.1 TESTING

Table 5.1.1 Test Cases

Sr No.	Test Cases	Description	Steps To Execute	Expected Results
1	UI Component Verification	Verify all UI elements such as text boxes, radio buttons, and buttons.	1. Click on Radio buttons, buttons and dropdowns	UI should be perfect
2	Verify Required Fields without Input	Check behavior when required fields are left empty.	1. Do not enter any value in the field. 2. Click on the Register button.	A notification should appear indicating that all required fields must be filled, or an asterisk (*) should be displayed beside mandatory fields.
3	Register with All Required Fields	Verify user registration by filling all required fields.	1. Enter valid values in the required fields. 2. Click the Register button.	Registration should be successful. A confirmation message should appear, and the user should be listed on the admin dashboard.
4	Register without Optional Fields	Check behavior when optional fields are left empty.	1. Do not enter any detail in optional fields 2. Enter valid data in required fields 3. Click on the Signup button	Registration should be successful. Only entered data should be displayed in the admin and faculty panels.
5	Register with Optional Fields Filled	Verify registration when optional fields are filled.	1. Enter valid data in optional fields 2. Enter valid data in required fields 3. Click on the Register button	Registration should be successful. All provided data should be displayed in the admin and faculty panels.

6	Invalid Email Formats	Check the email field with various invalid formats.	1. Enter Invalid Emails 2. Click on the Register Button.	Appropriate error message should appear indicating invalid email format.
7	Valid Email Formats	Verify valid email addresses.	1. Enter valid Emails 2. Click on the Register Button.	No validation message should appear, and registration should proceed.
8	Alphanumeric Phone Number	Verify phone number field with alphanumeric data.	1. Enter alphanumeric data in phone field 2. Click on Register button	A validation message should appear indicating invalid phone number format.
9	Password Less Than Minimum Length	Verify password field with less than the minimum required length (8 characters).	1. Enter value which is alphanumeric but less than 8. 2.Click on Register button	A validation message should appear indicating that the password must be at least 8 characters.
10	Password Exceeding Maximum Length	Verify password field exceeding the maximum length (32 characters).	1. Enter alphanumeric value but more than 32. 2.Click on Register button	It should show validation message
11	Password with Only Numbers	Verify password field with only numeric values.	1. Enter a value in numbers which is in between 8-32 2.Click on Register button	A validation message should appear indicating that the password must include both letters and numbers.
12	Valid Password	Verify valid password input.	1. Enter value in alphanumeric which is in between 8-32 2.Click on Register button	No validation message should appear, and registration should proceed.
13	User Interface	Validate alignment of all text boxes and buttons.	Check Page	UI elements are aligned properly.

14	Required Fields	Check error display for missing required fields.	1. Enter invalid username 2. Enter correct password 3. Click on Login Button	Appropriate error message is shown and login is not permitted.
15	User Login	Verify error handling for valid username and invalid password.	1. Enter valid username 2. Enter incorrect password 3. Click on Login Button	User should not log in and should show proper error message
16	Password Field Check	Verify error handling when password is missing.	1. Enter valid username 2. Do not enter password 3. Click on Login Button	User should not log in and should show proper error message
17	Successful Login	Validate login with valid credentials.	1. Enter valid username 2. Enter valid password 3. Click on Login Button	User should log in
18	Password Security	Verify password is encrypted.	1. Enter valid username 2. Enter password 3. Click on Login Button	Password is entered in encrypted form
19	Signup Link	Verify signup link functionality.	Click Signup link	Redirects to signup page.
20	Forgot Password	Verify error for unregistered email during password reset.	1. Click on the Forgot password link. 2. Enter unregistered email id and click on the send button.	User should get an error message.

21	Password Reset	Verify password reset link is sent to registered email.	1. Go to the forgot password link. 2. Enter the registered email. 3. Click on the send reset email button.	User should receive a link to reset their password on registered email.
22	Welcome Email	Validate welcome email is sent on first login.	Login with valid credentials.	Welcome email is received.
23	Authentication	Validate login error for incorrect email and correct password.	1. Enter incorrect Email. 2. Enter the correct password. 3. Click on the Login Button.	Error message should be shown
24	Successful Login	Validate login with correct email and password.	1. Enter the correct email 2. Enter the correct password 3. Click on the Login Button	User should be logged in redirected to user dashboard.
25	Create Team with Invalid Email	Validate that the system shows an error when a user creates a team with an invalid email.	1. Click on create team button. 2. Add all team member detail with error in email 3. Click Save	An error message is displayed.
26	Create Team with Missing Email	Validate that the system shows an error when a user creates a team and omits an email.	1. Click on create team button. 2. Add number of team members and miss one of the email. 3. Click Save	An error message is displayed.

27	Create Team Successfully	Validate that a team is successfully created and displayed to all team members.	1. Click on create team button. 2. Add all team member detail and valid email id. 3. Click Save	The team is created and displayed on the notification panel of all team members.
28	Create Project	Validate that a user can create a project once the team is created.	1. Enter the project title 2. Enter project description 3. Select mentor and team id 4. Click Submit	The project is created and visible to the team leader, team members, and mentor.
29	Display Project to Faculty	Validate that the created project is visible to the faculty.	1. Enter the project information 2. Select Mentor 3. Click Submit	The project is shown to the selected faculty mentor. After approval, it appears in green on the student's panel.
30	Upload Documents	Validate that a student can upload documents for assigned tasks.	1. Click on go to 2. Enter File Name 3. Choose file of any format 4. Add comment if needed and then press upload.	The file is uploaded and visible to faculty and other members.
31	View/Download Uploaded Documents	Validate that users can view or download uploaded documents.	1. Click on go to 2. Scroll down and click on uploaded documents 3. On the selected file click view or download	The document is viewable or downloadable on the device.

32	Upload Weekly Report	Validate that a student can upload weekly reports.	1. Click on go to 2. Scroll down to upload weekly report section 3. Add description and date of submission 4. Select file and then press upload reports	The report is uploaded and visible to faculty and members.
33	View Uploaded Weekly Reports	Validate that users can view uploaded weekly reports.	1. Click on go to 2. Scroll down and click on uploaded reports 3. On the selected file click view uploaded report	The report is viewable to the user
34	Notification	Validate that users receive notifications sent by mentors or admins.	Click on notification in sidebar menu	Notifications are visible with subject, message, deadline, and recipient details.
35	Project Approval	Mentor can approve or reject a project.	1. On the side menu bar click on Projects 2. In the available projects click on to go 3. Approve or Reject with comment	Mentor’s decision is saved, and comments are updated.
36	Update Project Progress	Mentor updates project progress.	1. Click on progress button 2. Update the percentage of acquired progress 3. Click on update progress	Progress is updated and reflected on the graph for students and mentors.

37	View Documents	Faculty views or downloads documents.	1. Click on document button 2. Press on uploaded documents 3. Click on View or Download	Selected document is accessible on the device.
38	View Weekly Reports	Faculty checks weekly project reports.	1. Click on document button 2. Press on uploaded documents 3. Click on View Uploaded Report	Report is displayed or downloaded to the device.
39	Send Notification	Mentor sends notifications to the selected recipients.	1. Click on notification on side menu bar 2. Enter the subject and message 3. The select the deadline date 4. Select to whom notification to be sent 5. Click on add notification	Notification appears in the recipient's notification section.
40	Add Calendar Comment	User adds comments to future dates in the calendar.	1. Click on Calendar on side menu bar 2. Select any future date and press on add comment 3. Add the description 4. Press Add Comment	Comment is visible to all members and highlighted on the calendar.
41	Update User Profile	User updates their profile details.	1. Click on My profile on side menu bar	User information is updated and saved on the server.

			2. Update the details 3. Press Save	

5.2 DEPLOYMENT

- **Hosting Environment:**

The frontend of the application has been deployed on Netlify, providing fast loading times and optimized static assets delivery through its content delivery network (CDN). The backend is hosted on Render, a cloud platform that provides a managed environment for deploying applications, offering easy scalability and robust performance for handling API requests and data processing.

- **Front-End and Back-End Deployment:**

The front-end is built using React.js and styled with Bootstrap. It has been optimized for production and hosted on Netlify to ensure fast loading times and global CDN caching. The backend, built with Node.js and Express.js, is deployed on Render, which ensures automatic scaling and containerized deployment for consistent environment setup.

- **Database Deployment:**

The MongoDB database is managed using MongoDB Atlas, which provides a fully-managed database service with automated backups, scalability, and security measures to store user data, results, and interaction logs.

CHAPTER-6 ANALYSIS AND RESULTS

6.1 RESULT

6.2 ANALYSIS

6.1 RESULT

- **UI Alignment:** UI elements are properly aligned, ensuring a clean user interface.
- **Authentication and Login:** Appropriate error messages displayed for invalid credentials and successful login for valid inputs.
- **Password Management:** Passwords are encrypted, and proper error handling occurs for unregistered email addresses during password resets.
- **Team and Project Management:** Teams and projects are created successfully with appropriate error messages for invalid email entries.
- **Document Handling:** Users can upload, view, and download documents seamlessly, with visibility to intended recipients.
- **Notifications:** Notifications are sent and received correctly, with all necessary details displayed.
- **User Profile Management:** User profiles are updated successfully and saved on the server.

6.2 ANALYSIS

- **Coverage:** The test cases encompass a broad spectrum of functionalities, providing confidence in the system's capabilities.
- **Error Handling:** Emphasis on error handling ensures robustness and enhances user experience by preventing confusion.
- **Success Scenarios:** Validation of successful operations is crucial for user engagement, indicating a well-functioning system.
- **Communication:** Testing notifications highlights effective communication between mentors and users, reinforcing collaboration.
- **Continuous Improvement:** Regular updates to the test cases will be essential as the application evolves, ensuring ongoing reliability and user satisfaction.

This structured approach lays a solid foundation for quality assurance in the application.

CHAPTER-7 CONCLUSION AND FUTURE ENHANCEMENTS

7.1 CONCLUSION

7.2 FUTURE ENHANCEMENTS

7.1 CONCLUSION

We have created a system that provides a facility to final year students to seamlessly work on their project and achieve their goals. Our project, “Project Pulse”, will significantly reduce the workload of both faculties/mentors/guides as well as students working within. Using our website, students and faculty will be easily able to handle tasks like arrangements, announcements, assessment collection, weekly reports, and overall project work. Using our platform, students and mentors will be able to work collaboratively, focusing over faster and more accurate project completion. Mentors/guides can keep track of the work being done on a daily basis or weekly basis and update the percentage based on work completed and the success rate achieved. A deadline option will also be provided so that student may complete their work within the given time and submit it online for the evaluation.

7.2 FUTURE ENHANCEMENTS

Our project currently offers a comprehensive range of features to support final year projects. However, we are actively working on incorporating Artificial Intelligence into our system to further automate tasks and enhance user experience. Additionally, we plan to introduce a built-in plagiarism checker to assist students and faculty in seamlessly verifying the originality of uploaded content. Furthermore, we aim to integrate version control using GitHub, enabling users to collaborate effectively with team members and work directly on their code.

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LIST OF APPENDICES

- WEEKLY REPORT
- CERTIFICATE
- PLAGIARISM REPORT

➢ WEEKLY REPORT

Table 1 Weekly Report

Parul Institute of Engineering and Technology				
B.Tech - IT				
Progress Card				
Team ID: PIET_IT_002				
Team Leader Name: Aman Ravindra Bariya				
Team Member's Name: Harsh Ajay, Meera Mukeshbhai Dobariya, Dhaval S Bavda				
Enrollment Number: 210303108055, 210303108048, 210303108075, 210303108263				
Guide's Name: Mr. Shaleen Shukla				
Project Title: Project Pulse				
Week	**Work Done**	**Suggestion**	**Progress**	**Guide's Sign**
08/01 to 15/01	Title discussion of the project.	Idea Approved & Suggested for Literature Review	Good	
15/01 to 22/01	Literature Review	Visit more sites for research	Good	
05/02 to 12/02	Literature Review (5 papers per person)	Refer & Analyses similar systems	Satisfactory	
12/01 to 19/02	Analysis and Study of Existing system.	Find out the limitations and list out methods	Good	
19/02 to 26/02	First presentation for proposed method.	Technologies for implementations and software devised model	Satisfactory	

04/03 to 11/03	Work flow decided	Design the proposed workflow using draw.io	Good	
11/03 to 18/03	Report Making	Send for Plagiarism	Good	
18/03 to 25/03	Plagiarism Test & Submission.	Start Working on Frontend	Good	
26/03 to 15/04	Worked on frontend and submission of ppt.	Carry on with further project work	Good	
16/04 to 06/05	Final exams, viva and other.	Keep working on project	Good	
06/05 to 09/06	Impact training	Vacation	Good	
10/06 to 19/06	40% implementation of frontend and backend.	Complete the remaining work	Good	
19/06 to 28/06	60% work done and class presentation.	Go through remaining work	Good	
28/06 to 07/08	80% work completed and presented at hackathon.	Complete 90% project before final viva	Good	

09/08 to 21/08	90% implemented and submitted to mentor.	complete the remaining documentation	Good	
21/08 to 04/09	Documentation completed and final viva.	Start to write survey paper	Good	

➢ CERTIFICATE

Figure 1 Certificate of THE MAVERICK EFFECT AI CHALLENGE

Figure 2 Certificate of THE MAVERICK EFFECT AI CHALLENGE

Figure 3 Certificate of THE MAVERICK EFFECT AI CHALLENGE

Figure 4 Certificate of THE MAVERICK EFFECT AI CHALLENGE

Project Pulse

ORIGINALITY REPORT

6%
SIMILARITY INDEX

PRIMARY SOURCES

1	www.caedes.net Internet	50 words — 2%
2	www.coursehero.com Internet	45 words — 2%
3	slidetodoc.com Internet	16 words — 1%
4	ar.scribd.com Internet	11 words — < 1%
5	www.invensis.net Internet	11 words — < 1%
6	blog.profound-tech.com Internet	10 words — < 1%
7	C.E. Dickerson, Siyuan Ji. "Essential Architecture and Principles of Systems Engineering", CRC Press, 2021 Publications	8 words — < 1%

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EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	OFF