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Title: Project Management System

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

Abstract

This report is all about the interim report for the final year project, which is based on a" project management system", and it includes features for the company to manage the project, employee, and their client. Many projects have miserably failed and proven to be extremely costly to the organizations involved. I intend to create a project management system to assist project managers and team members in more successfully managing their projects and reducing the chances of failure.

The main purpose of this report is to summarize the system's development progress so that it can be determined whether or not it can be completed on time. It's an analysis of efficacy report. The issues mentioned in the survey and their solutions are summarized in this report. This document also includes the research undertaken as part of the decision to use the RUP methodology for this project, as well as the rationale for doing so. It also includes a software requirement specification that describes numerous software requirements, including functional and non-functional requirements, as well as the system's viability. This report represents the entire body of work done prior to the creation of the project. It provides evaluations using a variety of methods and similar projects to this one.

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1. Introduction

1.1. Introduction to the topic

A project management system is a set of processes and technology that help company plan, organize, and schedule everything that goes into making a project successful. Project management involves splitting a project into smaller tasks and subtasks, allocating resources to tasks, communicating project status with clients and stakeholders, and other activities that determine the project's overall success. (Kashyap, 2019)

A company may be working on many projects at the same time, and a multi-level development plan may involve input from a number of employee or teams, demanding the use of a strong project management system. Many projects have failed badly and known to be highly costly to the organizations involved. The project management system was developed to overcome the issues that existed in the previous manual method. This program is supported in order to eliminate and, in certain situations, decrease the difficulties encountered by the existing system. Furthermore, this system is developed for the company's essential requirement to carry out activities in a smooth and effective manner.

“project management system” is designed to assist in the management of a company's multiple projects. It provides for easy monitoring and tracking of the organization's multiple projects and the individuals allocated to them. This project contains a list of tasks given to company employee and the employee who are working on each project. This software system makes project management and activity tracking a simple. An administrator has complete authority over the system, allowing him to add and remove projects as needed. Set start and finish dates for those projects, assign individuals to work on them, and keep track of their progress. It is a useful software system for managing these tasks in a business or collegiate setting.

1.2. Introduction statement

As we know most of the company facing the many problem when they want to manage their project. Today's project management is a difficult field of work for every company, just because a manger is great and capable of managing individual project does not mean they will be able to effectively manage the whole project. Here are some of the most difficult project management issues that companies face while working on many projects at the same time.

- Project overlapping are usually responsible for the major inefficiencies - money, time, and other resources. When multiple project overlap, they hamper each other and lose potential benefits.
- Delayed projects create uncertainty, delay the time when companies can begin to profit from their businesses, affect accurate payback estimates, and disrupt projected long-term return on investment.
- Communication is essential to completing the project, but team members often complain that providing regular updates and holding meetings is a waste of time. Likewise, managers cannot be expected to save all reports for all teams.
- The client had no idea how far his project was going. So many customers will not give the project next time

1.3. Project as a solution

Since there are a lot of difficulties while manage many project , These problem can be solved by using the site I will create. This project is for company who need to manage their multiple project quickly. Using this web app, Customers can easily see how far his project was going. The company manager can easily hand over the project to the workers using this system. This system does not allow projects to overlap and projects can be completed easily on time. The system also allows customers to see when and how much their project has been completed, as well as pay customers the remaining amount through the system.

1.4. Aims and Objectives

The main aim on the project for company to easy to manage company project . our main goals are to assist manager to manage company all project. This web app objectives are include the successful development of project procedures for initiation, planning, implementation, regulation, and completion, as well as aligning the project team to meet all agreed targets within scope, time, and quality . The major objectives of the project management system are to keep details of employee, assignment project, project milestone. It keeps all the information about employees, client, and project. The goal of project is to create a system that will reduce the amount of manual effort involved in managing the assignment project, employee. Also this project provide a reliable, secure , efficient and user-friendly environment for company and customer .

The Project has a various of objectives, which is mentioned below:

- to make it easy to manage project for company
- to keeps details of employee, client, assignment project
- to reduce the manual work for managing employee, client and project
- to customer see how far project was going.
- to see which projects have been assigned for employees

2. Background

2.1. About the Client/ end user

The main purpose of the project management system is to manage projects for organizations who find it difficult to manage several projects and wish to avoid the problems that arise with the manual or traditional methods. Project management systems are particularly useful for managing projects, employees, and services online from the perspective of the end user. I completed a survey form, visited many companies, and met with employees and clients to learn about project management issues and desires. First, I gathered various forms of problems from the company, such as managing and controlling projects using manual or traditional processes is a very tedious job, and also a problem from the client, who does not know what percentage of the work was completed, who pay the due amount and would have to visit the company to find out and due payments. I was able to gather the requirements for my project management system, which may help the organization and its clients solve their difficulties.

2.2. Understanding the solution

Some The survey's issues have encouraged me to create a system to solve each of them, as shown below:

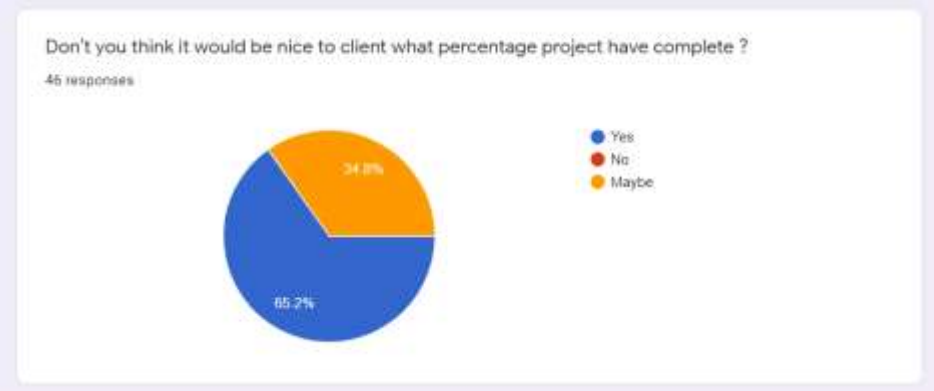

Figure 1- opinion of project tracking features

This implementation of project tracking features to client in the web system can solve the problem of having show the what percentage project have complete.

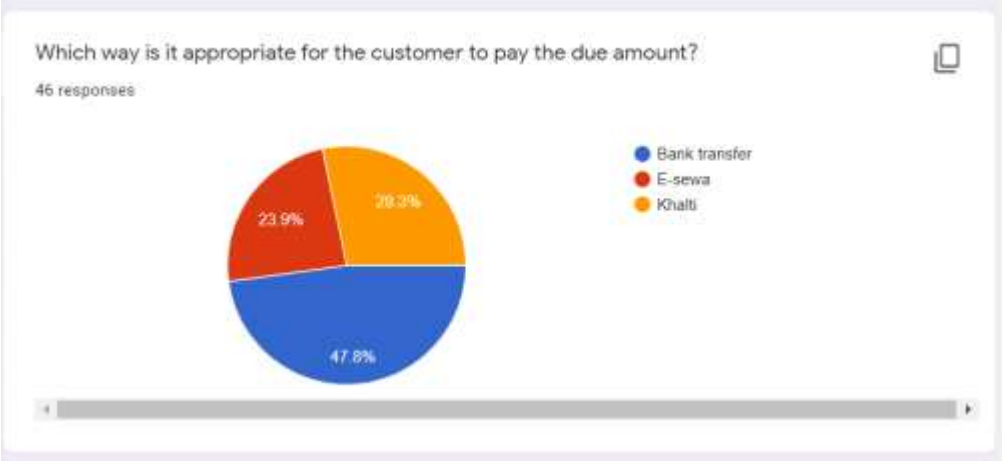

Figure 2- To know which way appropriate to due payment for client

This payments features in the system can the solve the problem of having client to visit company.

Figure 3- Data showing people appropriate to manage project

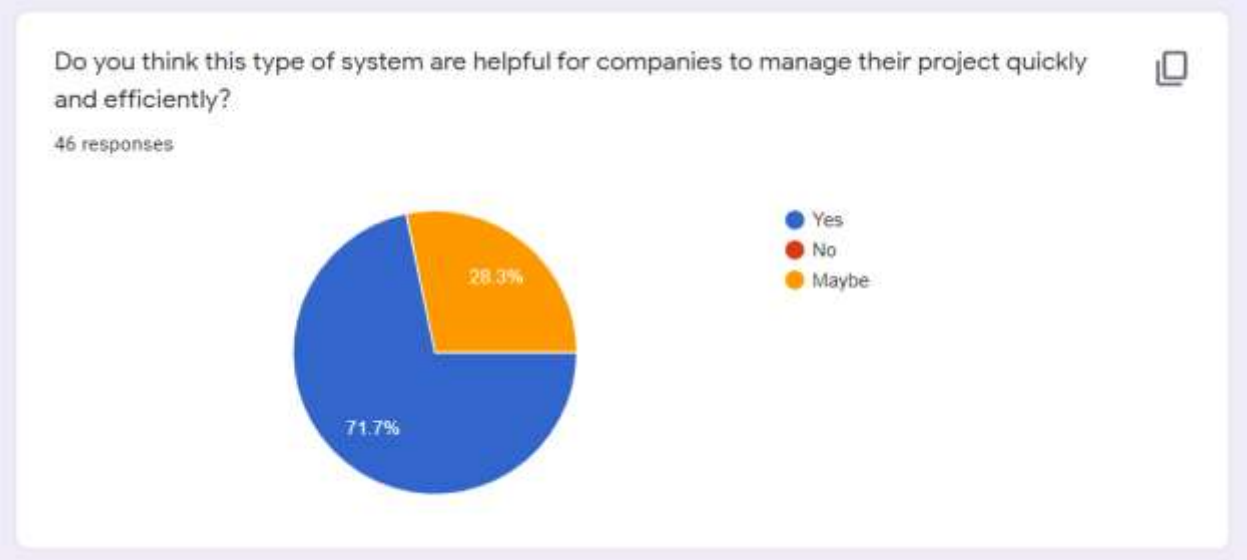

Figure 4- Data showing to know this system helpful or not l for company manage their project

The implementation of in the application can solve the problem of take managing way for organization .

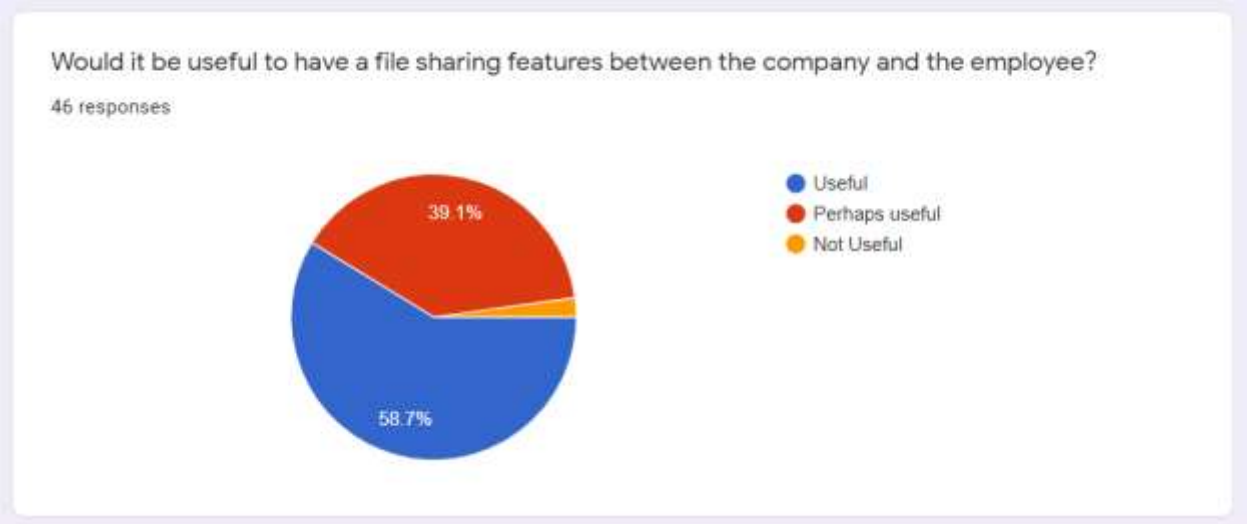

Figure 5- data showing the people interested in file sharing features

This implementation of file sharing features to company manger and employee in the web system can solve the problem of employee to take assigned project details.

2.3. Review of similar system/app/solution

Regarding the construction of the application, I done research on other online systems that are similar to our project. I've taken several of those systems' design concepts and functionality. The below are some of the existing systems.

2.3.1. Trello

Trello is a team project management program that allows you to track team projects, highlight ongoing tasks, see who they're allocated to, and measure progress toward completion.Trello's workflow visualization is based on Kanban project board concepts, giving managers and team members a straightforward perspective of a project from start to end. (Hassell, 2020)

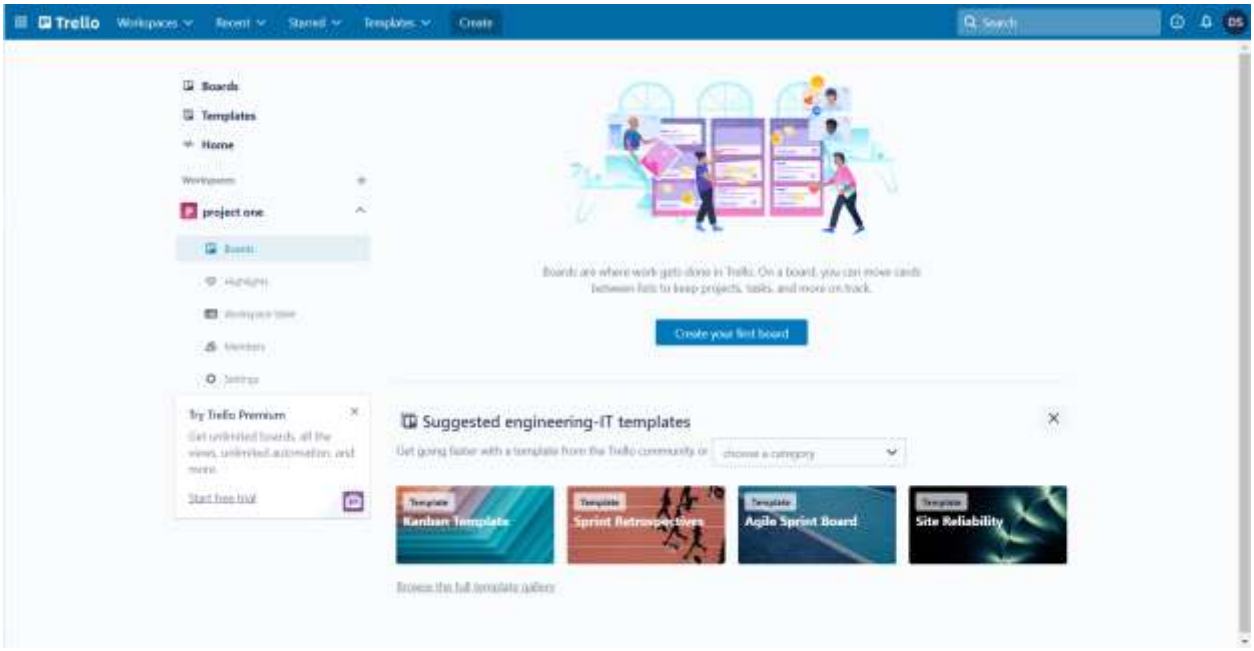

Figure 6- Trello system UI

2.3.2. Paymo

Paymo is an online project management system that focuses on time tracking, invoicing, and billing in ways that other tools don't. It's midrange software, which means it's more sturdy than low-cost small-business software but not as capable as enterprise-grade programs that can handle hundreds of projects and thousands of workers. The app's focus on invoicing is evident and noticeable throughout. Paymo is simple to understand and includes a few great features, such as the option to adjust user permissions. (Duffy, 2020)

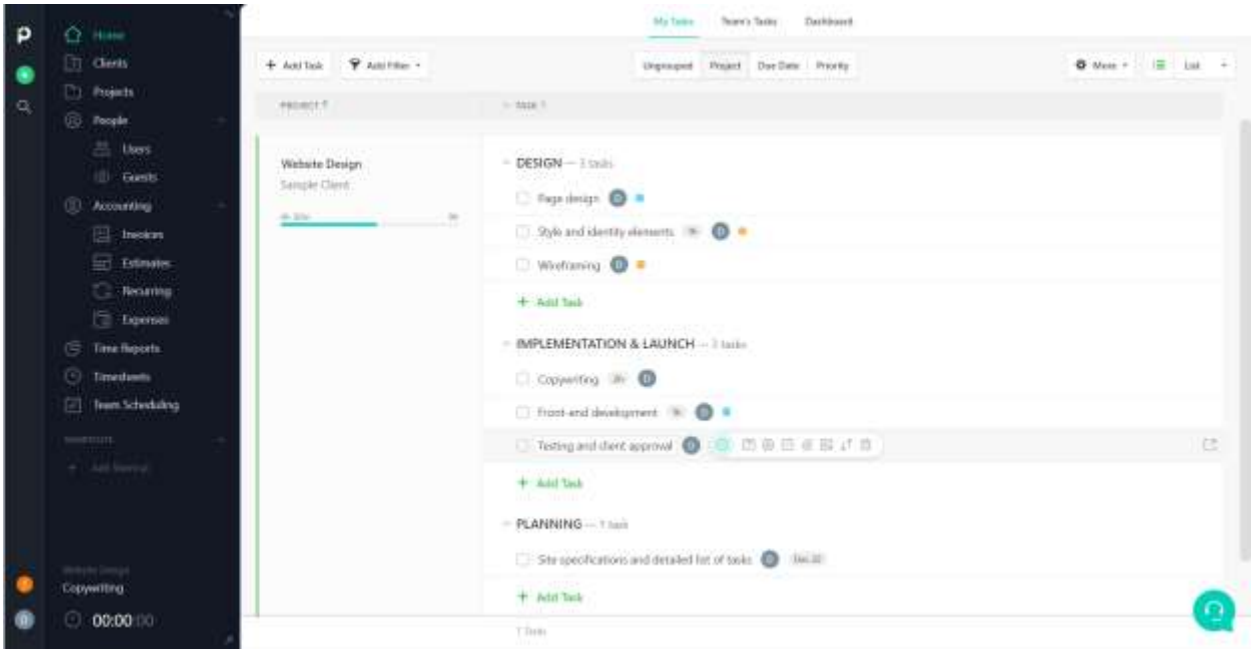

Figure 7- Paymo system UI

2.3.3. Workzone

Workzone software is a cloud-based project management program that offers teams and organizations a flexible platform for monitoring various projects and activities. Users may quickly move from a high-level view of projects to connected interdependent tasks with detailed information on assignees, due dates, attachments, comments, and approvals. Workzone not only improves visibility, but it also encourages cooperation by sending out automated reminders and notifications to keep projects on track and users on the same page. (workzone, 2019)

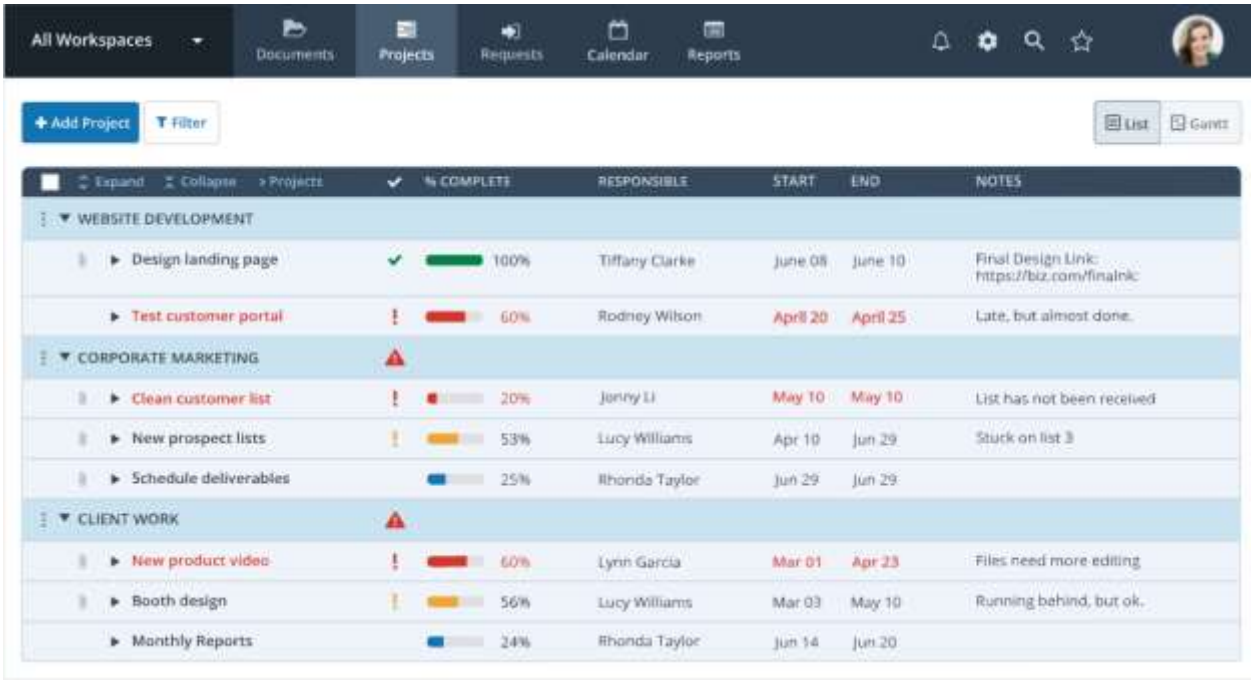

Figure 8- workzone system UI

2.3.4. Teamwork

Teamwork is a project management tool designed for teams who need to keep track of various clients and projects in one place. For greater automation, efficiency, and profitability, our platform allows client services teams to monitor, manage, and invoice their tasks. Teamwork, which was founded in 2007, has made a reputation for itself in today's competitive project management environment. (softwareadvice, 2019)

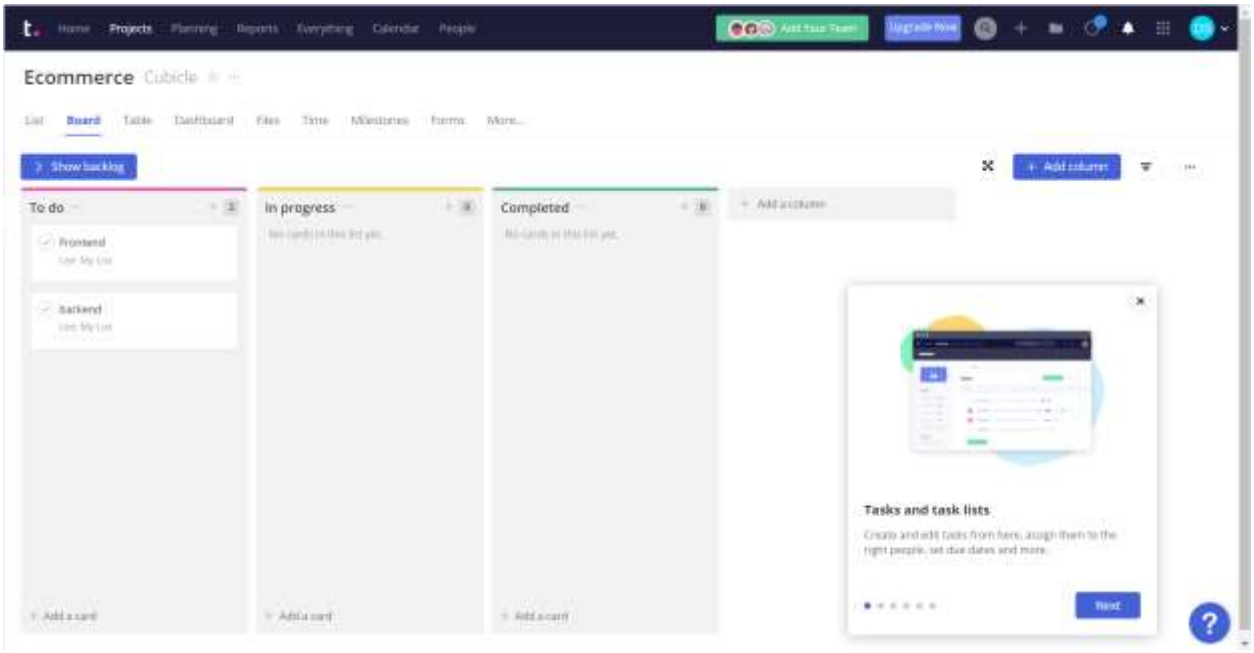

Figure 9- Teamwork System UI

Critical analysis

There are several project management systems. All of the systems differ based on project management methodologies are used to project management. All of them system have different features and functionality to helping manage project. After researching several online platforms, I discovered that the majority of them are mainly used by organization members. From the client's perspective, they do not have access to see what percent of the job has been completed, nor do they have access to the payments system

2.4. Analysis and comparison with similar system

Name of the Similar web app/ system	Positive analysis	Negative analysis	Feature taken or can consider in my project
1. Trello	It can be used by everyone because it was created to be basic and straightforward to use. At first sight, it's clear how the program may be operated in a way that even a beginner can understand.	Difficult to handle big project	Attractive user interface and easy to handle with big project , also access to client for see how much project has completed
2. paymo	Using various charts provides project information such as the start date, length, and completion date for each project.	does not allow to start the timer for many projects at the same time.	Set Project milestone, allow to start the timer for many project at the same time features in my system.
3. workzone	To-do lists, share file stored in the cloud and It features a highly attractive user interface that new users would find extremely easy to use.	Lower storage limit and expensive for small organization	Feature for Individual to-do lists keep each individual focused on what has to be accomplished.
4. teamwork	Easy to assigning people to a project and monitoring the progress and also can file sharing with them.	It might be too expensive for small organizations.	Feature of file sharing to between employee and organization

Table 1: Analysis and comparison with a comparable system

2.5. Review of technical aspects

This section of the report describes the evaluation of various software and hardware technologies that have been or will be implemented in the development of the project management system application proposed by this project.

2.5.1. Client side language

Html

HTML was designed with the goal of defining the structure of documents such as headings, paragraphs, lists, and so on, in order to make it easier for researchers to share scientific data. Html used in this project for build the whole structure of project management system.

(AryanVerma, 2021)

CSS

CSS is a basic design language that works to make the process of creating web pages attractive as easy as possible. Using css I can control the color, position, animation of the text, fonts, the spacing between paragraphs, layout designs, what background images or color are used, variable in display form various devices and scree size as well a variety of other effects.

(Singh, 2021)

JS

Javascript is a scripting language that is lightweight, cross platform and interpreted. it is a client-side scripting language with a lot of capability. JavaScript is mostly used to improve a user's engagement with a webpage. It used in this project for adding interctive behavior to web system like show or hide more information with click of button, display animation on a website. It used in this project for front end web development and backend development.

(Ghosh, 2021)

2.5.2. Server-side language

Node js

Node.js is a JavaScript runtime environment that is open-source and cross-platform. Outside of the browser, Node.js operates the V8 JavaScript engine, which is at the heart of Google Chrome. As a result, Node.js is extremely fast. Without establishing a new thread for each request, a Node.js program operates in a single process. For this project I have used this node js to backend code of my project.

(Tutorialspoint, 2019)

2.5.3. Framework

BOOTSTRAP

Bootstrap is a tool for building responsive websites and web apps that is free and open-source. It is the most widely used HTML, CSS, and JavaScript framework for creating mobile-first, responsive websites. (Geeks for geeks , 2021) For this web system, I have used this libraries to create responsive system.

Express js

Express is a lightweight and flexible Node.js web application framework that offers a complete range of functionality for web and mobile apps. The Node.js foundation created and maintains this open source framework. (tutorialspoint, 2018)

2.5.4. IDE

VISUAL STUDIO CODE

Visual Studio Code is a lightweight yet capable source code editor for Windows, MacOS, and Linux that runs on your desktop. It contains built-in support for JavaScript, TypeScript, and Node.js, as well as a large ecosystem of extensions for additional languages and runtimes (such as C++, C#, Java, Python, PHP, and Go, such as .Net and Unity). In order to developed this web app project , I used this code editor, the debug feature of the command palette provided a lot of help while writing code.

(Uzayr, 2021)

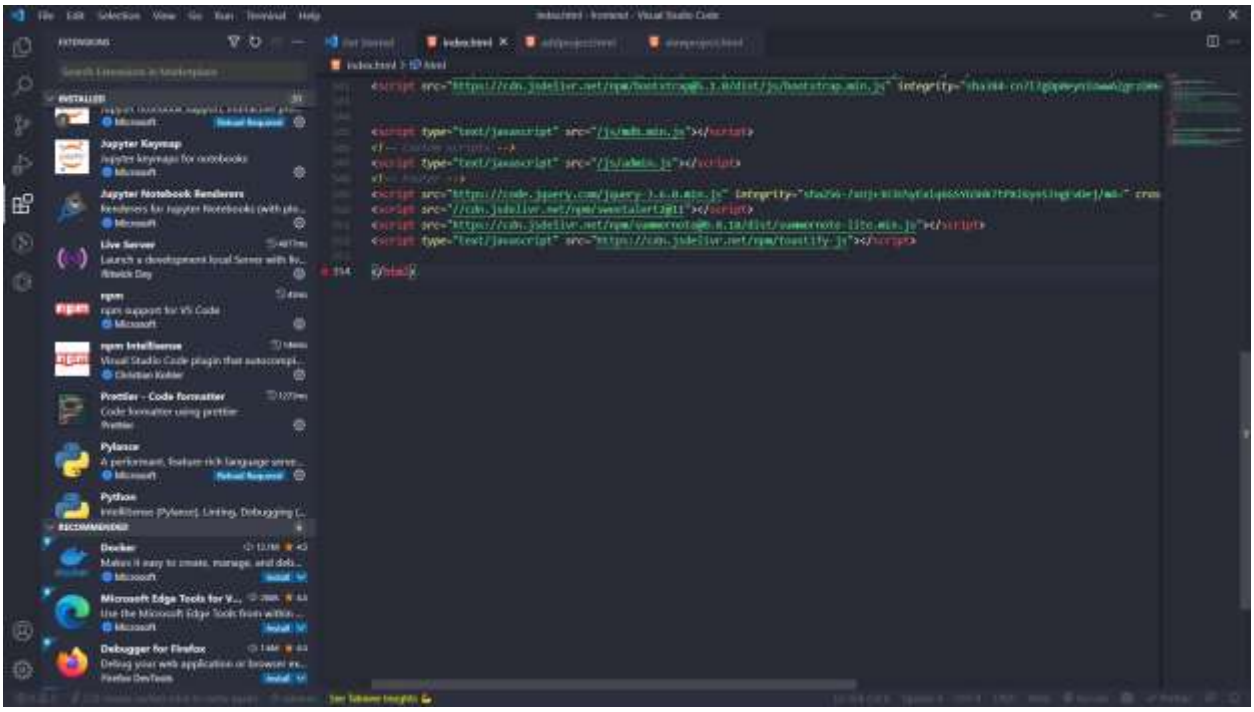

Figure 10- Visual studio code editor

2.5.5. LIBRARIES

JQUERY

jQuery is a feature-rich, fast, and compact JavaScript library. With an easy-to-use API that works across a variety of browsers, it simplifies HTML document navigation and manipulation, event handling, animation, and Ajax. (JQuery, 2021)

Ajax

Ajax is a client-side script that communicates with a server or database without requiring a postback or a page refresh. It refers to the usage of XmlHttpRequest objects to communicate with a web server dynamically using JavaScript in a more strictly defined meaning. (seguetech, 2019) It used in my system for allows web pages to be uptated asnchronouly by exchanging minimal amount of data with the server side.

2.5.6. API

Online Payment Gateway

The online payments gateway enables merchants to obtain payment information quickly and efficiently with little involvement by the internet. It used im my system for client to due payment thought online.

3. Development

3.1. Approach/ Methodology

A methodology divides software development activity into different stages and activities in order to improve planning and management. It's usually considered of as a part of the system development life cycle. Several documents, journals, and websites were explored during the research process to find the best methodology for this project, and the following methodology was discovered.

3.2. Consideration Methodology

3.2.1. Agile methodology

Agile is a software development methodology that is iterative and responsive. High levels of communication and cooperation, quick and effective reactions to change, adaptable planning, and continuous improvement are all characteristics of Agile development. It is one of the most reliable and efficient methods for turning a business need into a software solution Agile teams build applications in small steps instead of deploying the finished product all at once at the end of the development cycle. This allows for frequent testing and gives end users, stakeholders, and the company the opportunity to provide feedback on the work in progress. It's common for business and user needs to evolve as development goes on, and Agile ensures that teams are flexible and able to respond to changes. (mendix, 2018)

Advantage of agile methodology

- the product is developed quickly and provide regularly
- flexibility and adaptivity
- reduced risks
- higher customer satisfaction

Disadvantages of agile methodology

- Not suitable for small-scale developmental projects.
- An expert project member will make critical decision
- Lack of necessary documentation
- Compared to other types of development, the expense of development is more.

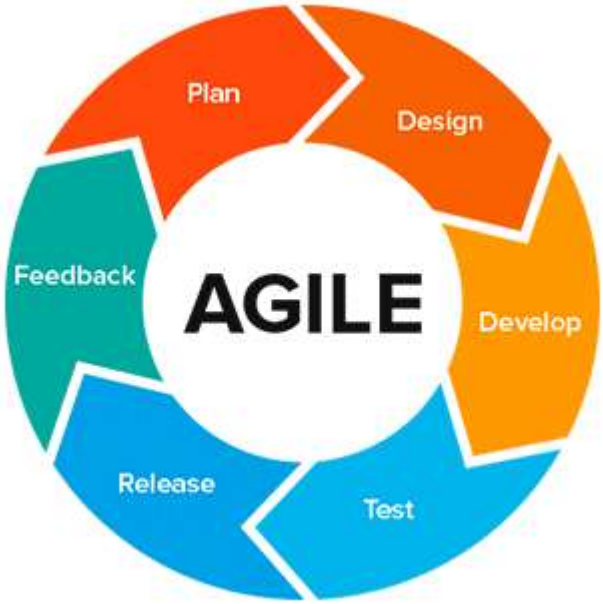

Figure 11 - Agile methodology lifecycle

3.2.2. EVOLUTIONARY PROTOTYPE MODEL

The prototyping model is a systems development process in which a prototype is produced, tested, and changed as needed until an acceptable result is reached, from which the entire system or product may be developed. The primary goal of the prototype approach is to meet the requirements of the client. When not all of the project needs are understood in detail ahead of time, this paradigm works well. Between the engineers and the users, it is an iterative, trial-and-error process. The following are the six stages of the SDLC for the Prototyping Model:

I. Gathering and analyzing requirements
II. Quick Design
III. Build prototype
IV. User evaluation
V. Refining prototype
VI. Implement and maintain

Advantages of prototyping model

- Customers get an early say in the product, which boosts customer satisfaction.
- Errors and missing functionality are easily identified.
- Prototypes can be utilized in more complex projects in the future.
- It encourages teamwork and adaptable design techniques.
- It assists both developers and users in gaining a better understanding of the system.

Disadvantages of prototyping model

- Because to the constantly changing client needs, it has poor documentation.
- After reviewing an early prototype, customers may demand that the final product be supplied as quickly and efficiently as possible.
- There may be an excessive amount of variety in requirements.

(Lewis, 2018)

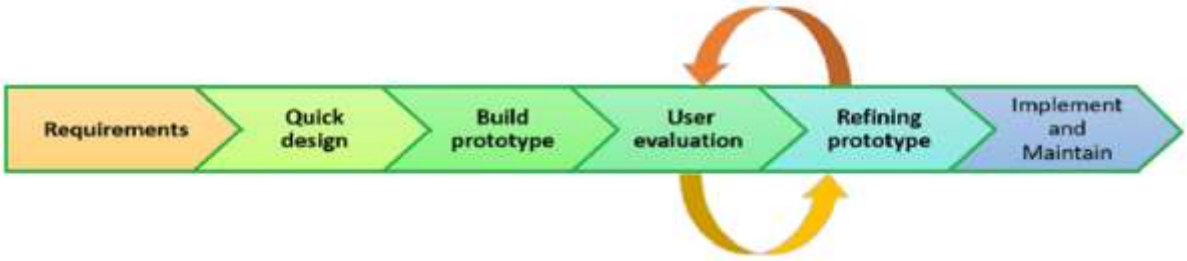

Figure 12- lifecycle of an evolutionary protype

PREFERED MTHODOLOGY

3.2.3. RUP Methodology

RUP is a software development process developed by IBM's Rational division.it provides a structured way to allocating tasks and responsibilities. RUP splits the development process into four phases: business modeling, analysis and design, implementation, testing, and deployment. RUP's main goal is to provide high-quality software on a predictable budget and schedule. If necessary, each of the life cycle phases can be repeated until the major objectives are achieved. The project is completed once the transition step is successfully completed. The Rational Unified Process development team interacts closely with customers, partners, Rational product groups, and Rational's consultant organization to ensure that the process is continually updated and modified to reflect current experiences and emerging and established best practice. (master2teach, 2019)

Advantage of RUP Methodology

- This is a complete approach in itself, with a focus on accurate documentation
- Due to the reuse of components, the development time is reduced.
- RUP methodology emphasizes accurate documentation.
- This methodology enhance team productivity.

Disadvantages of RUP Methodology

- Because there are several steps in the workflow, it is a difficult approach to implement.
- During the testing phases, the integration in development process might have a negative influence on certain more fundamental activities.

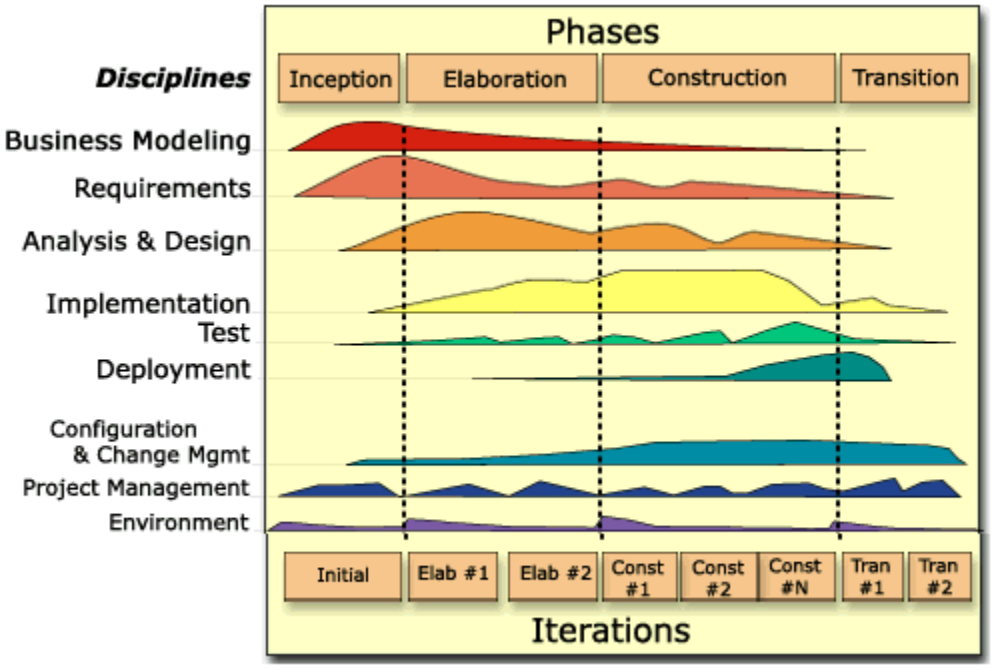

Figure 13- workflow of RUP

3.3. Justification for selecting or rejecting of methodology Methodology

3.3.1. Justification for rejecting agile

Business scenario	Justification
The project's technical components and operating processes are unfamiliar to the project's user.	To structure and control the project's components, the agile method demands the usage of a highly skilled user.
The client is a member of a well-known organization. As a result, he'll be focused on public service.	In order to move on to the next step of the development process, the agile approach demands regular customer evaluations and choices. As a result of the delay in client engagement, project execution will be delayed, and the projected cost will be surpassed.

Table 2- justification for rejecting the agile methodology

3.3.2. Justification for REJECTING EVOLUTIONRY PROTOTYPE

Project scenario	Justification
The requirements and other information are gathered at the start of the project.	An evolving prototype method is especially effective when requirements aren't specified.
At the start of the project, the appropriate diagrammatical solution and project design are created.	In evolutionary prototypes, work related to development, rather than design, is prioritized. As a result, this strategy places a low value on documentation.
The project's deadline has been set, and the budget has been determined.	The project's completion date is unclear for the evolving prototype. As a result, it is unsuitable for projects with a set deadline.

Table 3- Justification for rejecting the evolutionary prototype methodology

Business scenario	Justification
The client is involved in the delivery of services as well as organizational activities.	Before going on to the next iteration, the customer should validate the system prototype. There was limited engagement and meeting due to the client's demanding schedule. As a result, the system's progress is delayed.

Table 4- Justification for rejecting the evolutionary prototype methodology

3.3.3. Justification for selecting RUP METHHODOLOGY

Project scenario	Justification
The project has been designed to be implemented in an external, internal environment.	The RUP technique provides considerable assist in finding and removing risk factors early in the development lifecycle.
Software components, such as APIs and other components, are included in the project.	The RUP methodology assists software development initiatives. As a result, by following this strategy, I should be able to find a helpful solution for integrating the software.
Business Scenario	**Justification**
A non-technical person is referred to as a client. As a result, I want to provide extensive documentation to the system.	Work-related tasks such as developing and documenting are emphasized in the RUP technique. This will assist a nontechnical person in understanding the system's nature and principles of function.

Table 5- Justification for accepting the RUP methodology

3.4. Phases of RUP METHODOLOGY

Phases	Task going to Performed by me in each stage
Inception	During this phase, I will carry out responsibilities for the entire project's feasibility analysis, information collection, research, and risk factor analysis.
Elaboration	In the second phase of RUP, I'll gather software interfaces and templates and develop diagrammatical solutions to issues such as UML, class diagrams, case diagrams, milestone charts, and block diagrams with documentation.
Construction	During this phase, I will create the web app and conduct testing.
Transition	This is the final step of the Rup methodology, where I will collect feedback and offer end-users access to the app, after which I will make final improvements and upgrades to the app depending on their feedback.

Table 6- Task going to performed in each stage of RUP Methodology

4. Progress

4.1. Progress till date

	Tasks	Progress	Action performs to complete tasks.
Inception phase	Project topic Approval.	Completed	Research on appropriate topics and consult with the supervisor.
	Project Conceptualization.	Completed	Technical aspects were explored, as well as research towards a similar system.
	Determination of technical requirement.	Completed	Prepared the document including various types of software specifications.
	Risk Analysis	Completed	Researched at a similar system and found out what the major issues were.
	Proposal Approval	Completed	Prepared the proposal under the guidance of Module Leader.

Table 7- Task Completed in the inception phase

	Tasks	Progress	Action performs to complete tasks.
Elaboration Phase	Preparation of Vision Documentation.	Completed	Prepared project documentation, which included all of the required requirements for my project.
	Designing the Use Case, and wireframes.	Completed	Using various type of tolls such as draw.io , figma and adobe xd. I researched and analyzed the project's workflow and provided it as diagrammatical solutions.
	Collecting system's requirements like API, framework and libraries which is suitable for my project.	Completed	Researched on website and watched You Tube Videos, take suggestion API, libraries from my module leader and other teacher.

Table 8- Task methodology in Elaboration phase

4.2. Analysis of progress

This section of the report includes the analysis used to understand more about the present state of our project and how it is progressing. I've completed most of the major factors gathering and system development work. I was unable to map my process depending on the Gantt chart's scheduled date. The following are some of the hidden reasons behind the delay:

Influence by project related activities

- **Delay in gathering requirements**

  Since the project is completely new to me, and I have never done a project for commercial or academic purposes, and I don't have a thorough understanding of the various APIs and tools that I will be using in my project, I have conducted extensive research from the ground up and informed with my supervisor, which has resulted in a delay in the development process.

- **Gaining knowledge and experience in new technological aspects**

  A couple of the project's technical aspects, such as connecting a SQL database in node JS, Using different API and using the node Js framework and different type of API, are difficult for me. As a result, in order to have a thorough grasp of these topics, I undertook extensive study from the start, delaying the development process.

External entities' influence

- **Other Academic Modules**

  In terms of skill progression, the other academic courses are also equivalent. As a result, adding activities and assignments that are linked to other modules causes the system's progress to be delayed.

Preventive Approach

Restructuring the Gantt Chart , Work Break down Structure and Milestone

To finish my project on schedule, I need to reorganize my Gantt Chart and work breakdown structure to ensure proper time management.

Gannt Chart

Previous Gantt Chart

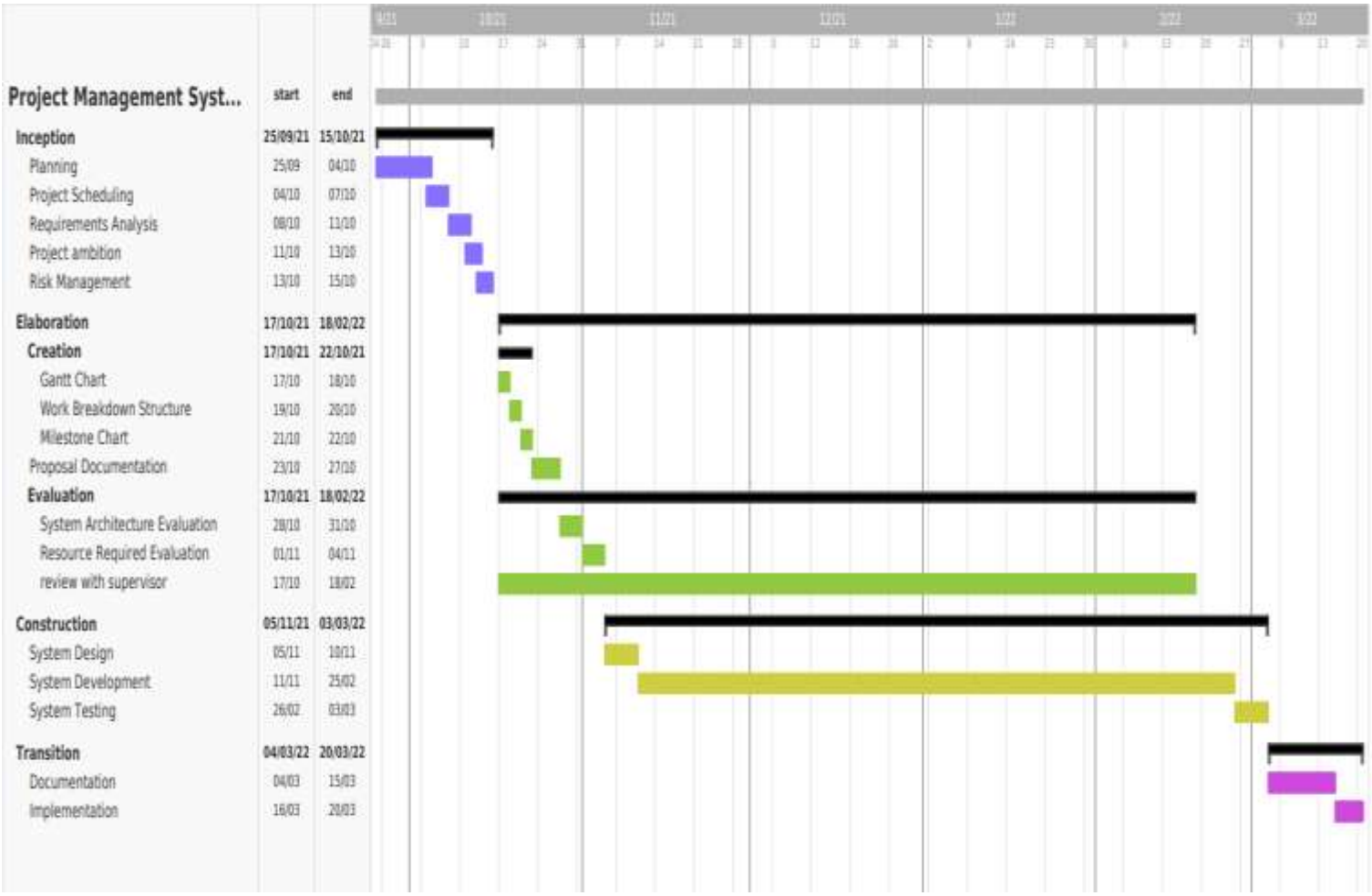

Figure 14 - Previous Gantt chart of my project

After Restructuring the Gantt Chart,

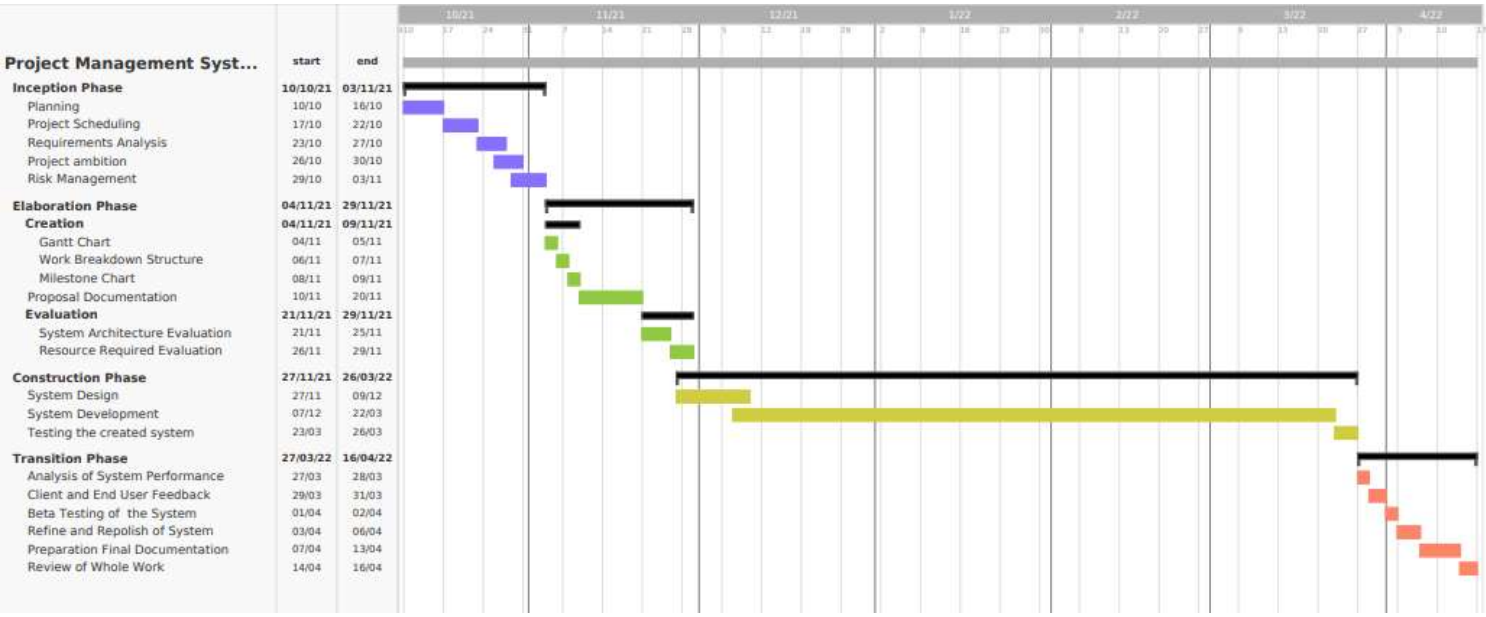

Figure 15- Restructuring Gantt Chart

Work-break down

Previous work-breakdown structure

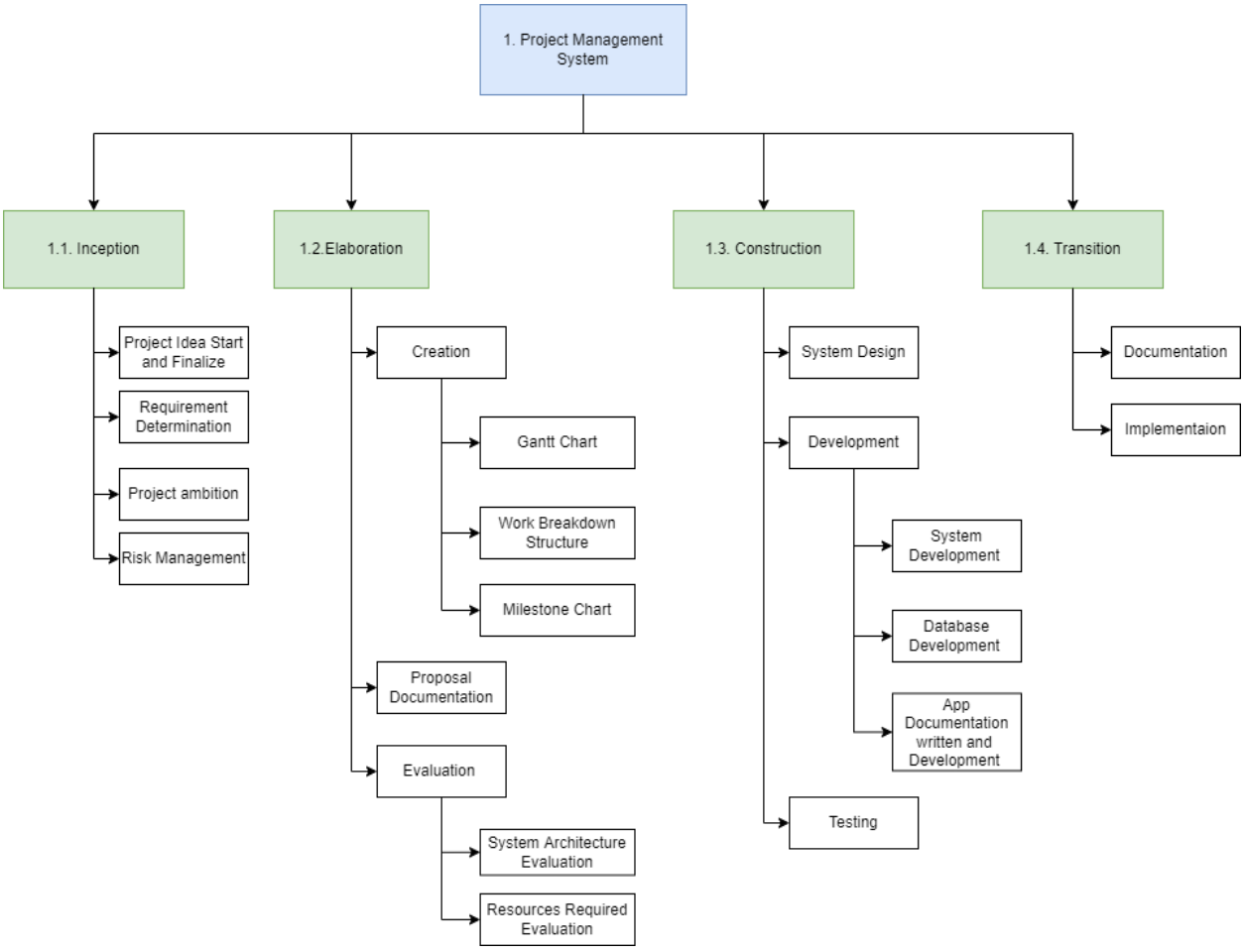

Figure 16- Previous work breakdown structure

After Restructuring the

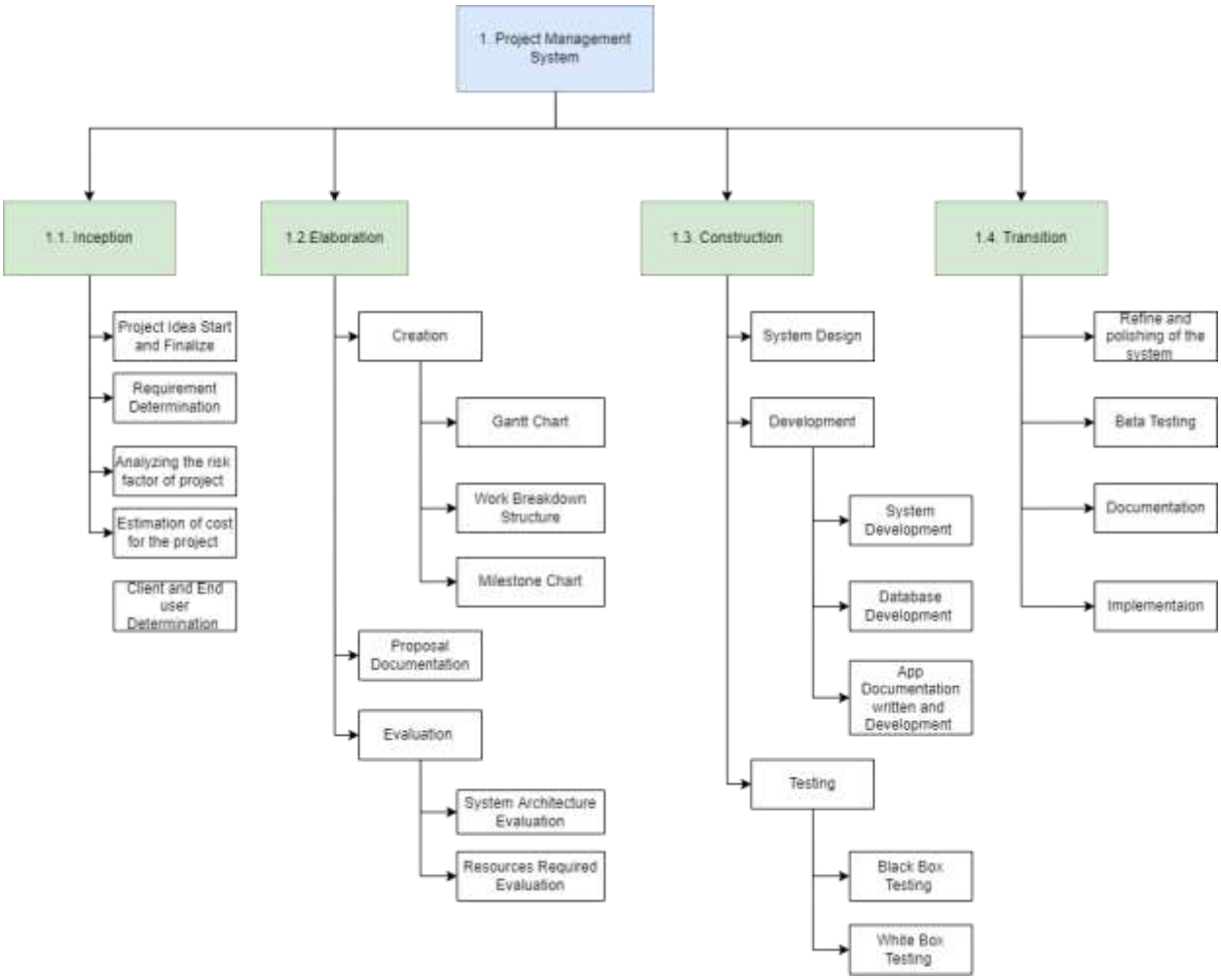

Figure 17- final work breakdown structure

Milestones chart

Previous milestones chart

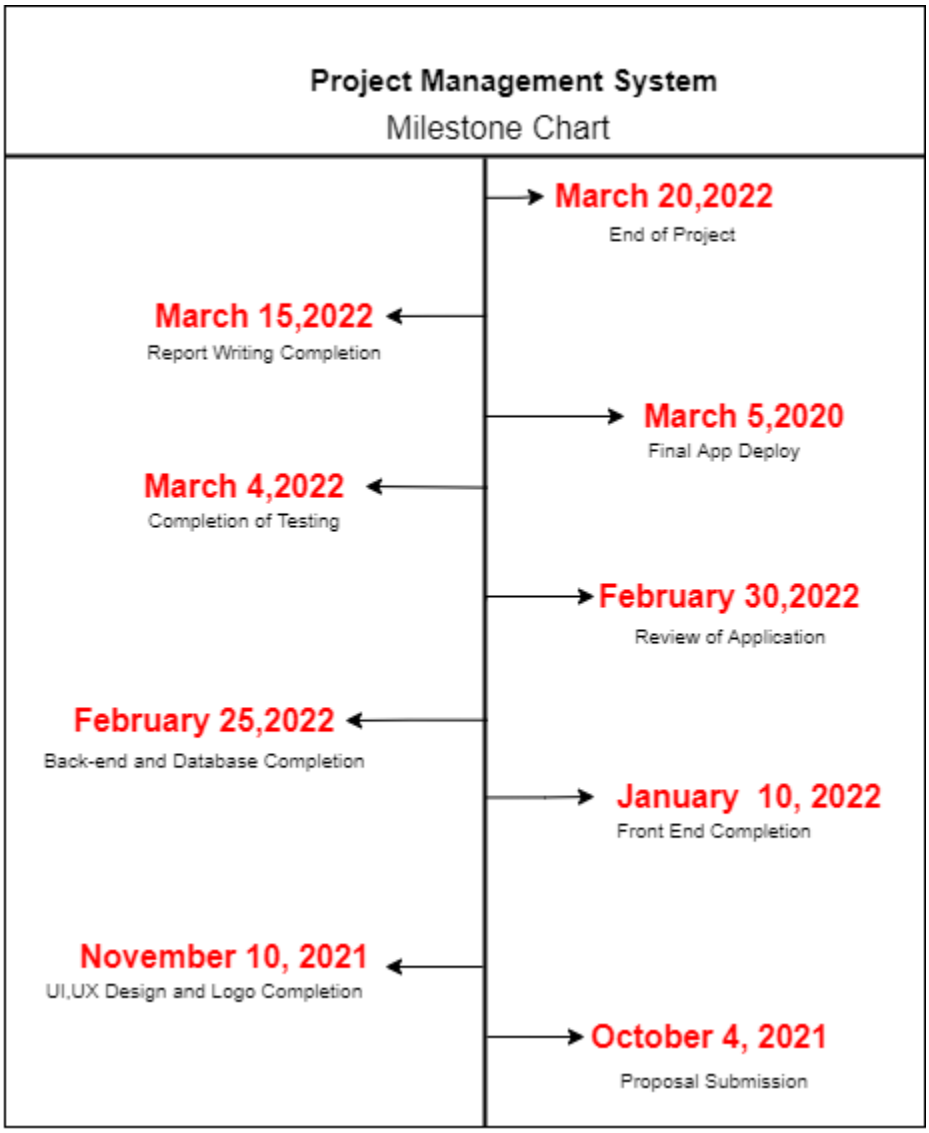

Figure 18- previous milestone chart

After Restructuring the Milestone,

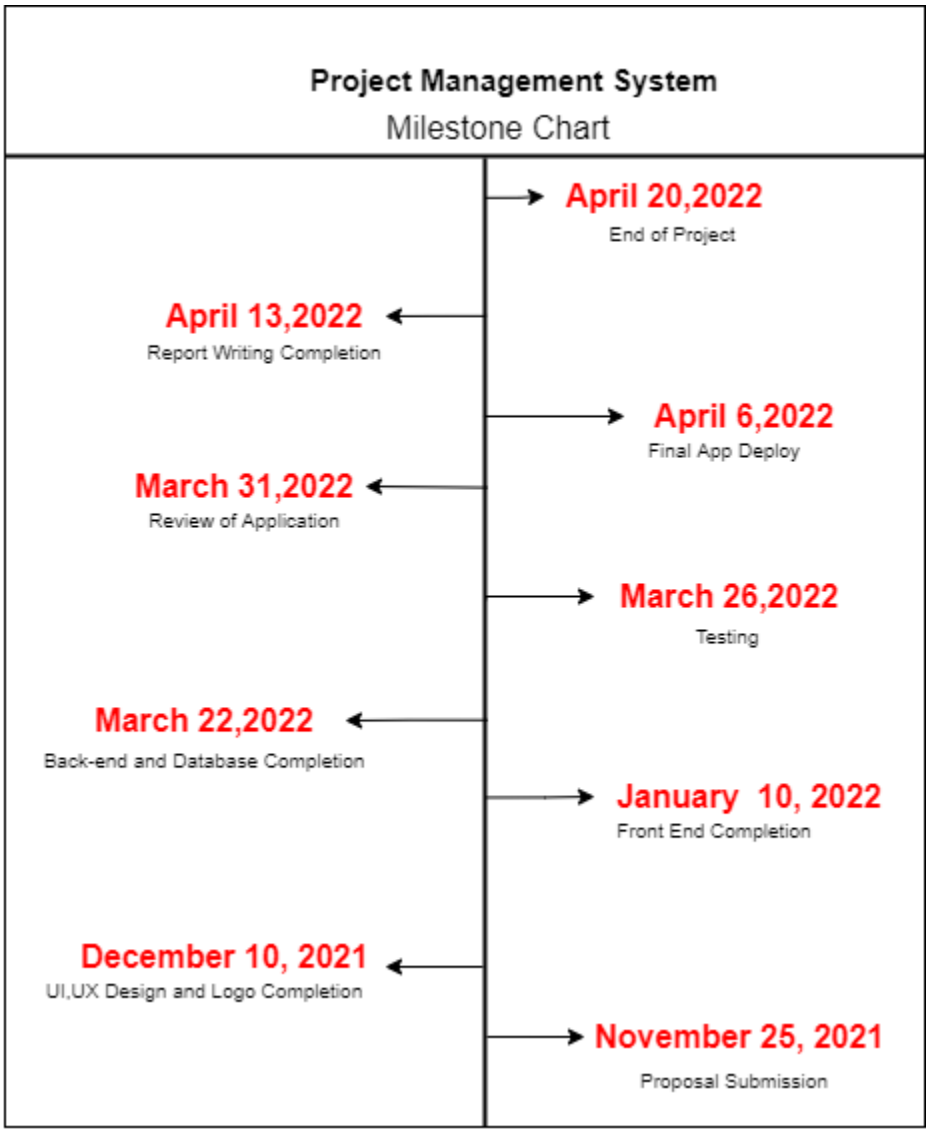

Figure 19- final Milestone Chart

5. FUTURE WORK

Since the start of the project, most sections of the RUP development lifecycle, such as inception and elaboration, have been completed. Therefore, the remaining thanks that mush be completer in the next iteration of the development lifecycle are as follows:

Construction Phase

This is the longest stage as compared to other stages in the RUP Development lifecycle.. The goal of the construction phase is to describe the remaining needs and complete the system's development according to the prioritized architecture. The construction phase is comparable to a manufacturing process in that it emphasizes resource management and operations control in order to maximize costs, timelines, and quality. As a result, the management viewpoint changes from the genesis and elaboration phases to the building and transition stages, from the production of intellectual property to the development of deployable products.

Several features must be built and developed throughout time in order to meet the time limitations in this phase. In this phase, I have planned to finish the general UI design of all pages of this application with static logic and register, as well as build functionality for managing projects, assigning projects, seeing how far projects have progressed, and calculating payment due amounts for company employee and client . In this phase, I'll finish the general analysis, design, programming, and testing of all project-related functions.

Transaction phase

This is the final phase of the RUP approach. After finishing the entire project or system, I will analyze the system's performance using various testing methods such as beta and alpha testing. I'll collect feedback from clients/end user and respond to any queries they may have. Based on the results of testing and client/end-user feedback, I will optimize the system's performance in this step.

6. Conclusion

Project Management Systems (PMS) are supposed to assist project managers and team members in more successfully managing their projects and reducing the chances of failure. Project management systems are becoming increasingly useful in a wide variety of companies. As a result, a good project management system is essential for delivering stable, secure, and high success in project to companies. Project management system assist businesses in saving time, money, and effort spent on manually managing their work. Managers can simply organize, manage, collaborate, and share resources among team members, whether they work remotely or on-site.

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8. APPENDICES

Appendix- 1 Suvey

Result of survey

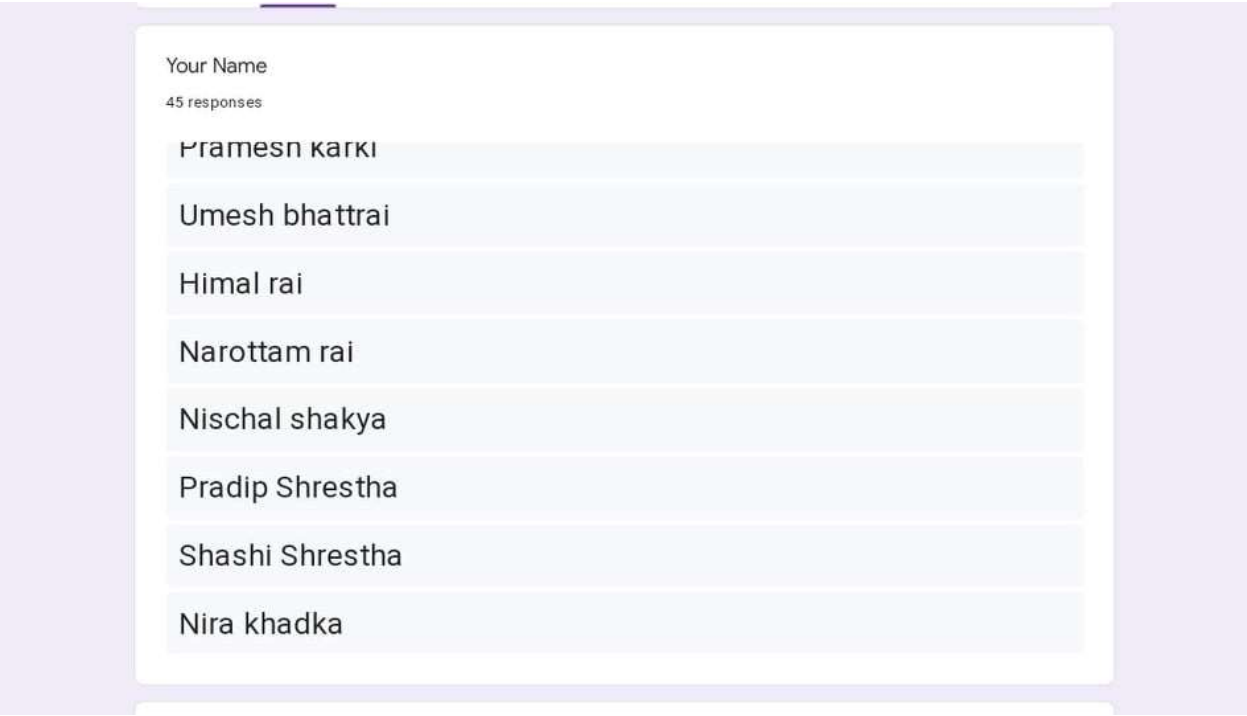

Figure 20- Survey Response

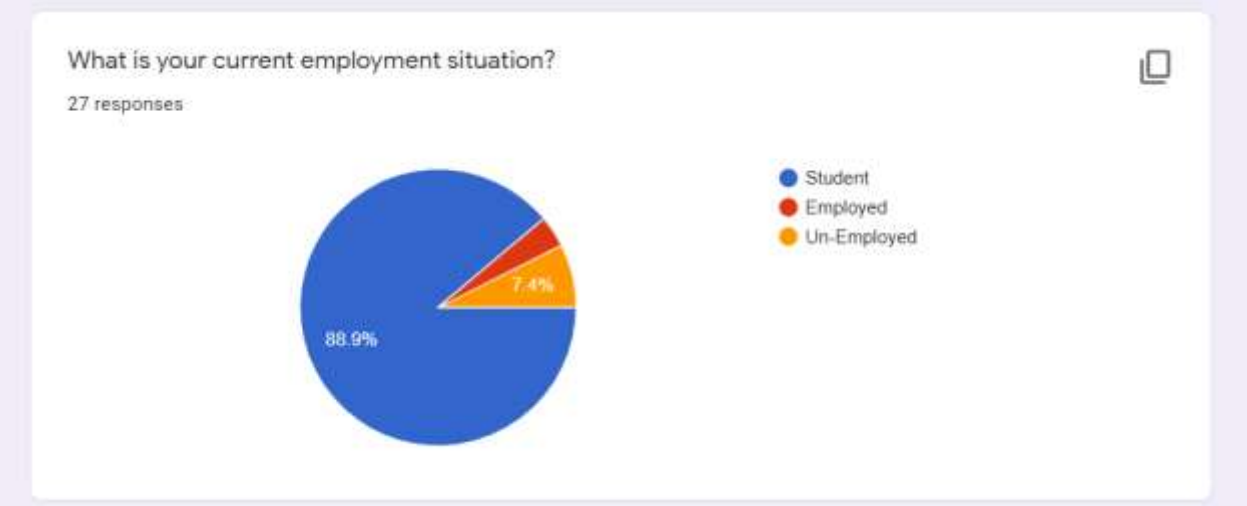

Figure 21- Survey Question 1

In the pre-survey, people were asked about the current employment situation, 88.9% participants were students, 7.4% unemployed and only 3.7% were employed.

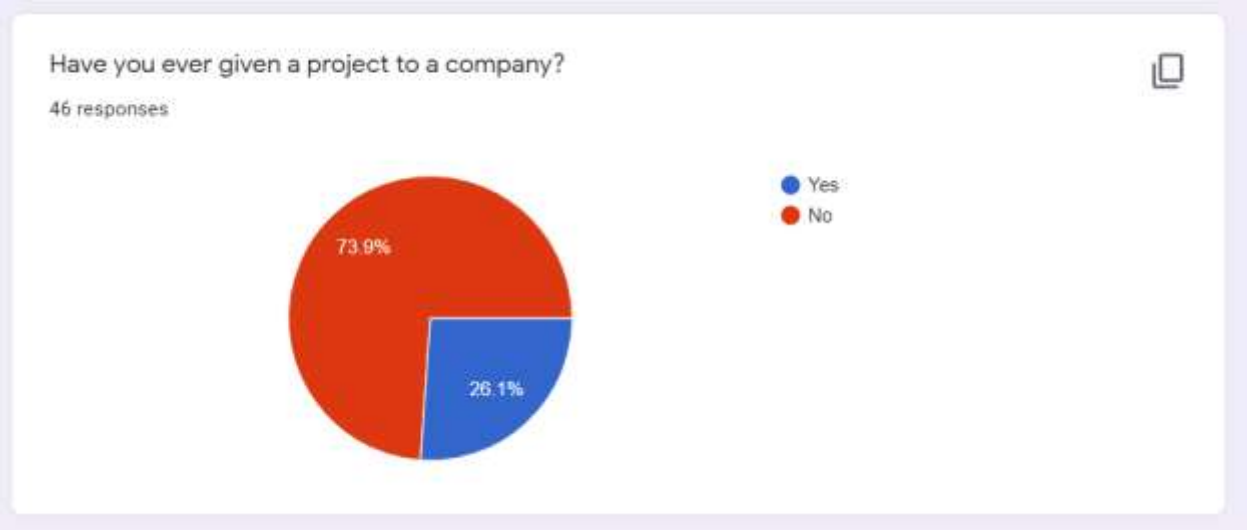

Figure 22- Survey Question 2

Among the all participant , 73.9% has not been handed project over to the company. And 26.1% participant have given project.

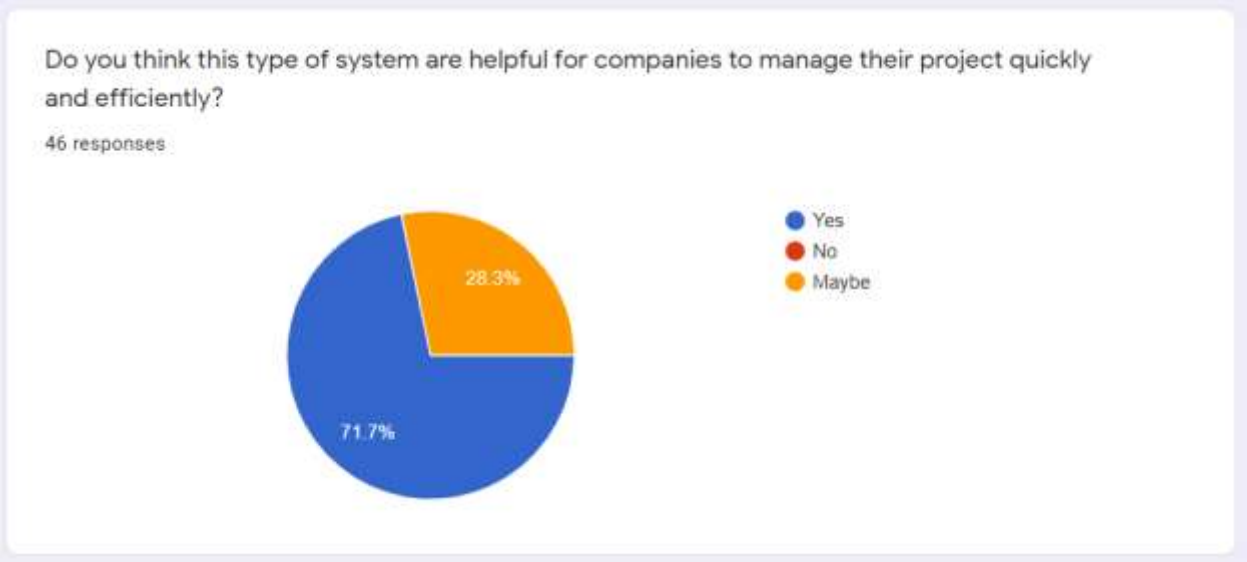

Figure 23 - Survey Question no.3

In the survey form, people were asked about project management system are helpful to manage their project quickly and efficiently.

Figure 24- Survey Question 4

In the survey form, people were asked about know which way are appropriate to manage company project.

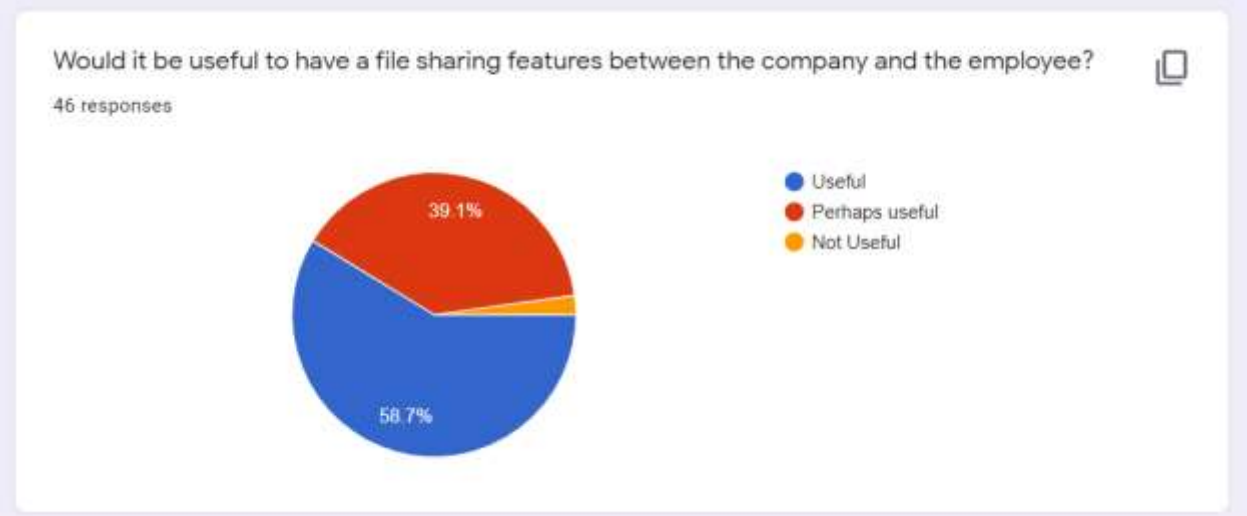

Figure 25- Survey Question 5

This question is asked for to know file sharing features are useful or not between company, customer and employee.

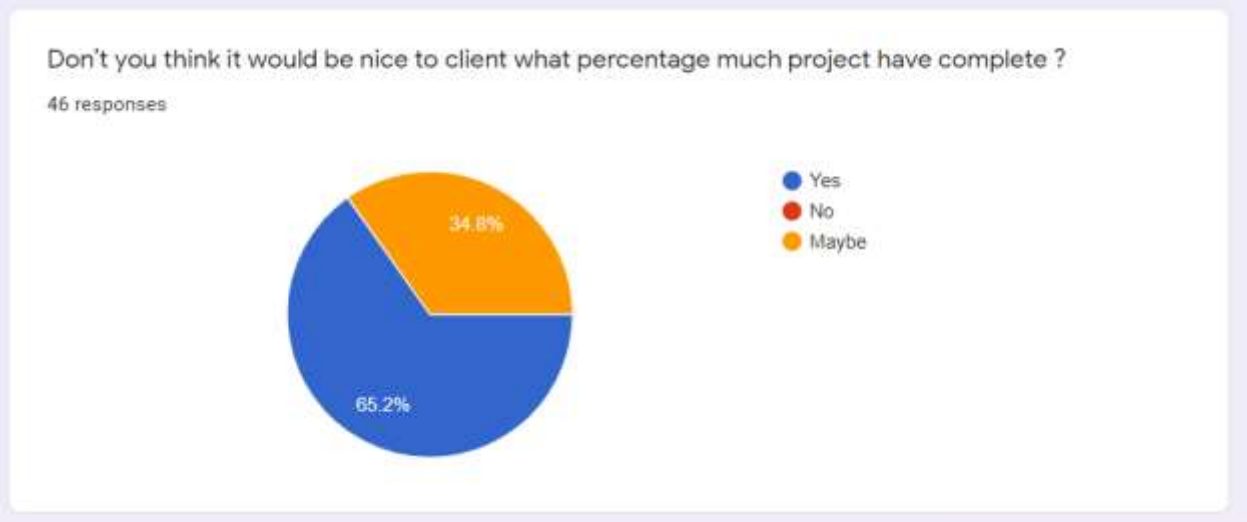

Figure 26- Survey Question 6

This questing is asked for to know how much useful for a customer to be able to see how far their project has complete.

Figure 27- Survey Question 7

This question is asked to identify how much help or not a project management system is for the company and client.

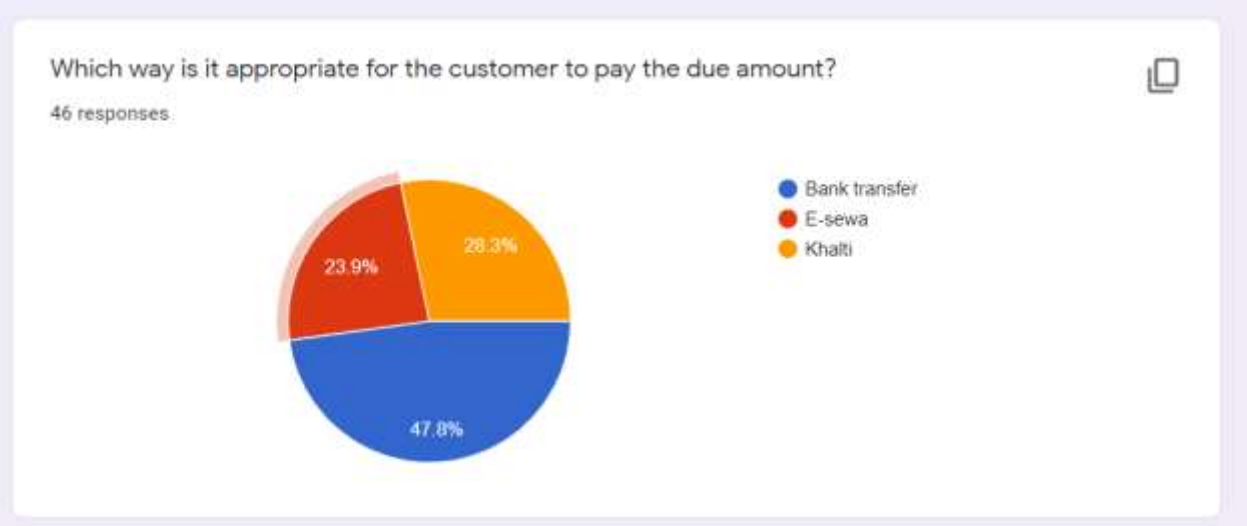

Figure 28- Survey Question 8

This question is asked for identifying which payment method appropriate for the customer

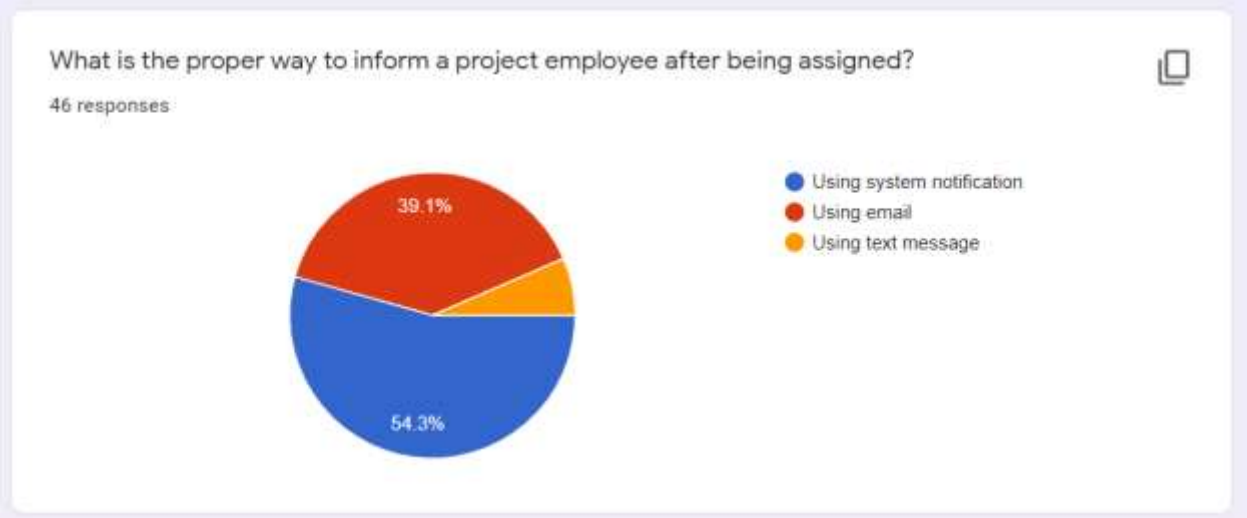

Figure 29- Survey Question 9

This question is asked to know which way to inform a employee after being project assigned.

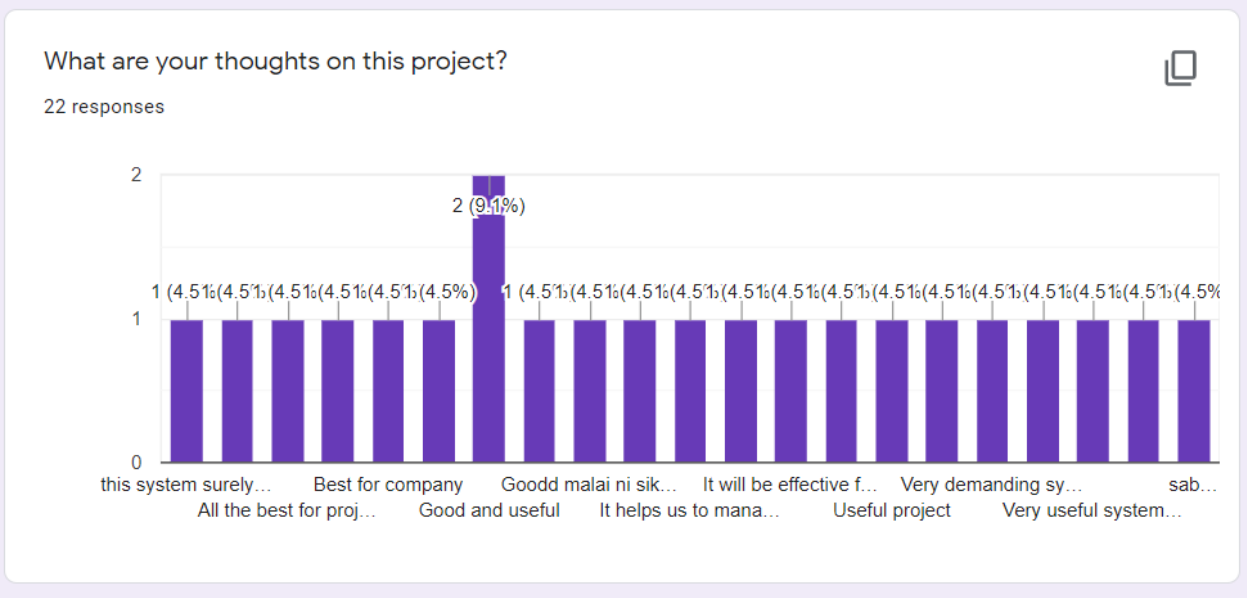

Figure 30- Users Feedback of my project

This question is asked to know people thoughts on this project.

Appendix-2 Wire Frame

WIREFRAME

Landing page

Figure 31- wireframe of landing page

LOGIN

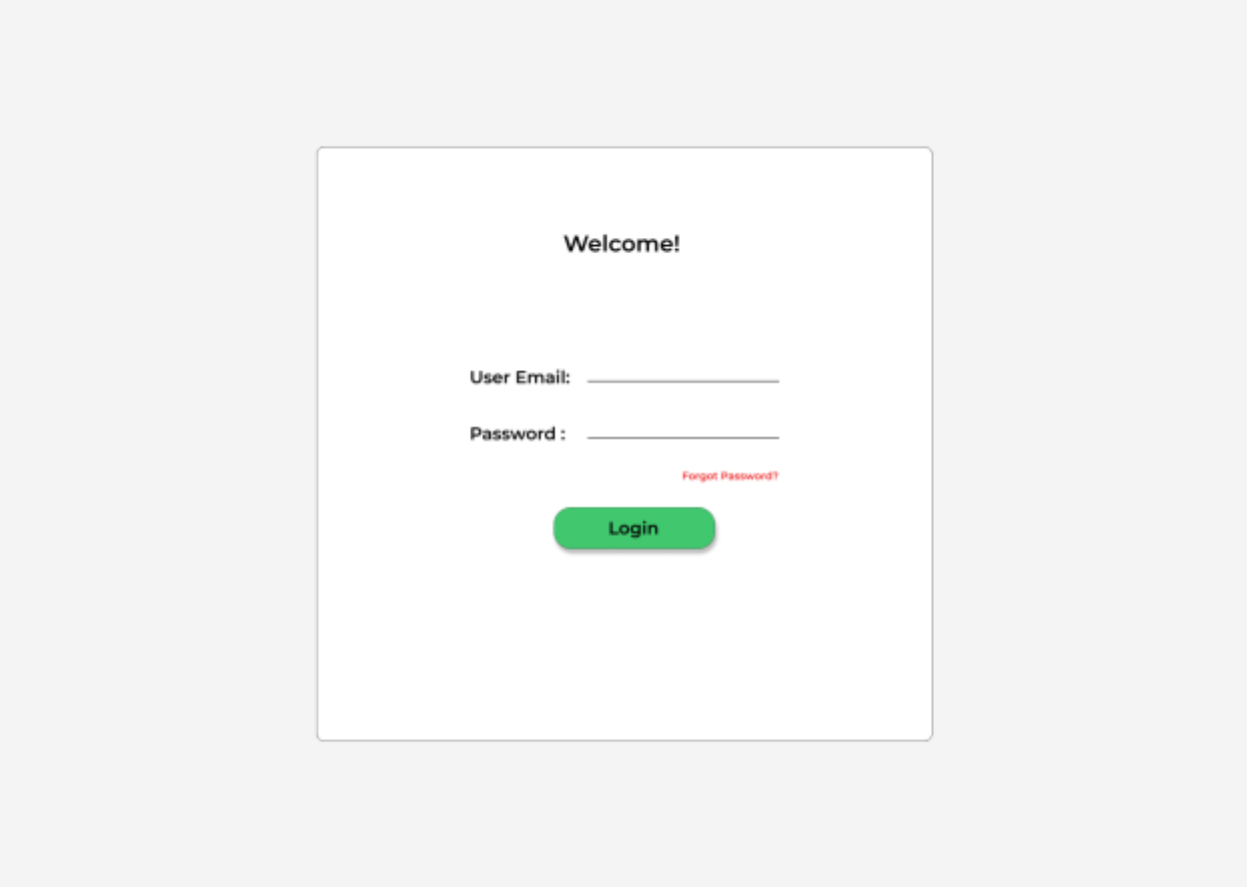

Figure 32- Wireframe of Login page of System

MANAGER DASHBOARD(ADMIN)

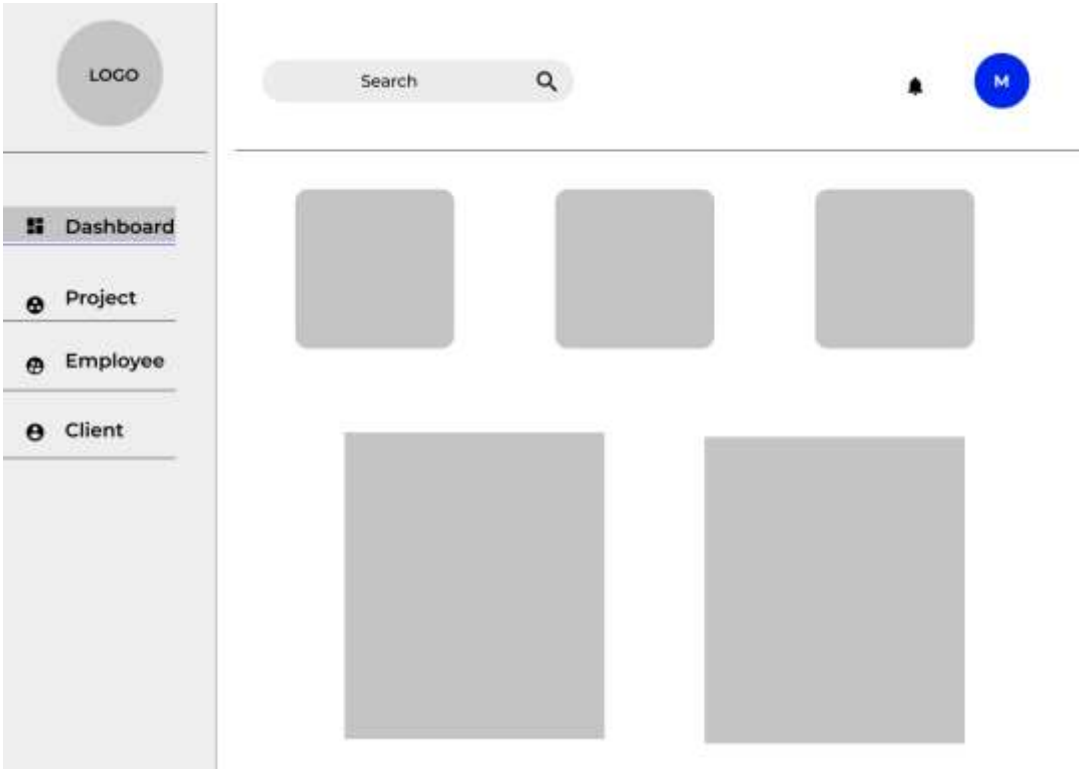

Figure 33- Wireframe of admin Dashboard page

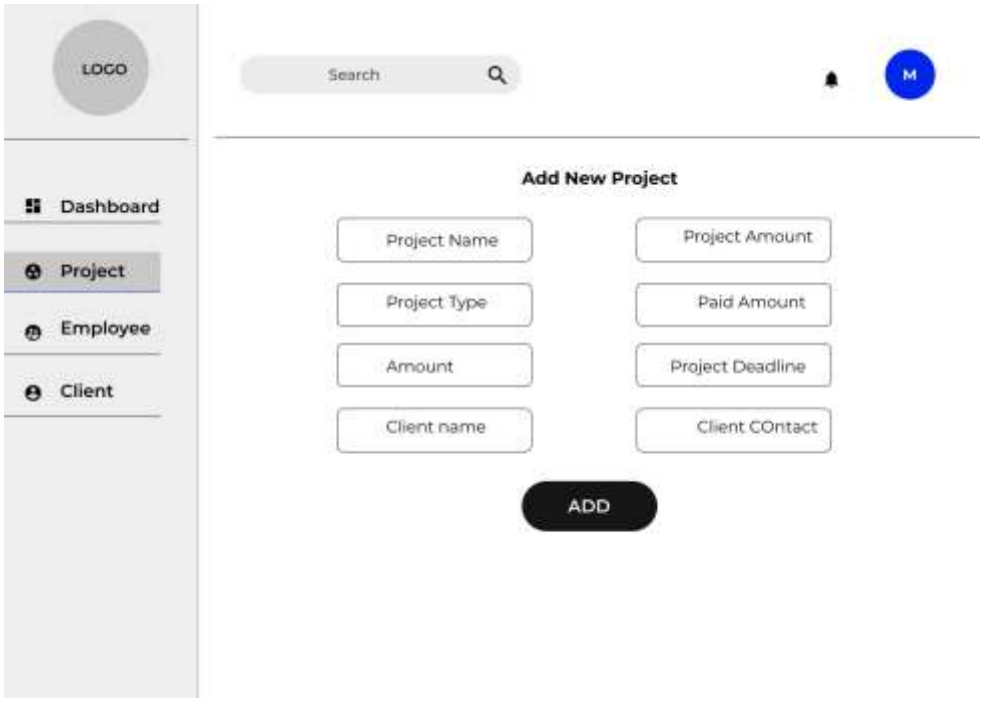

Figure 34- project management wireframe

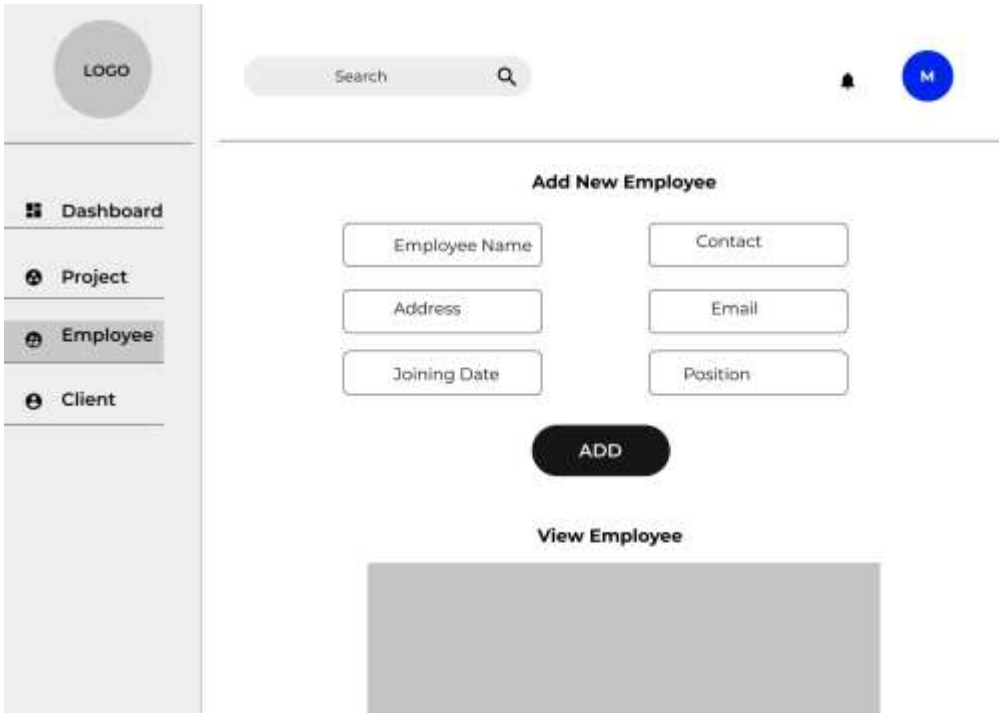

Figure 35- Wireframe of manage employee page

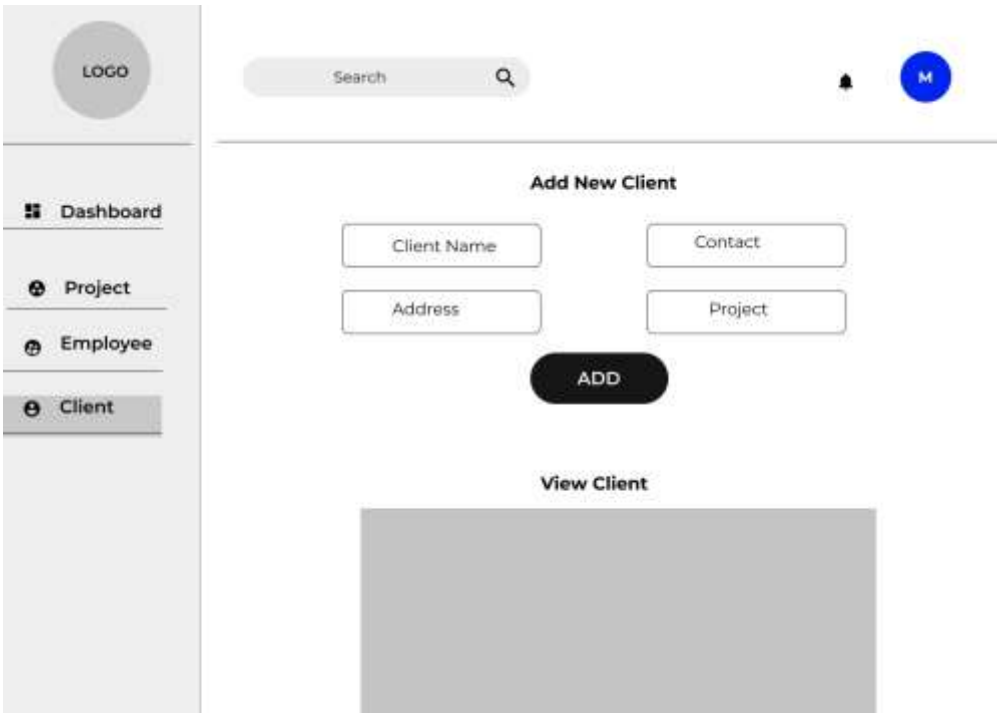

Figure 36- Wireframe of client management page

EMPLOYEE DASHBOARD

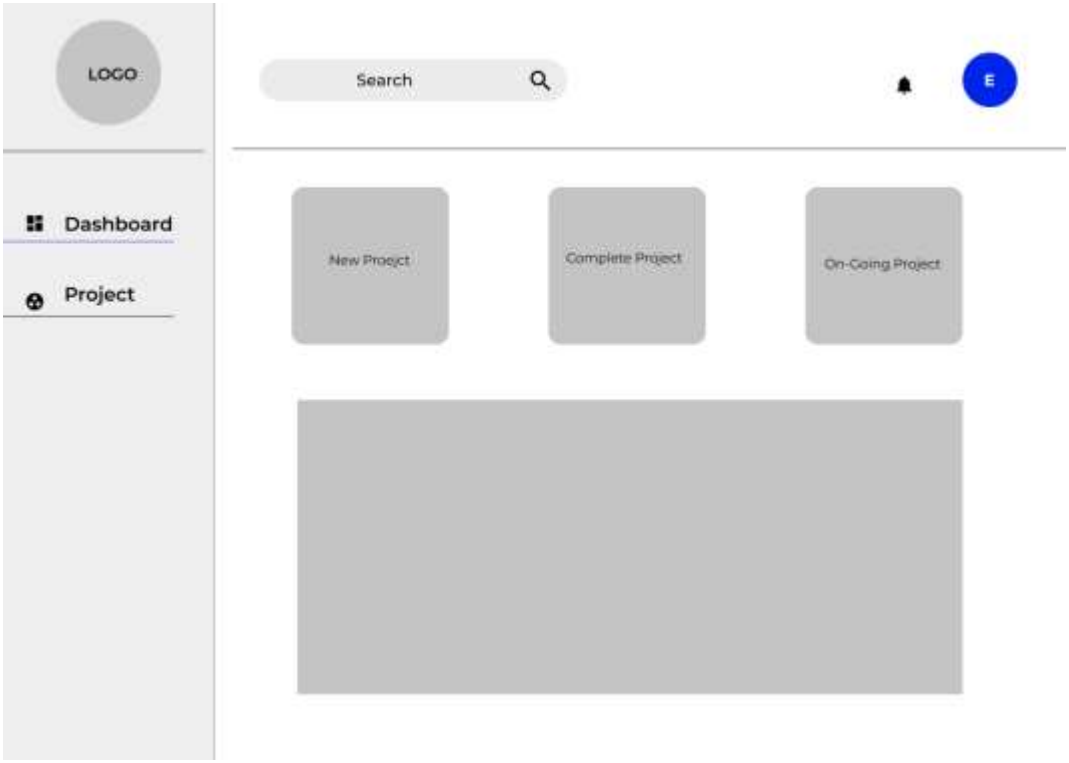

Figure 37- wireframe of employee dashboard

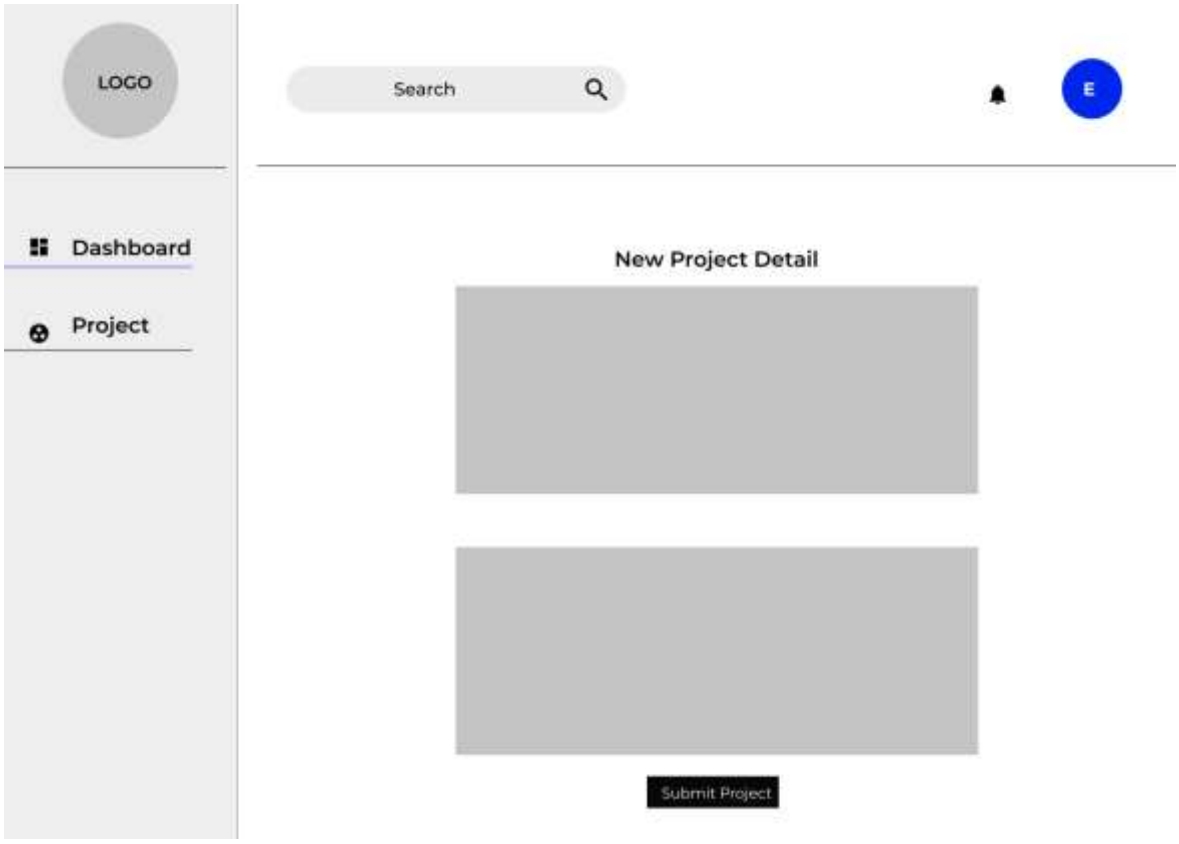

Figure 38- wireframe of project details

CLIENT DASHBOARD

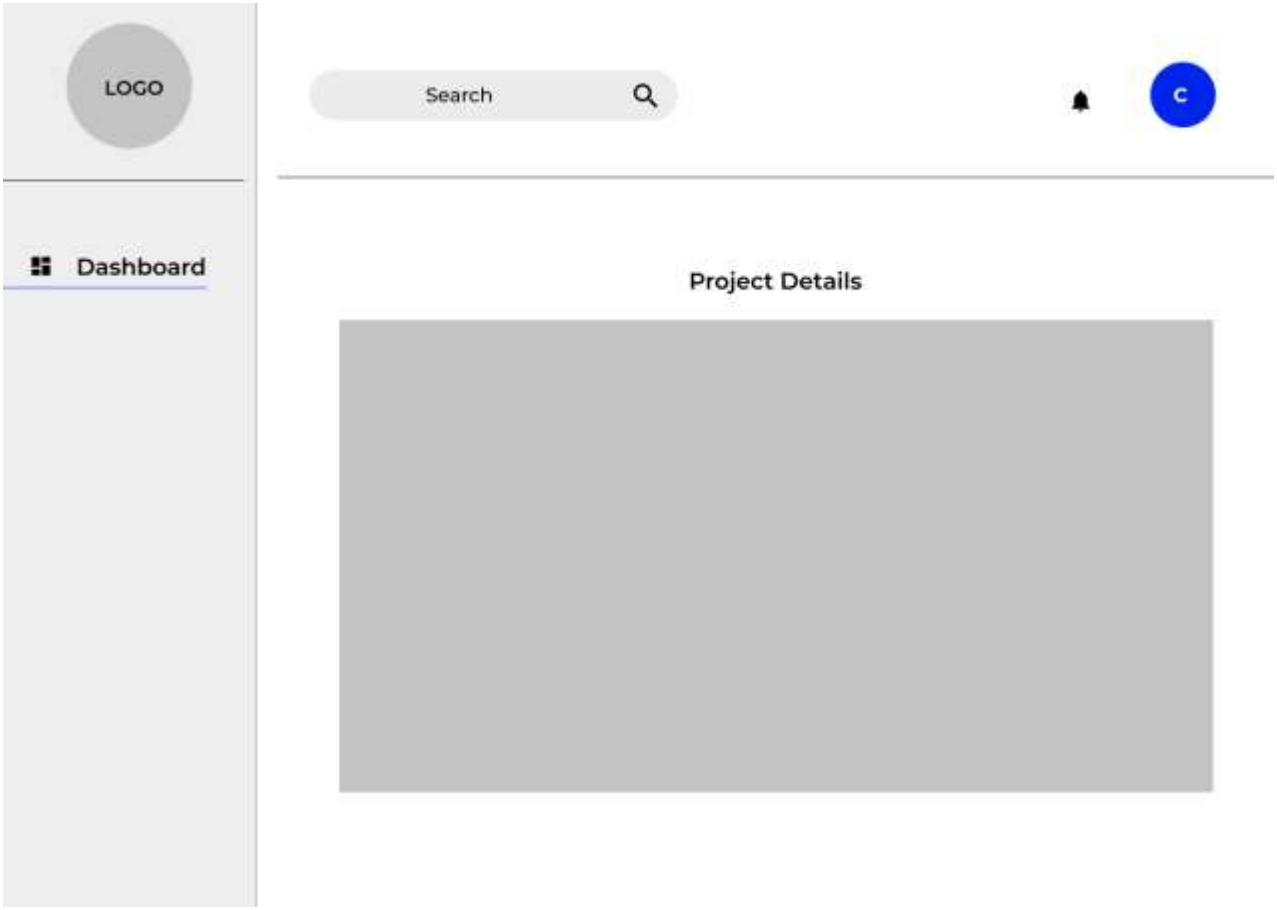

Figure 39- wireframe of client dashboard

Appendix-3 Use case

User Case of project management system

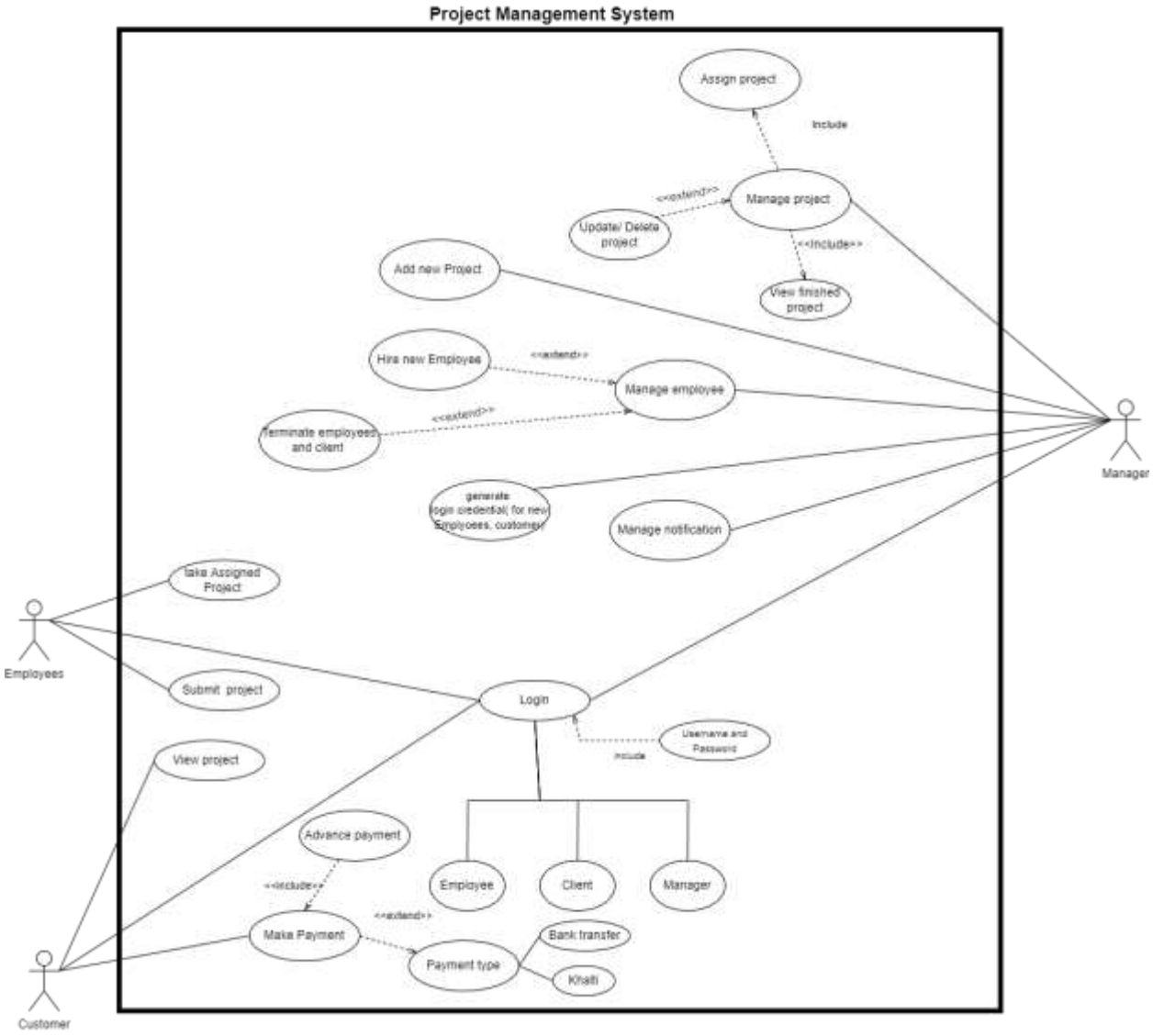

Figure 40- Use case of project management system

Appendix-4 Software requirements Specification

Software requirement Specification (SRS)

Introduction

Purpose

The purpose of this document is to provide the detailed description and software requirements for a project management system. It will describe the system's features and how they work in order to improve interaction with end users.

Project scope

This is a web-based application that solves the problem of project scheduling and management for an IT organization. This system will be designed to assist the company to manage project, to manage employee and manage their clientIt will be a simple and secure system for the organization. It will also lower the cost of management collection and ensure that the collection operation runs smoothly.

Intended Audience

The system is designed for organizations that are having difficulty managing their projects and clients. This system would be useful for project management and knowing which employee is allocated to which project. The project was chosen after considering the issues that many organizations have encountered when managing projects.

Overall Description

Product perspective

Project management system web application communicated with server, which help to organization to their project. The system will be designed to assist the company in assigning projects, adding new projects, adding new employees, providing current project information, and

determining how far a project is completed. Organizations can create new projects, hire new employees, and assign projects to them. Employees can see which projects have been assigned to them, as well as project information such as client requirements and project milestones. Clients can also see how much progress has been made on their projects. This project includes a simple user interface and a secure system that is simple to use for project management inside an organization.

Specific Requirements

Interface Requirement

In this system, there will be two interfaces: one that defines the interaction of client with the program, and the other that defines the interaction of the company member, where company manager as a admin in this system which is participation is necessary.

Functional Requirements

This section describes the actual interaction with users as well as the system's functionality. The general needs are mentioned below, along with the actors that will be using them.

Login

User enter his/her email and corresponding password to login the system. Employees and clients input the login credentials provided by the manager.

Logout

On the profile page, there is logout option that aalows the user to logout the system.

Manage project

The organization can add project and assigned project to company employees.

Manage employees

The company may hire new employees and view all of the employees' data, including who is working on which project.

Manage client

The company can add clients and view all of their information, such as which client gave which project and who have to paid due payment.

Project details

The client can see how much project had done.

View and submit assigned project

Employees of the organization may check which projects have been assigned to them and view project information. Employees can also submit assigned projects.

NON- Functional requirement

Performance requirements

The user interface, user experience, and performance of a project are all optimized in this area. While uploading and retrieving data from the server, the system's performance may be improved by increasing the data loading time on system , and data caching. For this, a better database system should be used, and data should be stored in the database with proper normalization. A global server should be used instead of the localhost given by Apache. Vaccination regions should be highly efficient, with information retrieval taking only a few seconds.

Safety Requirements

It contains provisions any loss, damage, or harm that may arise as a result of the product's use by end user. The server may crash due to excessive usage and data retrieval. Paid and certified resources should be used to store data with backups in cloud or server-based storage devices to avoid difficulties like these. They should be able to retrieve and recreate backed-up logs until they fail.

Security requirements

The criteria for product security or privacy problems, as well as the protection of data used or generated by the product, are included in this section. The server must save various end-user data

in our database, and this data must not be abused. To ensure security and fake users, we need to include some authentication for user registration. The database partner and server should be carefully chosen by the administrator for increased security.

Software quality attributes

Availability

The project tracking features should provide necessary information about the project related.

Correctness

The information provided by this system about ongoing project, finished project, and due paid amount for client.

Maintainability

End user should be able to manage and amend their project and personal information within the system.

Usability

The system should be simple to use and handle the organization's project management challenge. This project's user interface and user experience could be improved. As a consequence, should have a good time using it to solve various problems that arise while managing many projects.

Resources requirements

This project(project management system) will need a wide variety of resources to finish. The system's front-end and backend development will be done in Visual Studio IDE. HTML CSS , JavaScript and frontend framework to developed frontend for this project . Node Js is utilized for the back end to interface with the server, along with its framework Express Js, and Rest API is necessary to deliver data from the database in JSON format. A MySQL database is used to

store and manage the project's data. This project necessitates the use of APIs such as Khali API for online payment for clients in the system.