Project Documentation

One Stop Service Point

Submitted by

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171-35-2037

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This Project report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

Approval

This project titled on “One Stop Service Point”, submitted by Sakil Mia, ID: 171-35-2037 to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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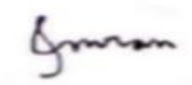

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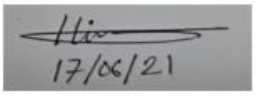

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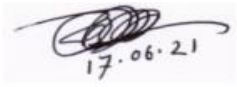

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DECLARATION

I hereby declare that I even have taken this project under the supervision of Kaushik Sarker Assistant Professor & Associate Head, Department of Software Engineering, Daffodil International University. I also announce that I even have submitted neither this project nor any a part of it for award of any degree.

Supervised by

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Acknowledgement

First and foremost, I want to express my gratitude to my God. After that, I'd like to express my heartfelt gratitude to my supervisor, teacher Kaushik Sarker, for providing me with the wonderful opportunity to work on this fantastic project on the topic of "One Stop Service Point," which also enabled me to conduct extensive research and learn about many new things. He has always been a strong supporter of my efforts to complete this project effectively. I owe him a debt of gratitude.

Second, I'd like to express my gratitude to my parents and friends for their invaluable assistance in completing this project in such a short amount of time.

I'm also grateful for and lucky to have received consistent encouragement, support, and advice from all members of the Department of Software Engineering's Teaching Staff, who assisted me in successfully finishing my project.

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Chapter 1: Introduction

1.1. Case Study

One Step Service Point will help the foreign and local investor to start their business or project as soon as possible by helping them to solve their paper verifying and permission issue. Currently in our investment environment it takes more than 1 year to just submitting all paper and get permission for all ministry. Due to low cost of worker, land and tax-free export many investors are interested to invest or start project in Bangladesh. But for our unfriendly investment environment often they can't execute their plan in high time.

1.2. Finding the Gap

First of all, we have some problem with coordination with Ministry to ministry even department to department of each ministry. All our paper is assigned and granted in real paper so storing and checking data is not time effective. When a foreign investor make plan to start or execute his plan in Bangladesh, he couldn't find a lot of information about our paper verification process. We don't have many professional agencies who can do the paperwork for our foreign investors. If all the paper is applied than it may happen the granting time is huge. Here is the basic gap of our system.

1.3. Objective

Our system will solve some problem and also fasten some process. It'll reduce documentation granting time from ministry to one year to 1 month. It can reduce extra hassle of an investor from ministry to ministry or department to department. As result they can give their time and concentration to many other important work and meeting. If Bangladesh want to take participation 4^{th} industry and tech revolution, then we have to make an investment friendly environment for foreign investor because if our permission procedure takes so much time as 1 year as or more than the business goal may fail after 1 year for rapid tech revolution.

1.4. Goal

Goal of One Stop Service Point will be

- Reducing paper granting time from ministry.
- Making the full verification process paperless.
- Making a reliable system which can hold confidential data of foreign investor.
- Dealing with many investors at a time and dealing with all ministry according to the project need.
- It will reduce fake costs of vendor or middle point agency.

1.5. Stakeholders

There are three types of stakeholders in One Stop Service Point. Such as:

- Investor
- Government Ministry
- Employee

1.5.1. Investor

Investor is our main client in our system who'll use our system for taking permission from our ministry and start a business or project. They can enter into the system then they can select their business category from our system's pre-defined business categories. Then the investor can see how many ministry permissions he need to get approval for his project and they system will inform him what to do and how.

1.5.2. Government Ministry

We'll have id for each ministry in our system like one for electric ministry and another from rajuk. The government ministry will verify and check all paper and match with standard. If they find any issue with the paper, they can send the paper with the feedback or cancelation reason and feedback. If ministry find all the information is correct than the Ministry will send feedback that the project is approved and it'll be written in feedback what amount he need to pay because payable amount may vary on project size, time and budget.

1.5.3. Employee

We'll have at least one specific employee for each ministry. They are expert in handling or processing paper for the specific ministry. They'll check all the paper from client and check the limitations or problem from his previous experience and send the feedback to the investor.

1.6. Proposed System Model

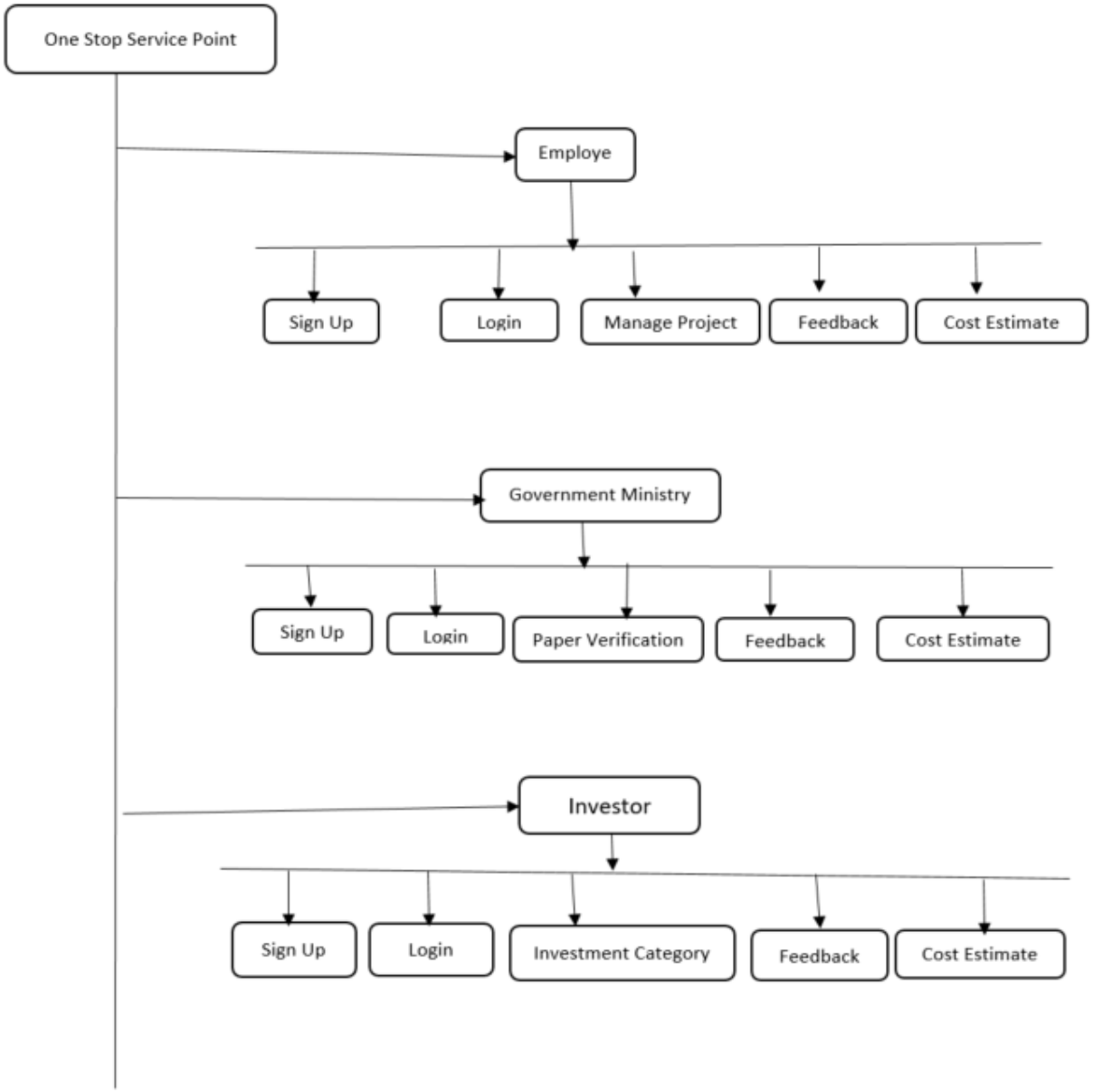


Figure 1: Proposed System Model for the project

1.7. Project Schedule

Here I have to make a plan of my project schedule. Now I am going to make a chart of my project schedule.

1.7.1. Gantt chart

The Gantt chart is the most important part of a project. It's containing the time table of complete a project. Now I am showing my project Gantt chart.

Activities		1 w	2 w	3 w	4 w	5 w	6 w	7 w	8 w	9 w	10 w	11 w	12 w	13 w	14 w	15 w	16 w
Planning	Ideas																
	Problem definition																
	Problem planning																
Requirements	Requirement specification																
	Requirement analysis																
QA–1	Quality assurance																
System design	Design specification																
	Interface design																
	Database design																
Development	Development system modules																
	Integrate system modules																
QA-2	Test cases																
Testing	Unit testing																
	Blackbox testing																
Resolve Issues	Resolve Issues found																
Release	Software release																

1.7.2. Release Plan/Milestone

Activities	Duration in Day	Total day
Ideas	7 day	7
Problem identification	7 day, 14 day	14
Requirement specification	14 day	7
Requirement analysis	14 day, 21 day	14
Quality assurance	21 day	7
Design specification	28 day	7
Database design	35 day	7
Development system modules	35 day, 42 day, 49 day, 56 day	28
Integrate system modules	42 day, 49 day, 56 day	21
Test case	21 day, 49 day, 56 day, 63 day, 70 day	35
Unit testing	77 day, 84 day	14
Black-box testing	91 day, 98 day, 105 day	21
Resolve Issues	98 day, 105 day	14
Software release	112 day	7

Chapter 2: Software Requirement Specification

2.1. Functional Requirements

Functional requirements are those which are related to the technical functionality of the system

2.1.1. Sign Up

FR-01	**Sign Up**
Description	At first user must be sign up to get into the system with all information.
Stakeholders	Investor, Employee, Government Ministry
Priority	High

2.1.2. Log in

FR-02	**Log in**
Description	After completing the sign up the client have to log in the system to visit the website and can invest their interested filed.
Stakeholders	Investor, Employee, Government Ministry
Priority	High

2.1.3. Investment Category

FR-03	**Investment Category**
Description	Investor can select interested category where they want to invest.
Stakeholders	Investor
Priority	High

2.1.4. Paper Verification

FR-04	**Paper Verification**
Description	It is important to verify the investor paper is that valid or fake. Here also verify the client bank statement that he have enough money to invest.
Stakeholders	Government Ministry
Priority	High

2.1.5. Cost Estimate

FR-05	Cost Estimate
Description	Client will concern about their cost that how much will cost for the invest to their interested investment field and what is the payable amount or tax for the government ministry
Stakeholders	Investor, Government Ministry
Priority	High

2.1.6. Feedback

FR-06	Feedback
Description	If any papers is rejected from ministry for which purpose the papers is rejected the system will notify to the client that for that purpose the papers are rejected.
Stakeholders	Investor, Government Ministry
Priority	Medium

2.1.7. Manage Project

FR-07	Manage Project
Description	Our team check the form and for individual investment the admin panel of the system send to that papers to the different ministry for approve the investment.
Stakeholders	Employee
Priority	High

2.1.8. Contact

FR-08	Contact
Description	Investor can send massage to our office if he want to contact for any issue or complain.
Stakeholders	Investor
Priority	Medium

2.1.9. Profile

FR-09	Profile
Description	All user can see own profile. Investor can create his own profile so he can update at a time if he wants. Other user such as Employee, Government Ministry can't create or update their profile. Admin will create their account and have the right to update it.
Stakeholders	Investor, Employee, Government Ministry.
Priority	High

2.1.10. Log out

FR-10	Log out
Description	After completing all that thing client will log out from that system.
Stakeholders	Investor, Employee, Government Ministry
Priority	High

2.2. Non-Functional Requirements

A non-functional requirement (NFR) is a requirement that specifies criteria rather than specific behaviors that can be used to judge the operation of a system. Functional requirements, on the other hand, define precise behavior or functions.

2.2.1. Security

All transactions involving confidential client information will be secured by the system. All customer transactions will be secured by the system. The system will not leave all cookies storing user personal data on consumer computers.The system protects the customer's personal information. Customer credit card numbers retrieved from the database will never be shown in the customer's web browser. Only the authorized administrator and authorized user have access to the system back-end server. That system will give the highest level of protection for the customer's data as well as secret data.

2.2.2. Usability

The system will provide a uniform look and feel between all the web pages and it also provide use of icons and toolbars that's why to use the system with comfortable to the users.

2.2.3. Performance

This system is web based and run from the web server. In performance how efficiently perform the system from the server with multiple users. Here provides the best quality performance to the user but sometimes performance depends upon the configuration of the client computers and internet strength of the client computer.

2.2.4. Reliability

It means that the expected output from the system that's mean that the system will fulfill to client desire what he actually want from the system. The system shall provide storage of all databases on redundant computers with automatic switchover.

2.2.5. Maintainability

The system allows to create clients profile and their business profile and their investment information. That system also have to allow the client to update their information to the system. The system is to maintain for the better performance to the client.

Chapter 3: System Analysis

3.1. Use Case Diagram

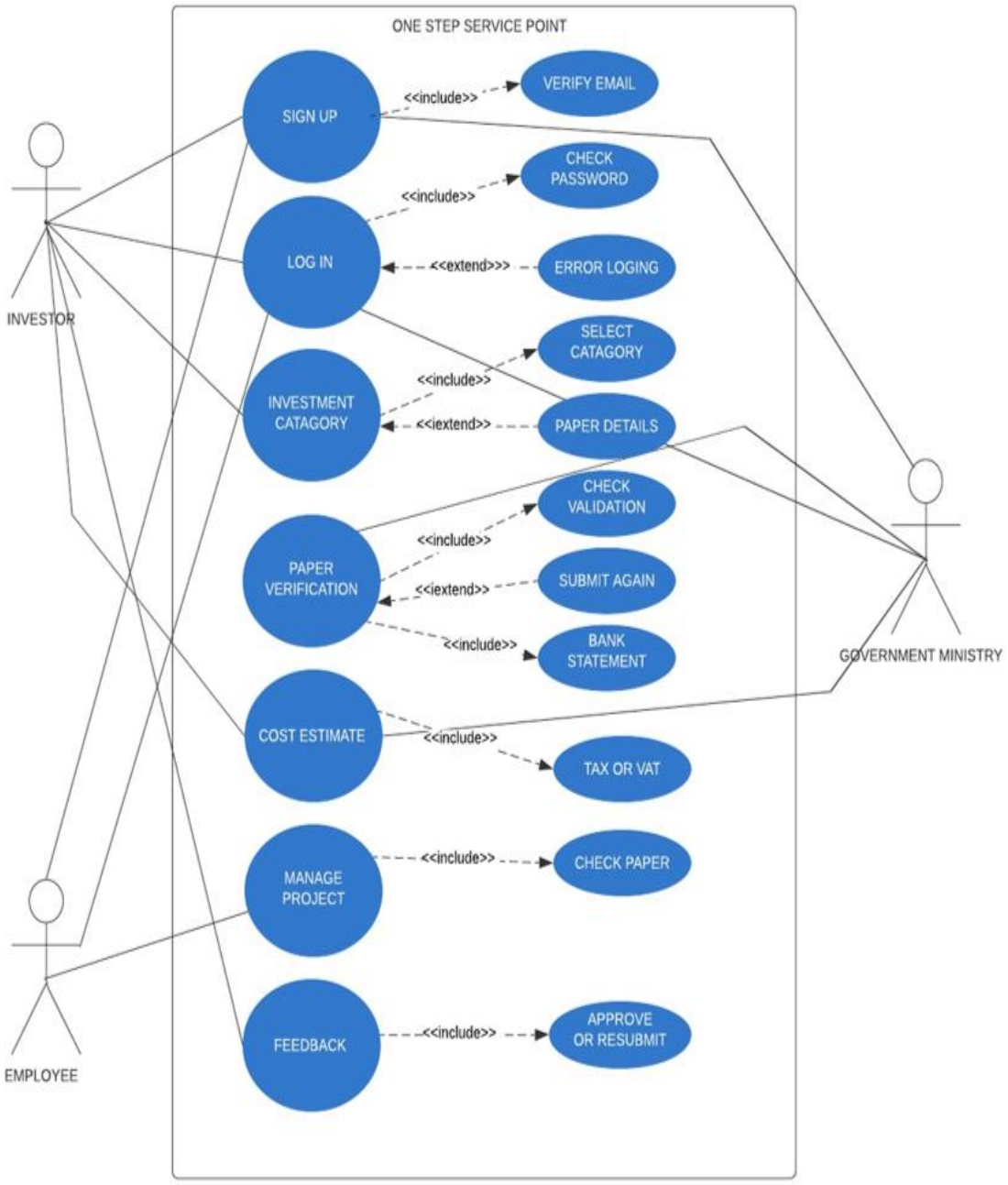


Figure 2: Use Case Diagram for the project

3.2. Use Case Description

3.2.1. Sign Up

Use Case Name	Sign Up
Actor	Investor, Employee, Government Ministry
Description	All the user has to input their details and register to the system for getting further access of their own work.
Precondition	User should be new to the system.
Trigger	By clicking on Sign Up button
Flow of Events	• User will go to the system and click on Sign Up button • User will input all the details as desired from the system. • System will check input validation then return a confirmation.
Post Condition	A new user will be added into the system

3.2.2. Login

Use Case Name	Login
Actor	Investor, Employee, Government Ministry
Description	User can log in into the system using their username and matched password
Precondition	User must know the username and password, and on the first page
Trigger	By clicking login button
Flow of Events	• User will be on login page • User will enter their matched username and password • User will click login button • Successful log in massage will be shown.
Post Condition	User will be logged in

3.2.3. Select Investment category

Use Case Name	Select Investment category
Actor	Investor
Description	Investor can choose between many types of business or invest from predefined category or can click on other and tell in comment box
Precondition	Investor must be on Investment Category page and registered user.
Trigger	By clicking on confirm category
Flow of Events	• Investor will select on button on the Investment Category page. • Investor will choose the suitable category for his business. • System will ask for confirmation after selection category.
Post Condition	Category must be listed on the system

3.2.4. Verify paper

Use Case Name	Verify paper
Actor	Investor, Government Ministry
Description	Investor will submit the paper for their business and system will send it to Government Ministry. Ministry will verify and check the all the paper if the investor is fulfilling all the government rules and condition.
Precondition	Investor must fill all the form and give all the paper to ministry
Trigger	By clicking verify paper
Flow of Events	• Government Ministry should receive all the PDF • Check the paper and statistics according to ministry rules and regulation. • If all goes correctly ministry will approve or reject their proposal.
Post Condition	Investor should submit all paper wanted by ministry's regulation.

3.2.5. Cost estimation

Use Case Name	Cost estimation
Actor	Employee, Government Ministry
Description	Government ministry will send the verified paper and estimated cost for the proposed proposal. Employee will sum up all the cost from different ministry and add our service charge according to project size and cost.
Precondition	Investor need to agree with all condition of government ministry
Trigger	By sending PDF by email.
Flow of Events	• Government will check all PDF • Cost for applying and tax will be added from ministry. • Employee will add addition service charge and make a final bill.
Post Condition	Employee will send total cost to Investor.

3.2.6. Managing Project

Use Case Name	Managing Project
Actor	Employee, Investor
Description	Investor can see status of all project under and investor can see all status of his project
Precondition	Employee want to send feedback to investor
Trigger	By clicking on manage project section
Flow of Events	• Employee can see current from his profile and send feedback • Employee can send email to Investor
Post Condition	Project current status will be shown to employee

3.2.7. Giving Feedback

Use Case Name	Giving Feedback
Actor	Investor, Government Ministry, Employee
Description	Government ministry will make a feedback such as approved or reject of the project or reasons of rejections.
Precondition	Paper must submit to Government ministry
Trigger	By clicking Feedback button
Flow of Events	• Ministry can send feedback investor. • Investor can see approval or rejection reason
Post Condition	Feedback will be sent to user

3.2.8. Logout

Use Case Name	Logout
Actor	Investor, Government ministry, Employee
Description	System will cut the access of information of the user and end the session.
Precondition	User must be logged in into the system
Trigger	By clicking Log out button
Flow of Events	• User in the system • User press into log out button
Post Condition	System will again go to Log In page

3.3. Activity Diagram

I have arranged a few activity diagram according to Use Case. These activity diagrams are properly referring the flow of the individual conditions of my project.

3.3.1. Investment Category

Investor will select on button on the Investment Category page. Investor will choose the suitable category for his business. System will ask for confirmation after selection category.

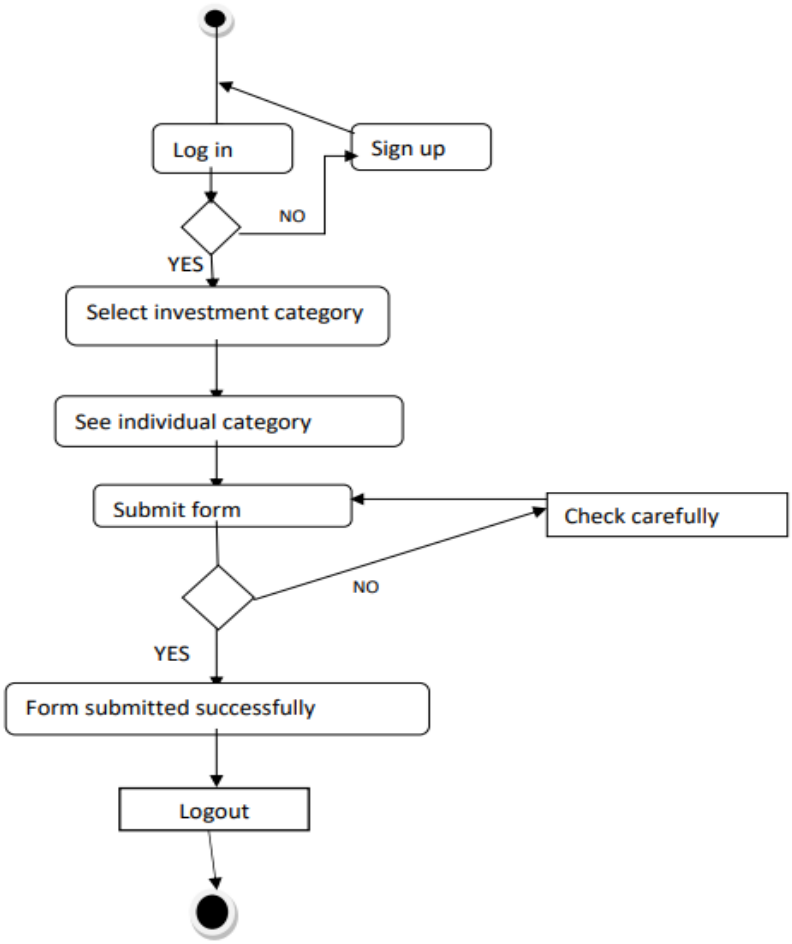


Figure 3.: Activity Diagram for Investment Category

3.3.2. Paper Verified

Government Ministry should receive all the PDF. Check the paper and statistics according to ministry rules and regulation. If all goes correctly ministry will approve or reject their proposal.

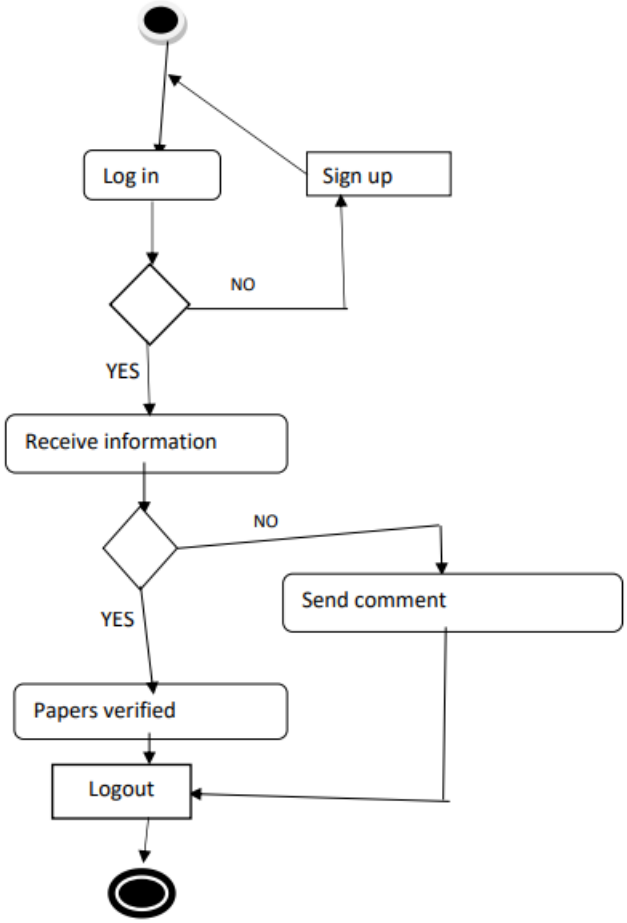


Figure 4: Activity Diagram for Paper Verified

3.3.3. Manage Project

Employee can see current from his profile and send feedback. Employee can send email to Investor.

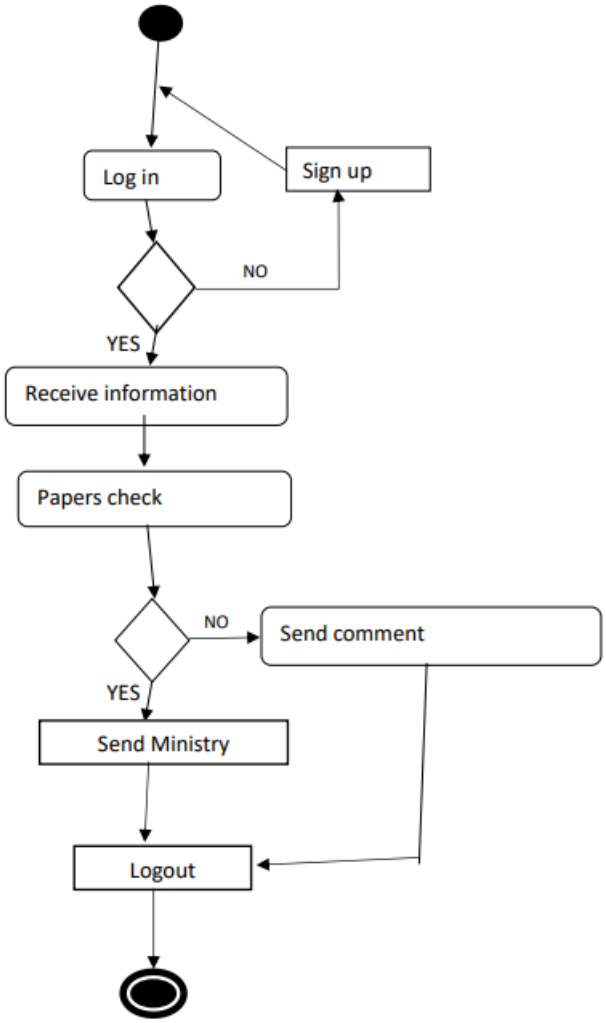


Figure 5: Activity Diagram for Manage Project

3.3.4. Cost estimate

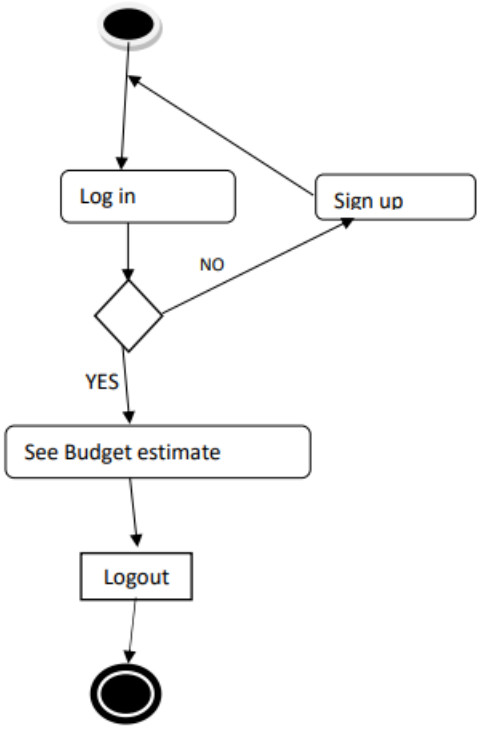


Figure 6: Activity Diagram for Cost estimate

3.3.5. Feedback

Ministry can send feedback investor. Investor can see approval or rejection reason

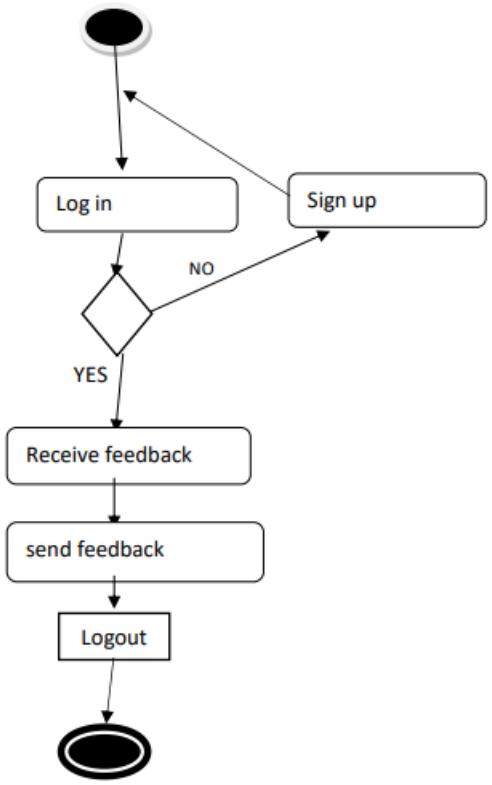


Figure 7: Activity Diagram for Feedback

3.4. System Sequence Diagram

Mainly sequence diagrams understand us how the data will be followed in any application. Now I am going to show some sequence diagrams.

3.4.1. Investor

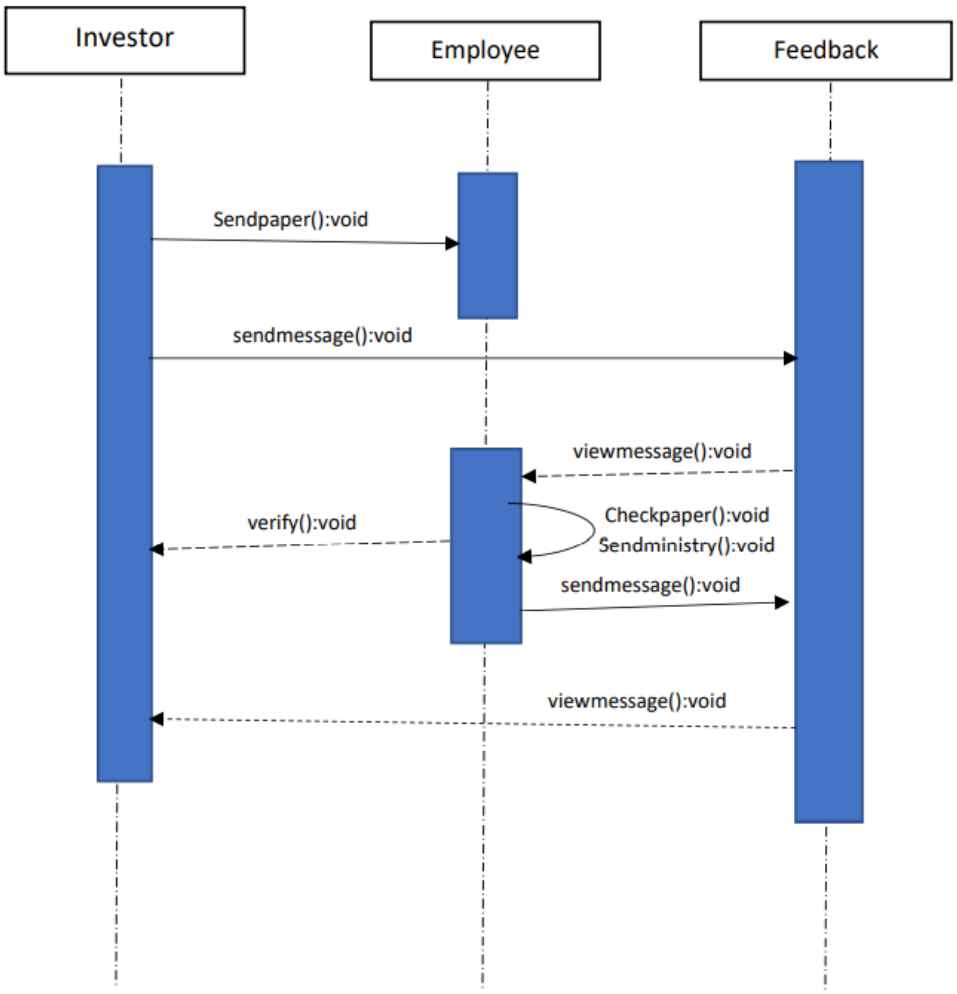


Figure 8: Sequence diagram for Investor

3.4.2. Employee

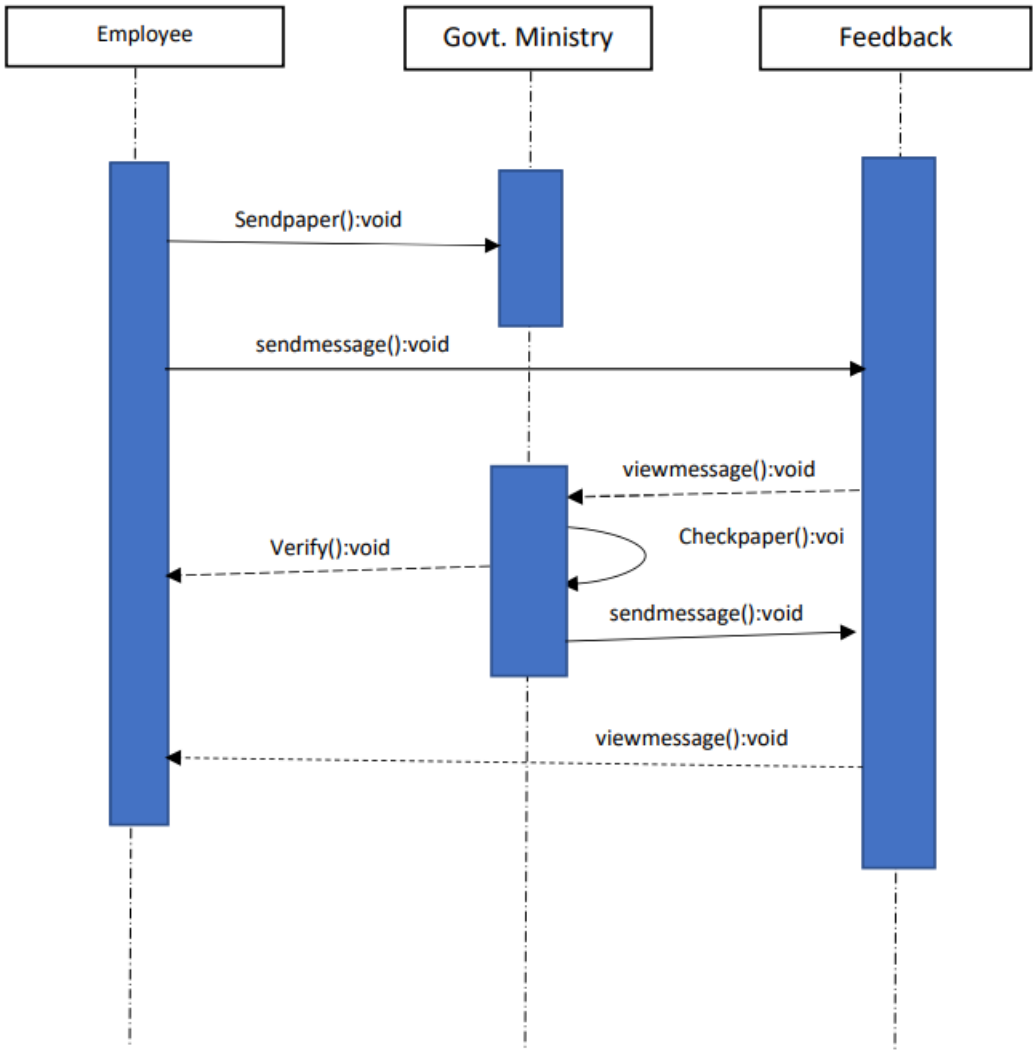


Figure 9: Sequence diagram for Employee

3.4.3. Ministry

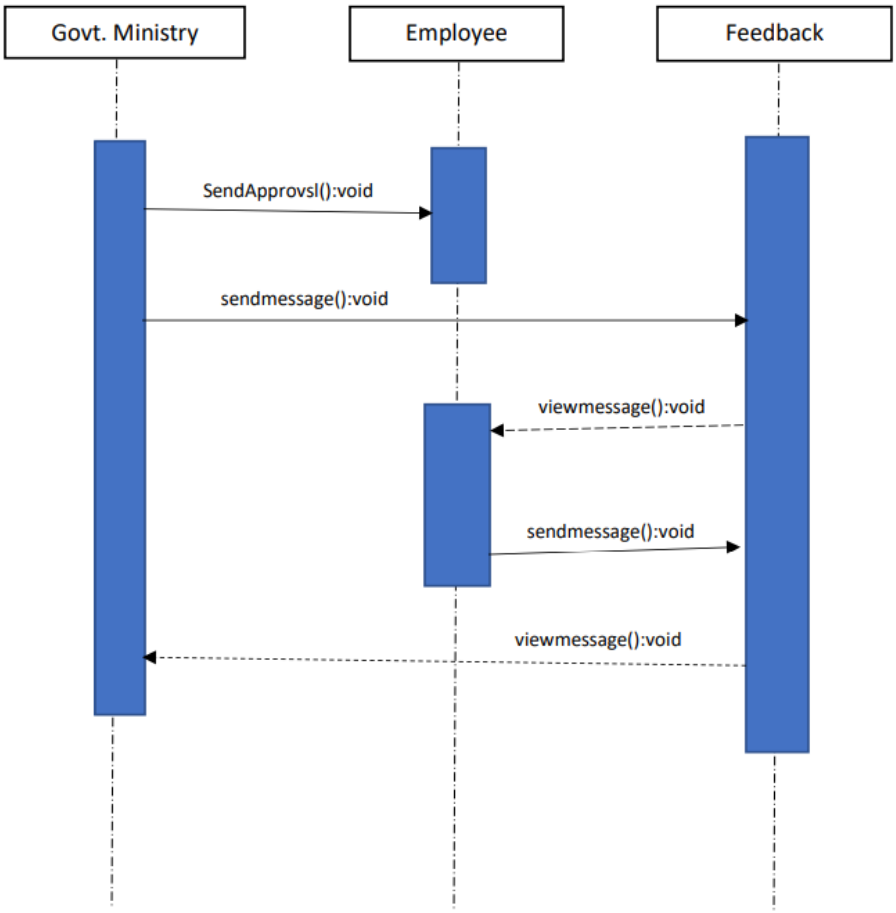


Figure 10: Sequence diagram for Ministry

Chapter 4: System Design Specification

4.1. Class Diagram

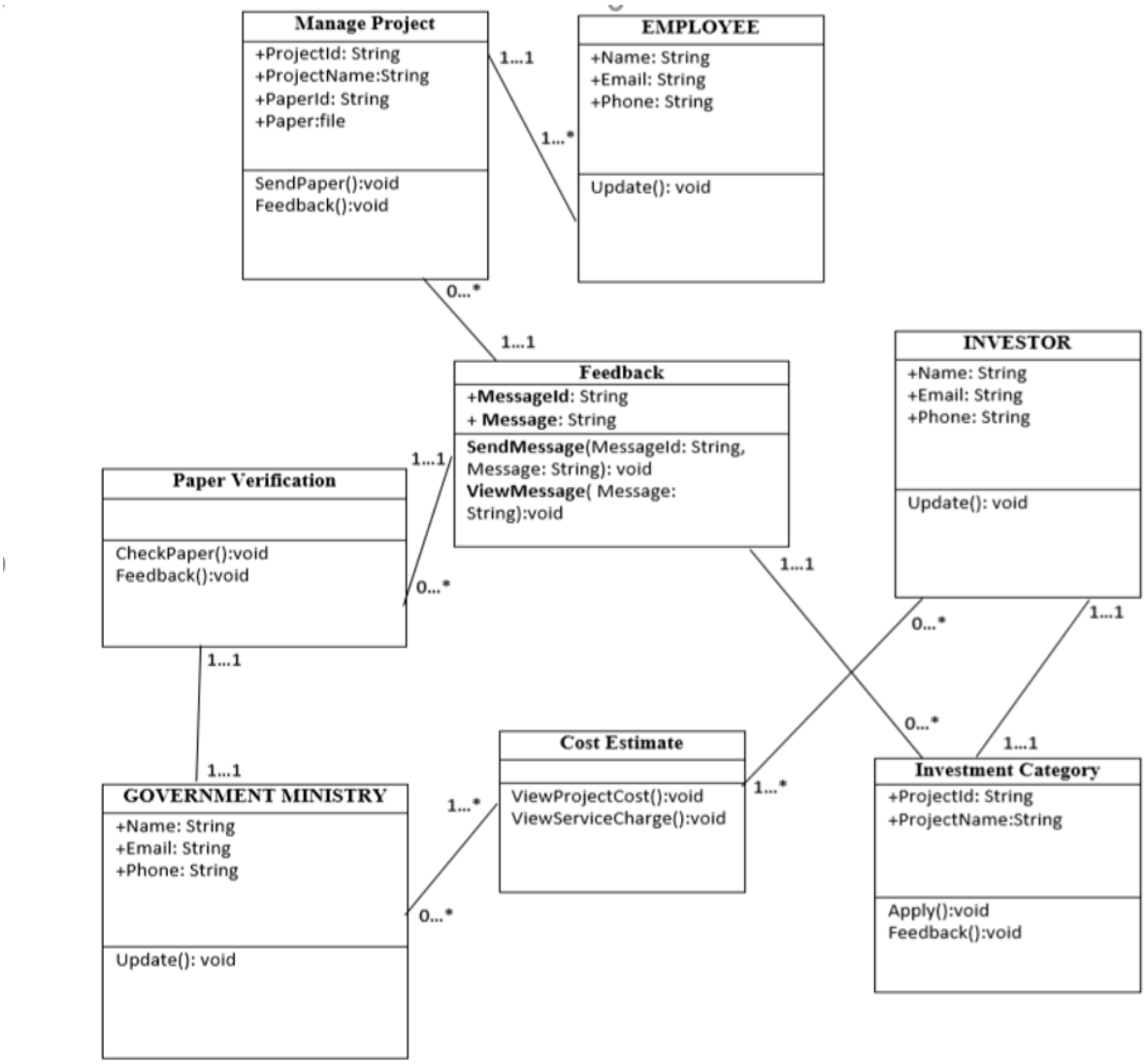


Figure 11: Class diagram for this project

4.2. Development Tools & Technology

To create software, software development tools are needed. Now I'm going to teach you about the tools and technology that will be used in this system.

4.2.1. User Interface Technology

First and foremost, when a user visits a website, the user is presented with the software's interface. As a result, the user interface is extremely important in this system. The use of good picture, graphics, typography, style sheets, and scripting, among other things, is part of the user interface.

4.2.2. Laravel Framework

For developing any application system minimum one programming language is essential. Laravel is a web Framework of PHP language. In this project I am go to use Laravel Framework.

4.2.3. jQuery Framework

jQuery UI is the name of a library that employs JavaScript as its primary programming language. It simplifies the codes of the JavaScript programming language. In most cases, it communicates via a graphical user interface (GUI) (GUI). AJAX eliminates the need for page reloading. The jQuery Framework is used in this project. It works with all major browsers, including Google Chrome, Mozilla Firefox, Opera, Safari, and Internet Explorer.

4.2.4. CSS Framework or Bootstrap

Some JavaScript components are also included in Bootstrap. There are certain pre-installed components, such as Query UI. We acquire both Cascading Style Sheets (CSS) and HTML by using the Bootstrap framework. With a single platform, you can use JavaScript. However, before beginning to develop this system interface with Bootstrap, one should have a fundamental understanding of the framework. It will improve productivity.

4.2.5. Implementation Tools & Platforms

Now I am telling here what kind of tools and Platforms will use in this system.

4.2.6. Integrated Development Environment (IDE)

IDE stands for Integrated Development Environment. Programmers write code on IDE. After that IDE provide the feature to execute the source code. For developing my web site, I have used an IDE. For developed my project here I use “VS code” IDE

4.2.7. Database

A project's database is its most important component. This project's data will be stored in a database. In this case, I'm using a MySQL database. You don't need to add anything to this database because Laravel already has it. It's also quite simple to operate. It can also provide security, scalability, and high performance, among other benefits.

Chapter 5: System Testing

5.1. Testing Features

Adding or modifying new functionality to an existing project is what feature testing is all about.

5.1.1. Features to be tested

- Sign Up
- Log in
- Investment Category
- Paper Verification
- Cost Estimate
- Feedback
- Manage Project
- Contact
- Profile
- Log out

5.1.2. Features not to be tested

Here we must need to see what is 'not' to be tested from both the user's viewpoint of what the system does and a configuration management/version control view.

- User's interface
- Users personal record
- Post publish time

5.2. Testing Strategies

Testing strategy can be thought of as the overall goal of the testing process. It also serves as a guide to the many test levels that must be completed during the software development life cycle.

5.2.1. Test Approach

Testers must perform some action in order to finish the test procedure. There are primarily two types of tests.

Automation testing: Automation testing is a term for a testing technique in which test engineers create scripts based on the test plan and then utilize appropriate tools to test the program. Automation testing is used by practically every software company these days.

Manual testing: Manual testing is also the name of a process for finding faults or vulnerabilities in a system. Without the use of any automation technologies, test engineers manually test and execute the test cases in this procedure.

5.2.2. Black Box Testing

Black box testing is a form of software testing in which test engineers examine software without knowing the internal architecture of the system being tested. Behavioral testing is another name for it. Both functional and non-functional black box tests are possible. It disregards a system's internal mechanisms.

5.2.3. White Box Testing

White box testing, also known as clear box testing, glass box testing, open box testing, transparent box testing, code based testing, or structural testing, is a type of testing approach. It is the polar opposite of black box testing.

White box testing can be classified into some levels. Such as:

- Unit Testing
- Integration Testing
- System Testing

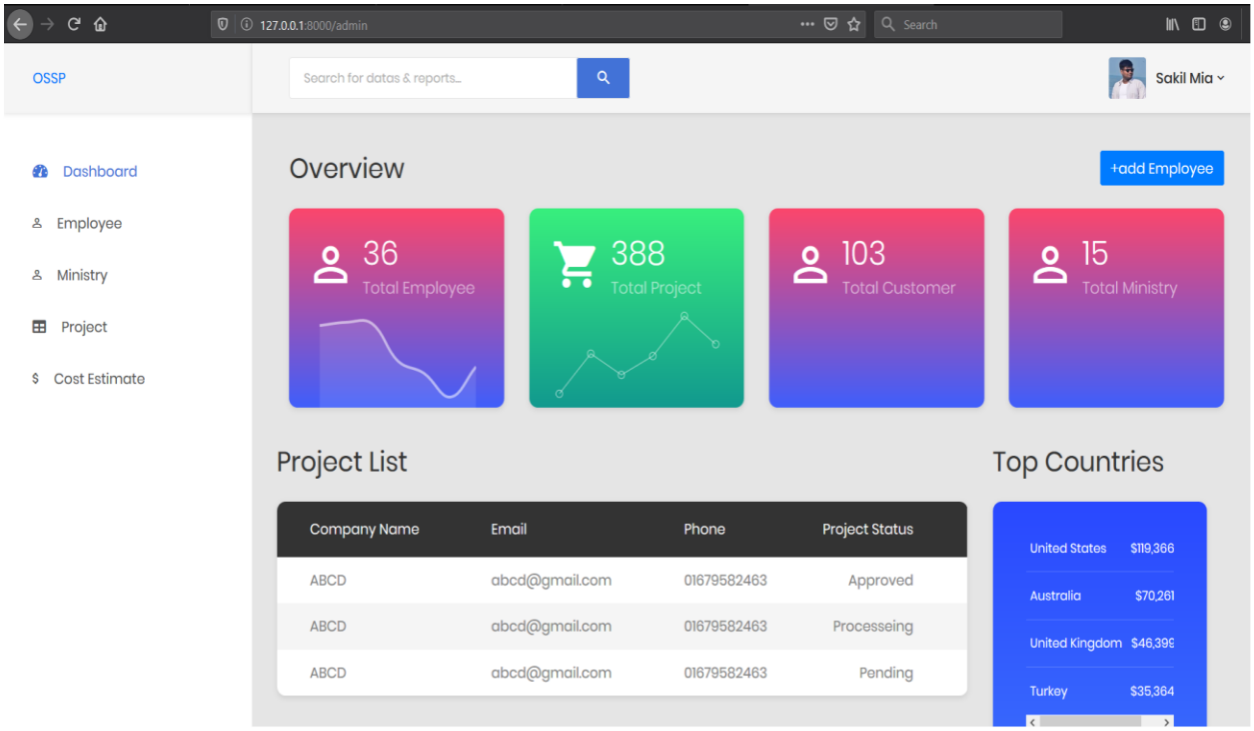
The main advantage of white box testing is that testing is more throughout and the testing can be started from the very beginning stage.

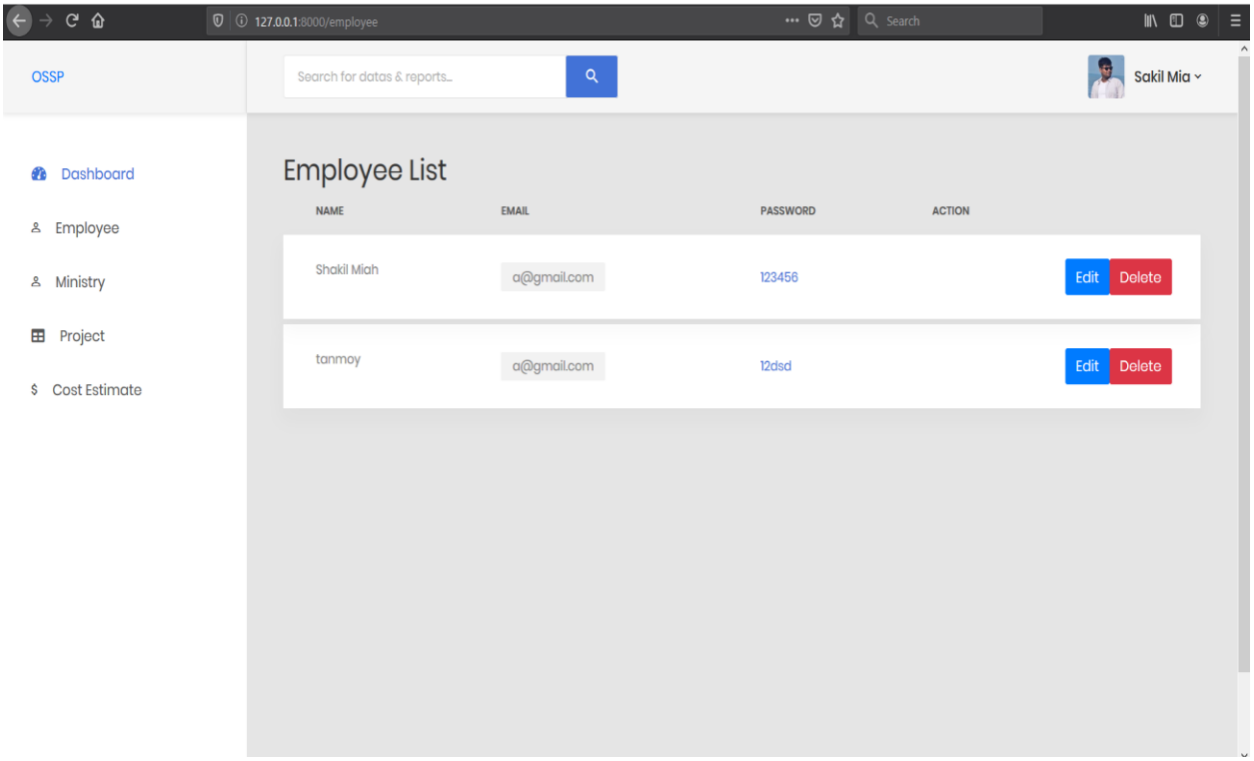
5.2.4. Testing Schedule

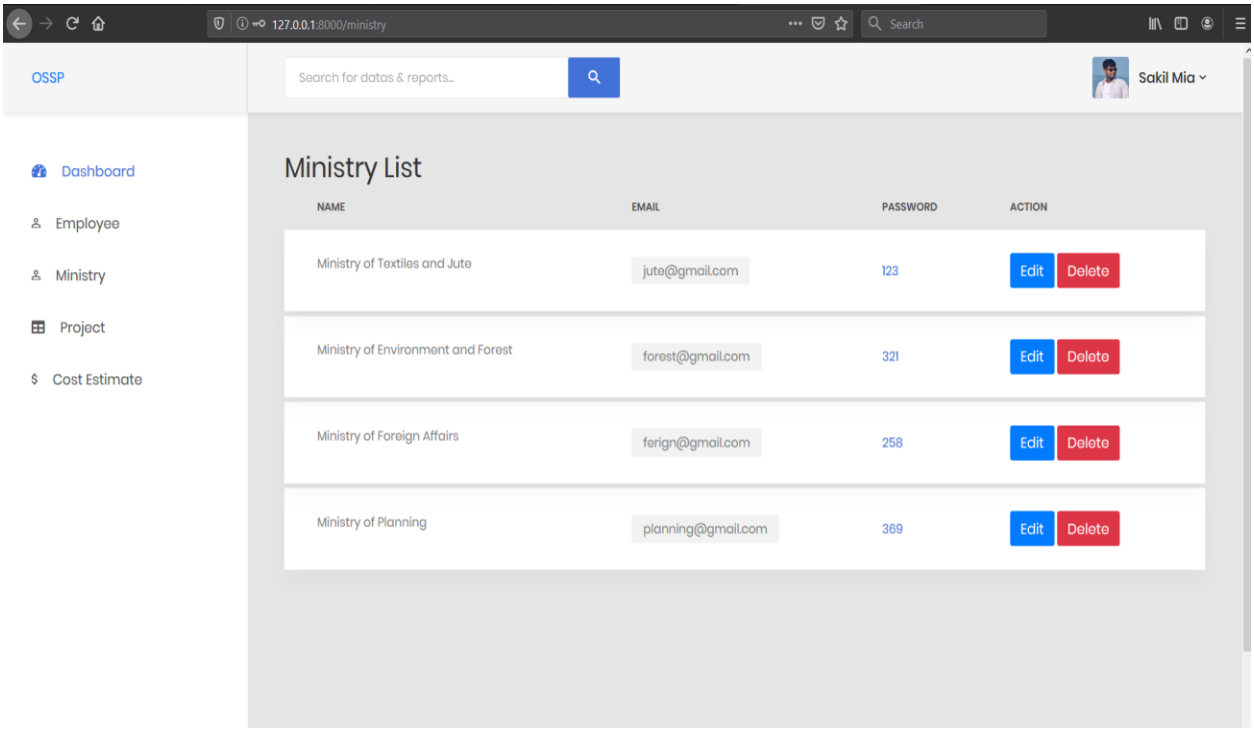
Test Phase Time	**Time**
Testing plan create	7 days
Test specification	7 days
Unit testing	During development time
Component test	7 days
Integration testing	7days
Validating use cases	5days
Testing user interfaces	10days
Load testing	4days
Performance testing	10days
Release to production	5-6 days

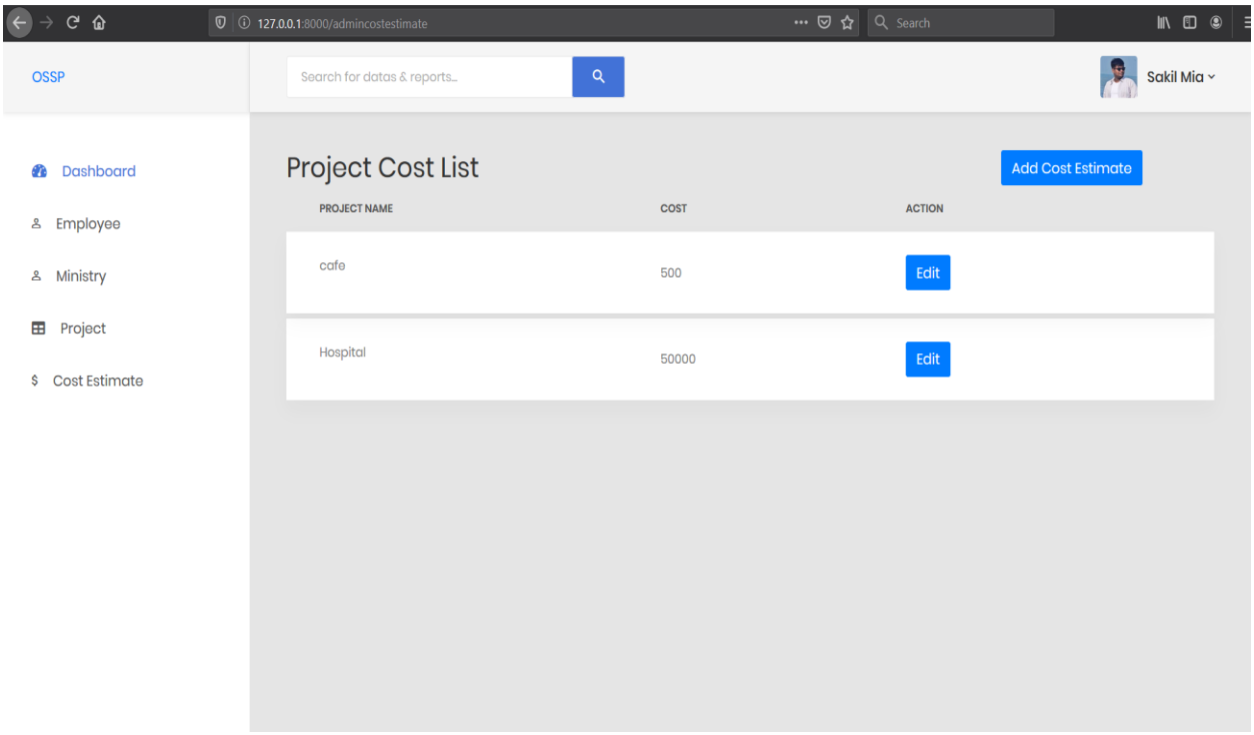
Chapter 6: User Manual

6.1. Admin

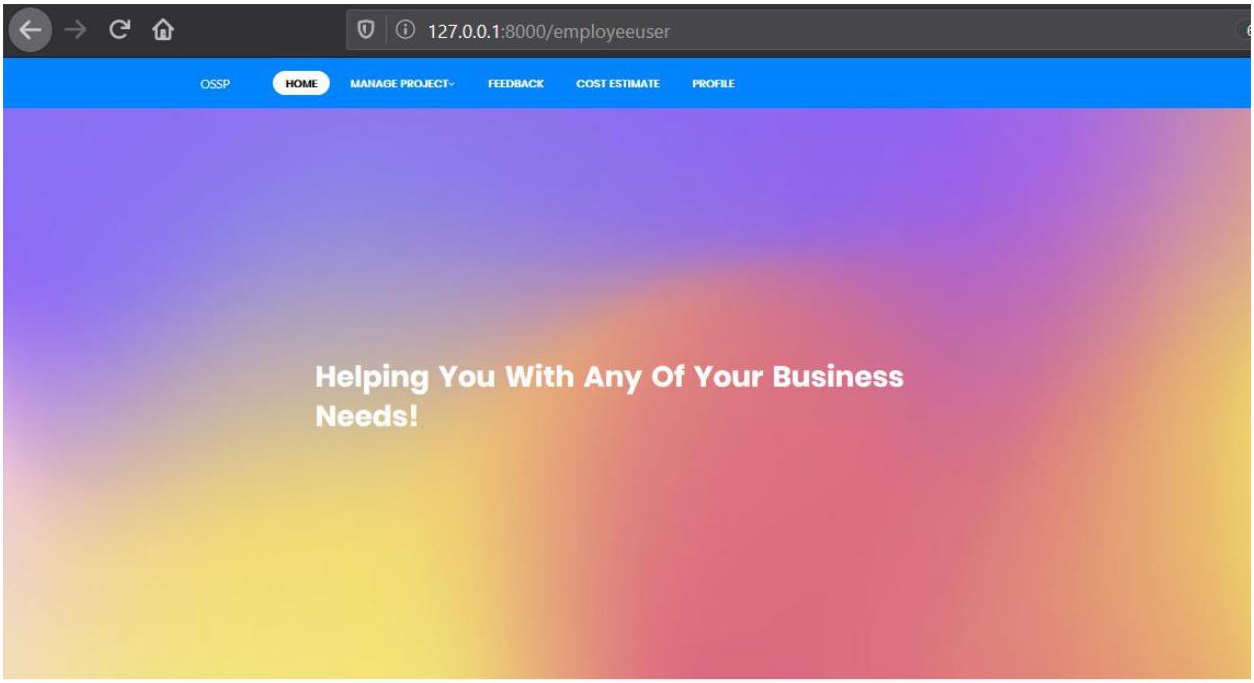


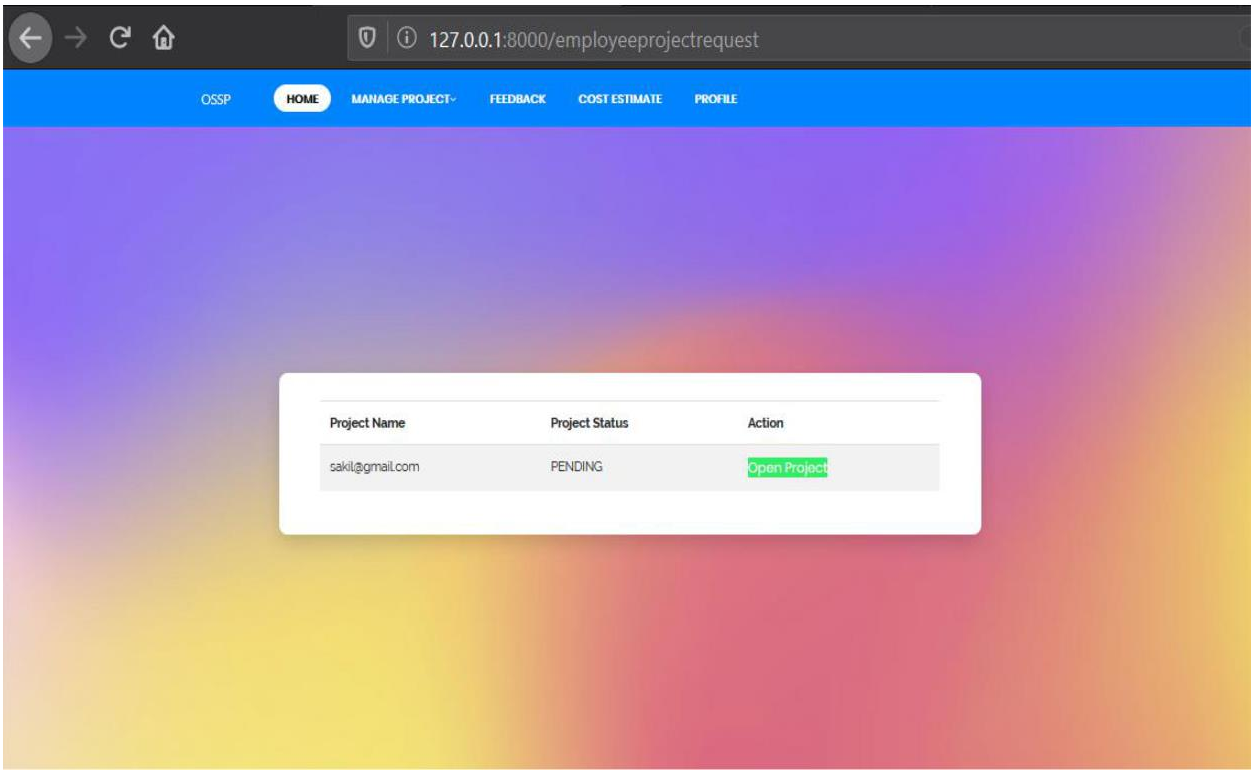


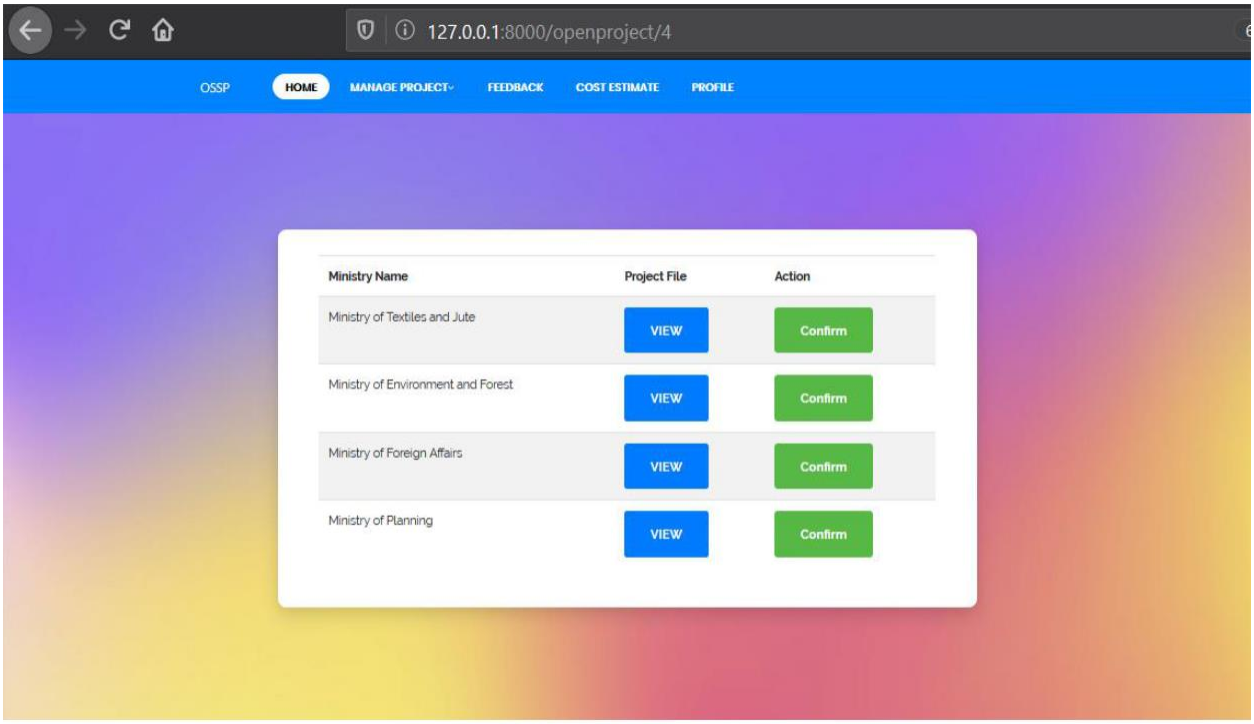


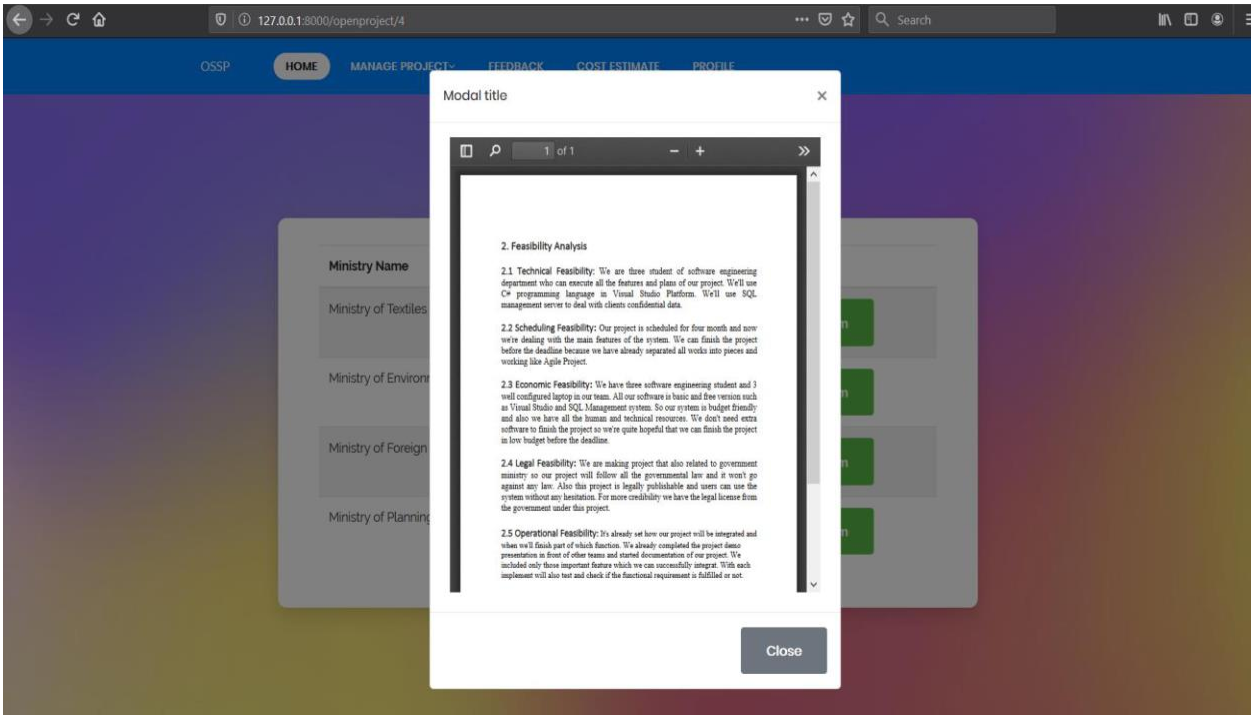


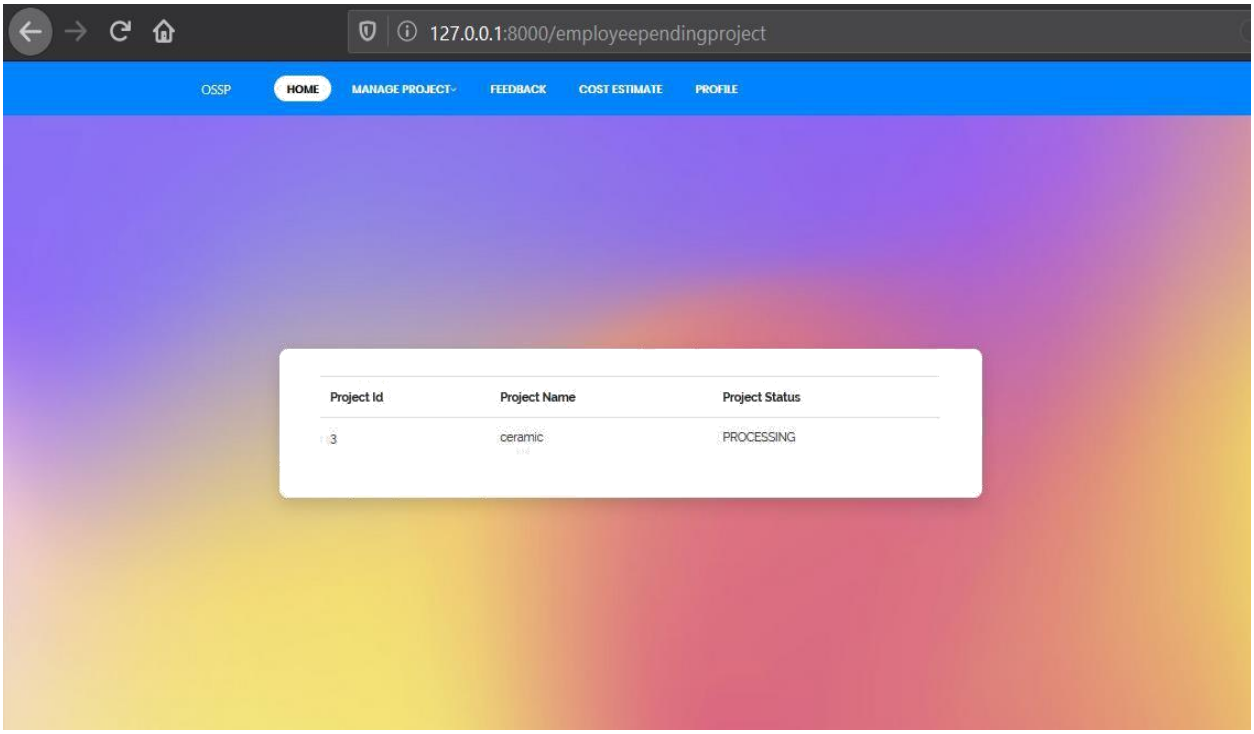
6.2. Employee











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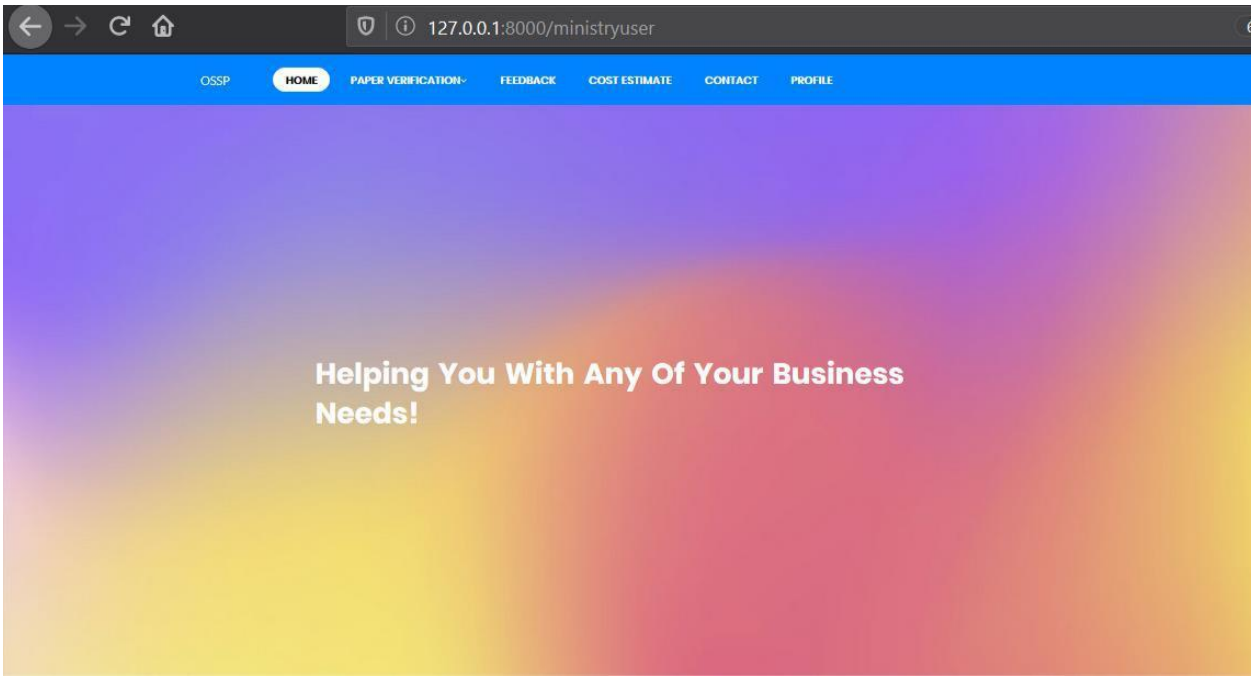
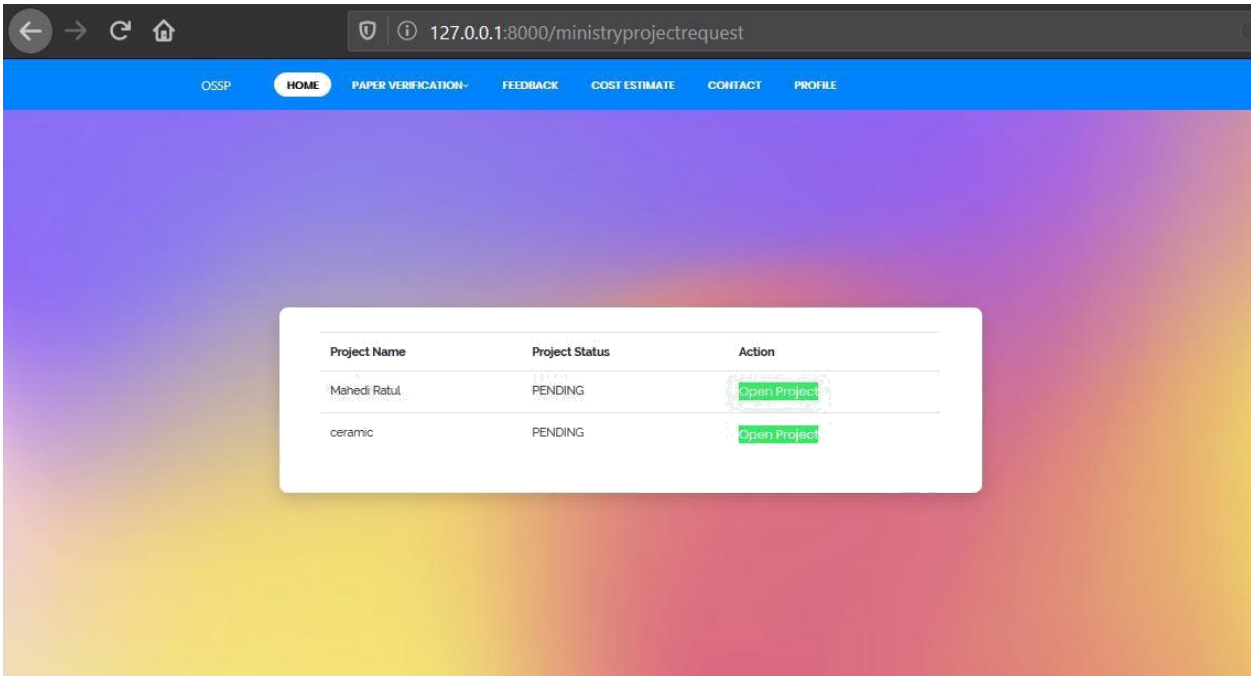
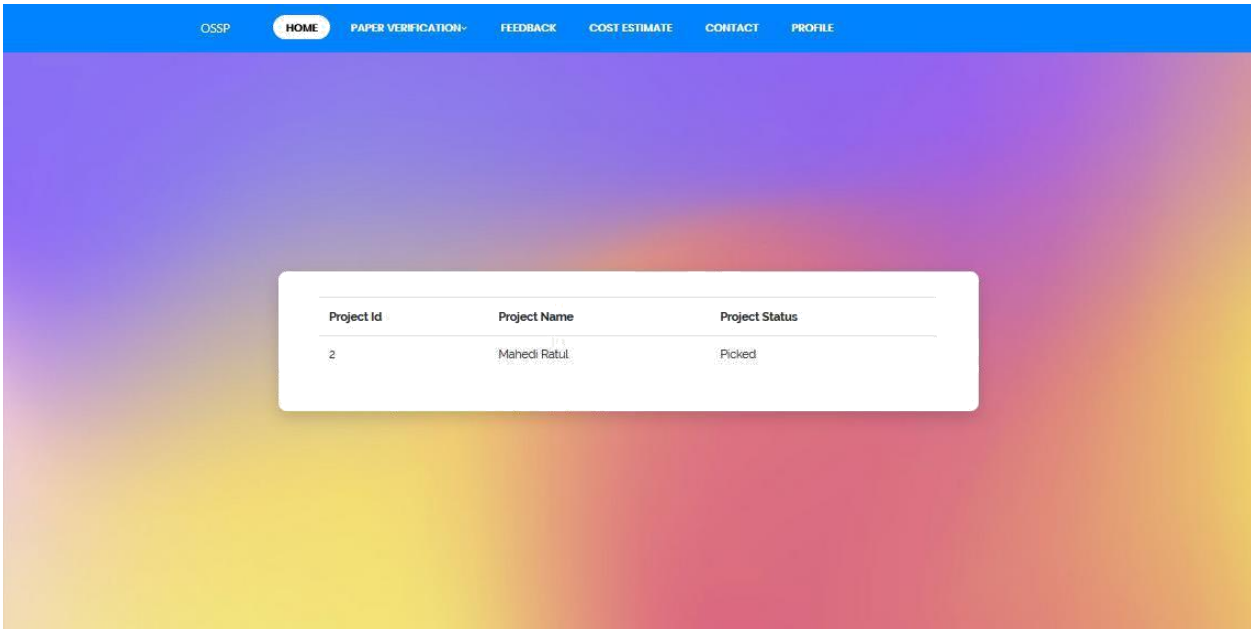
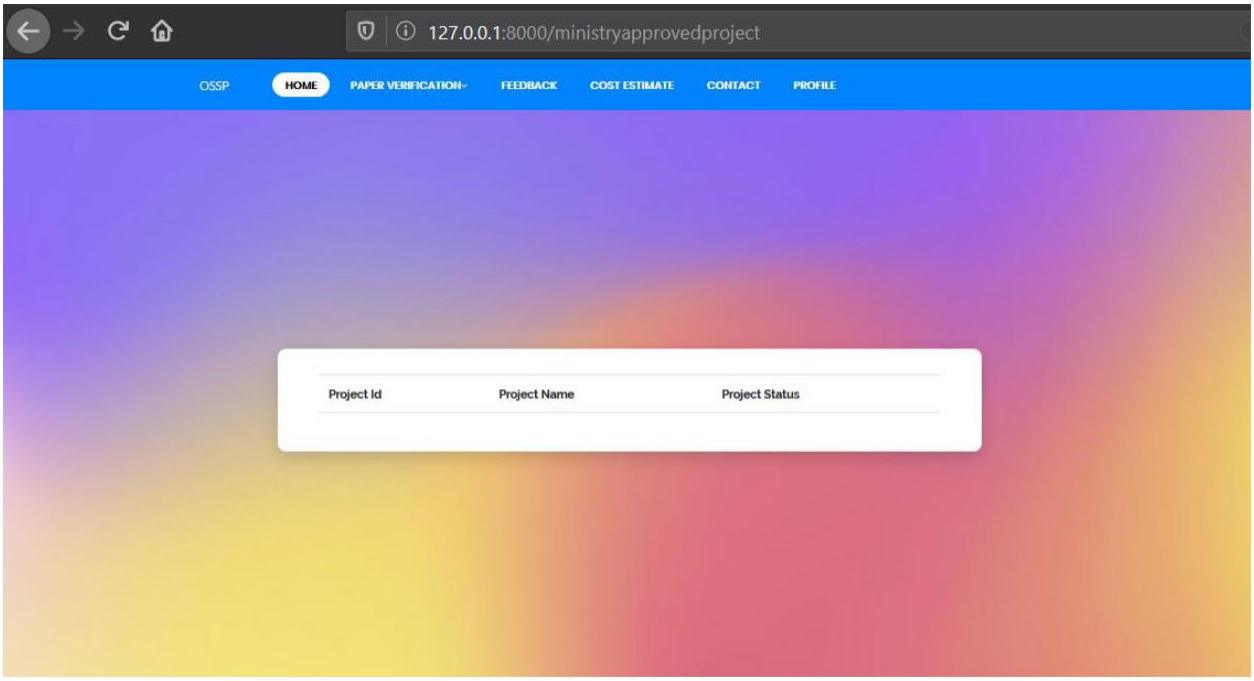
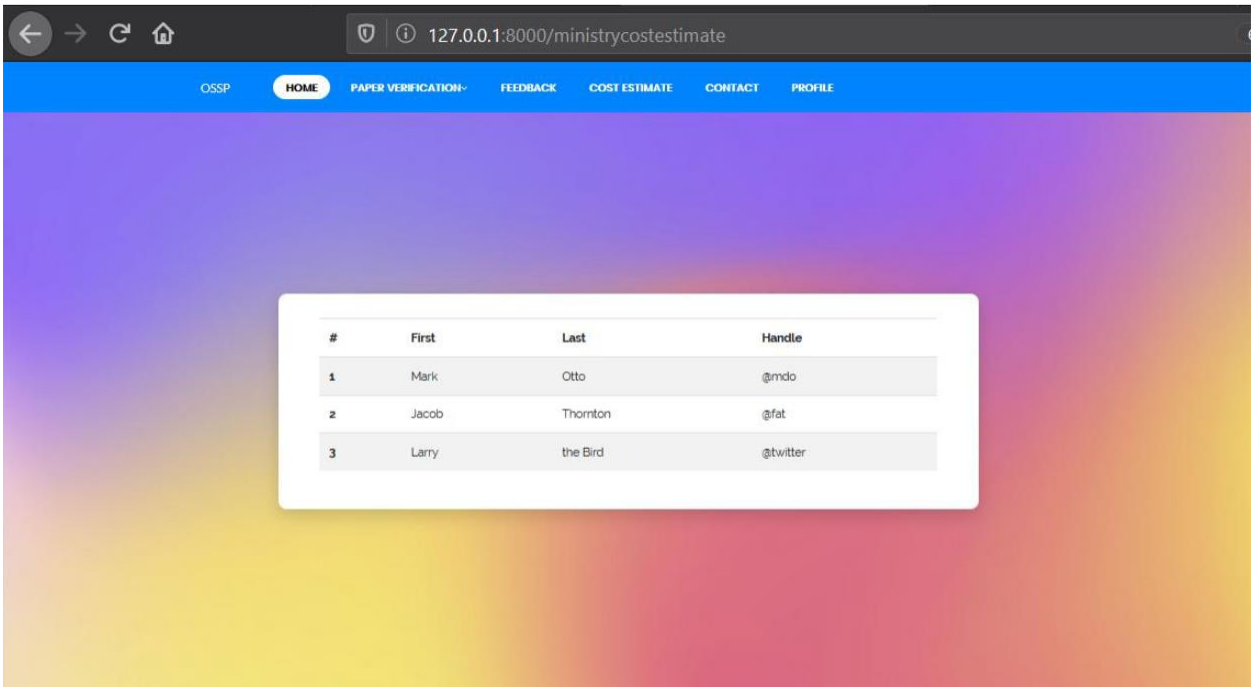
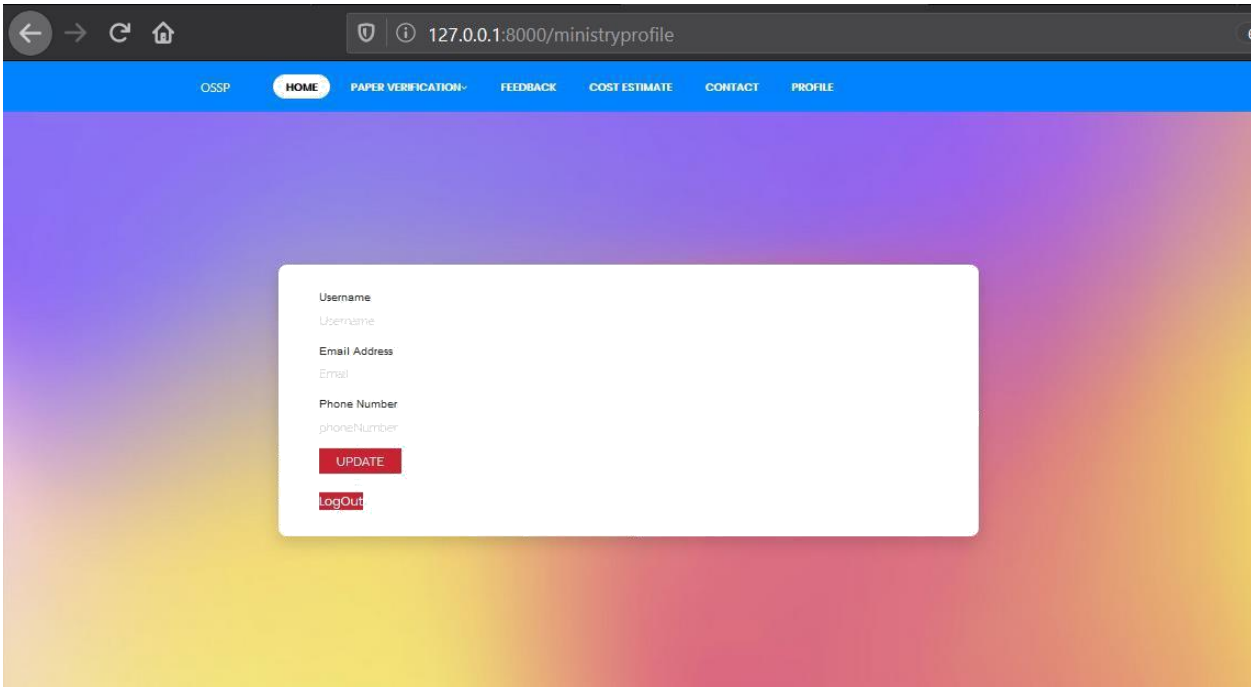




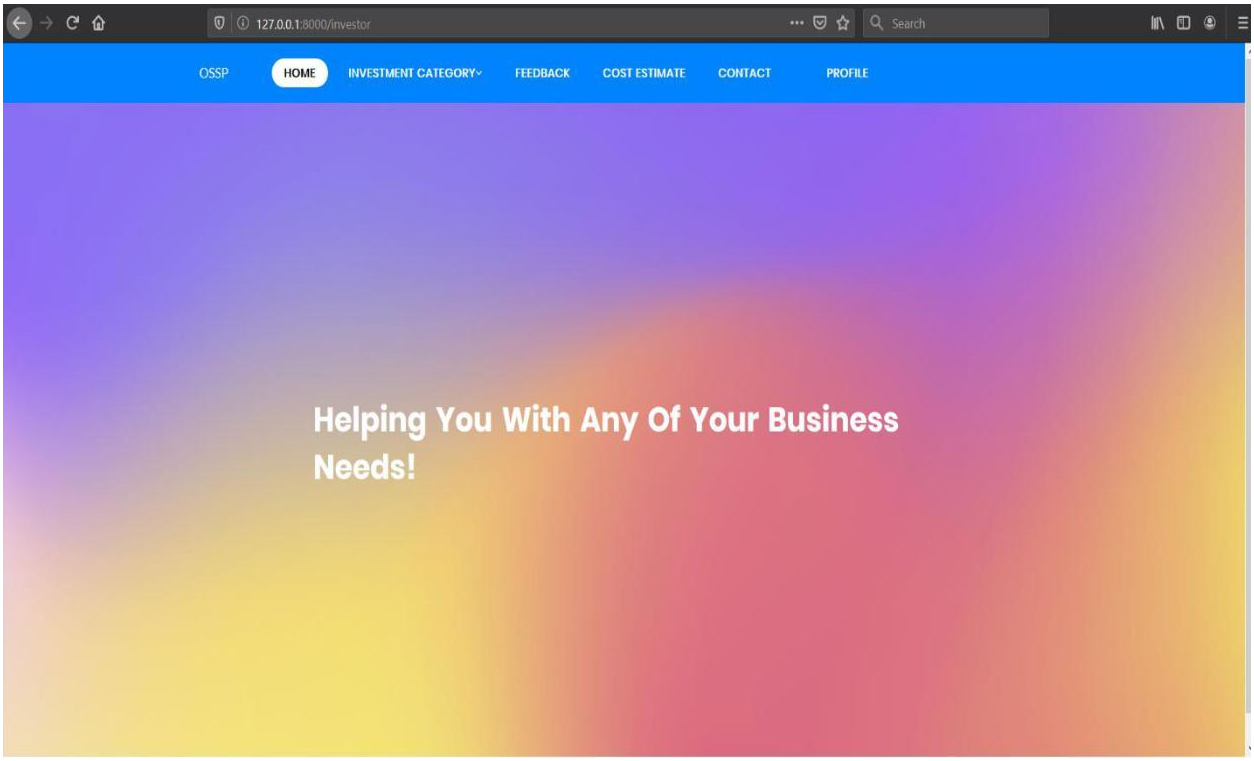


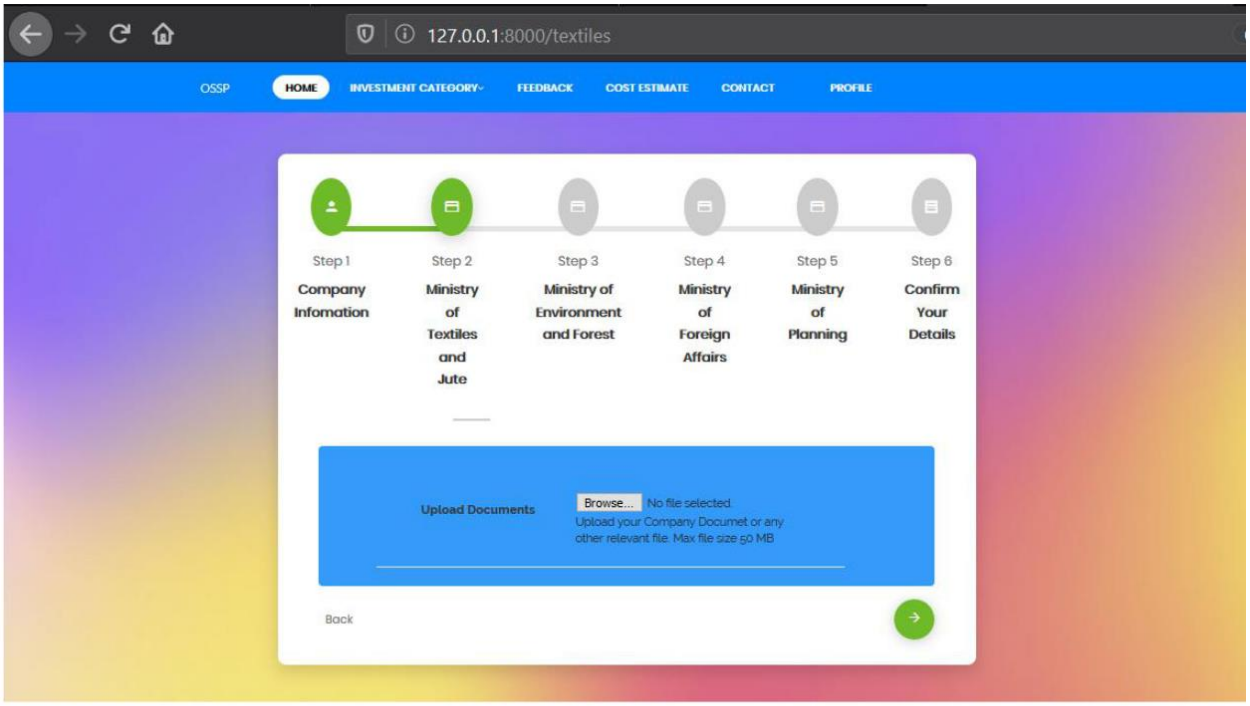


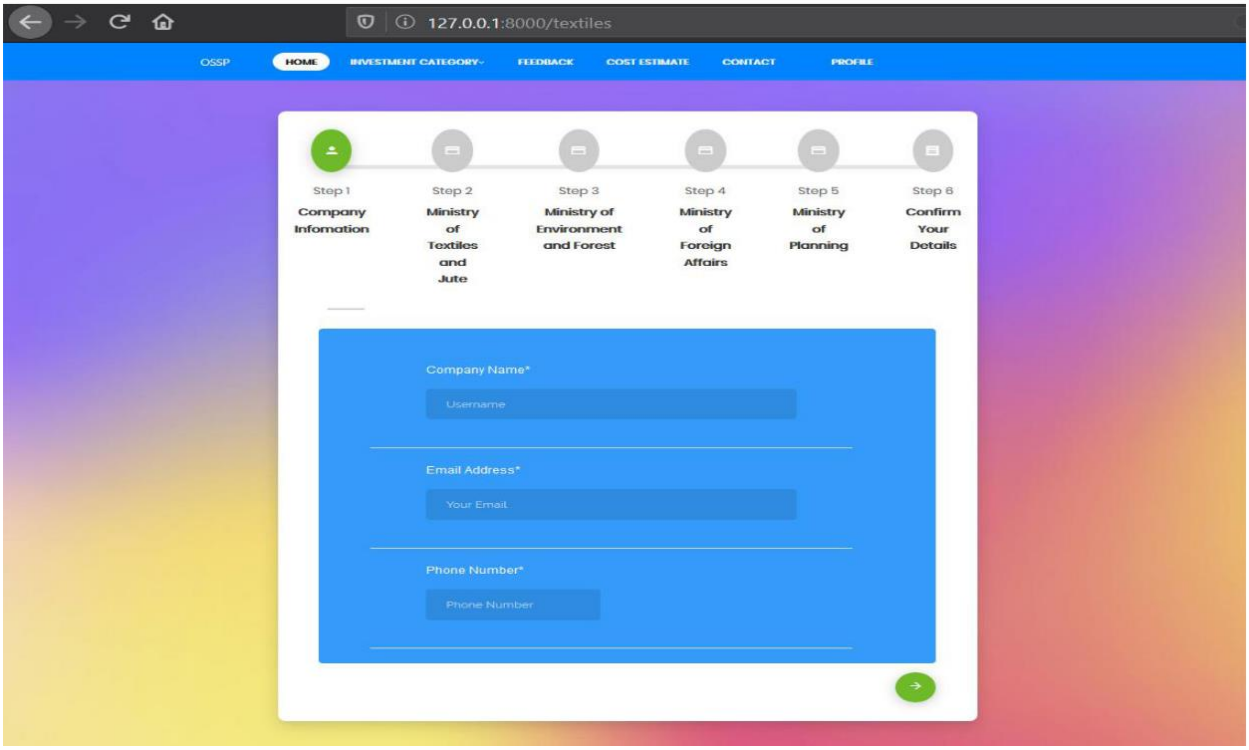


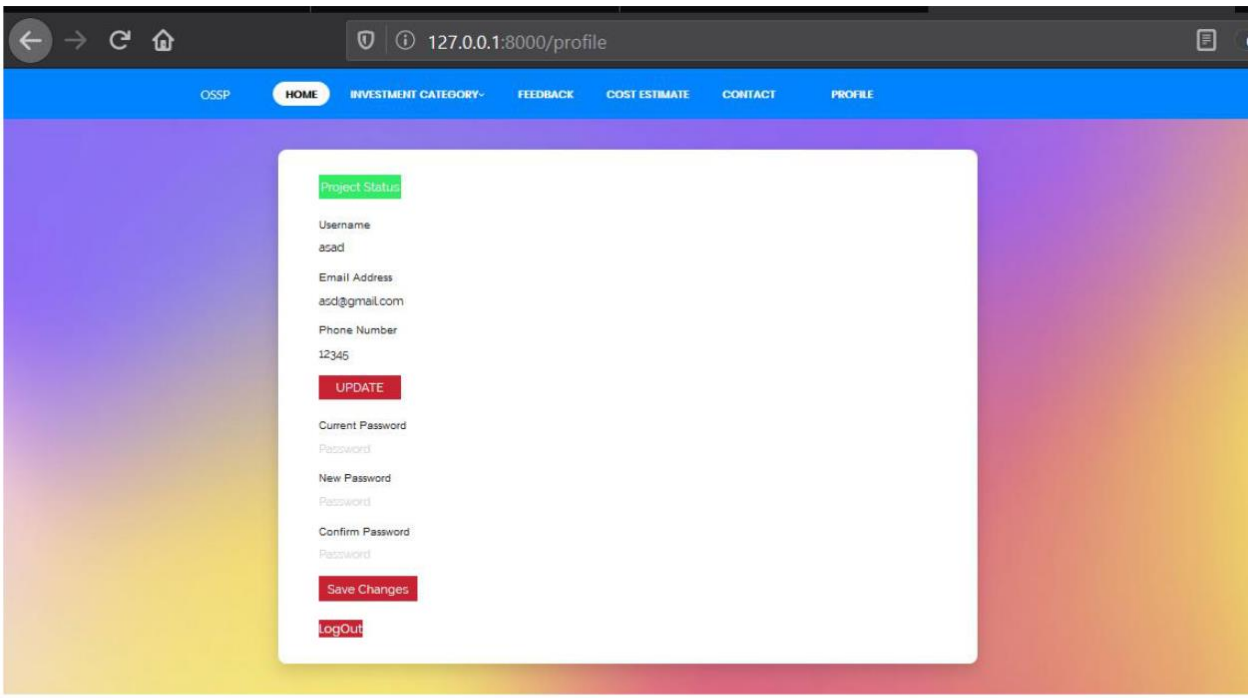


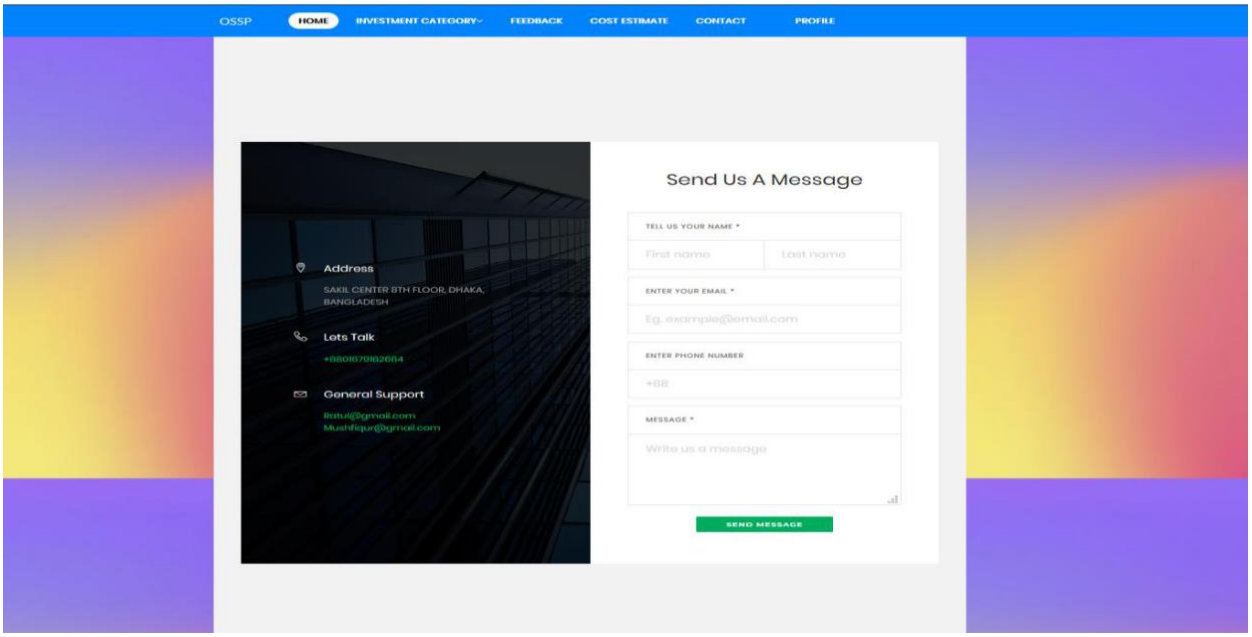
6.4. Investor

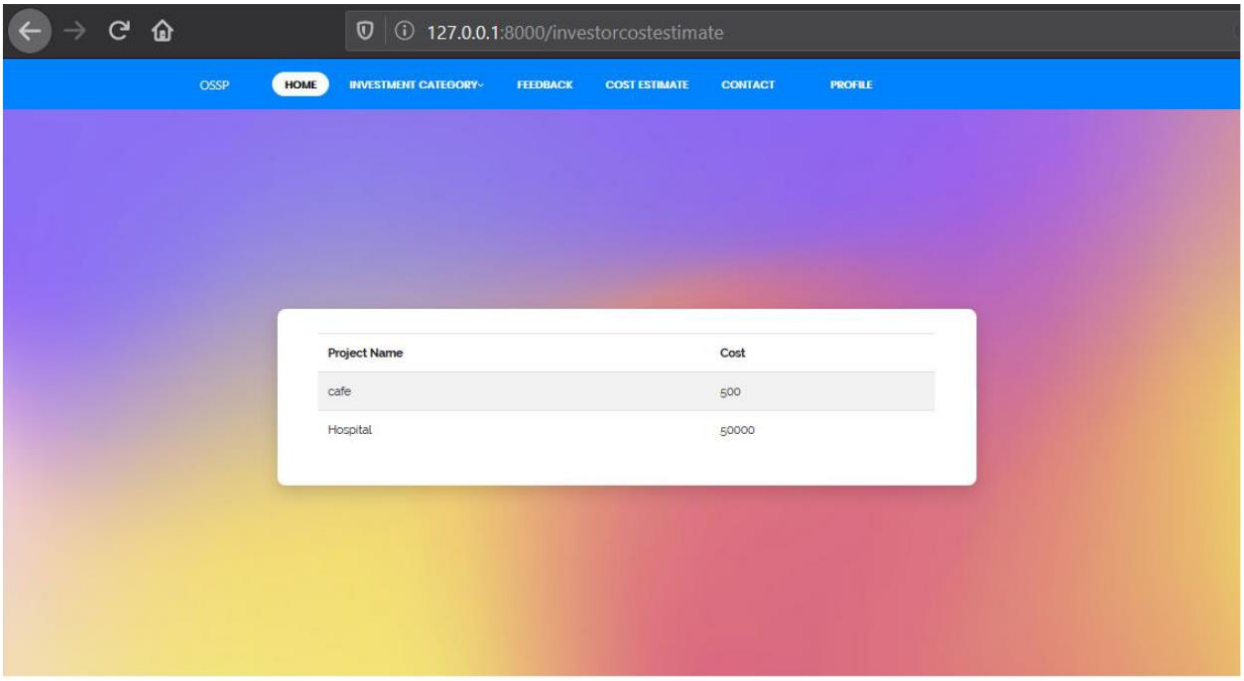


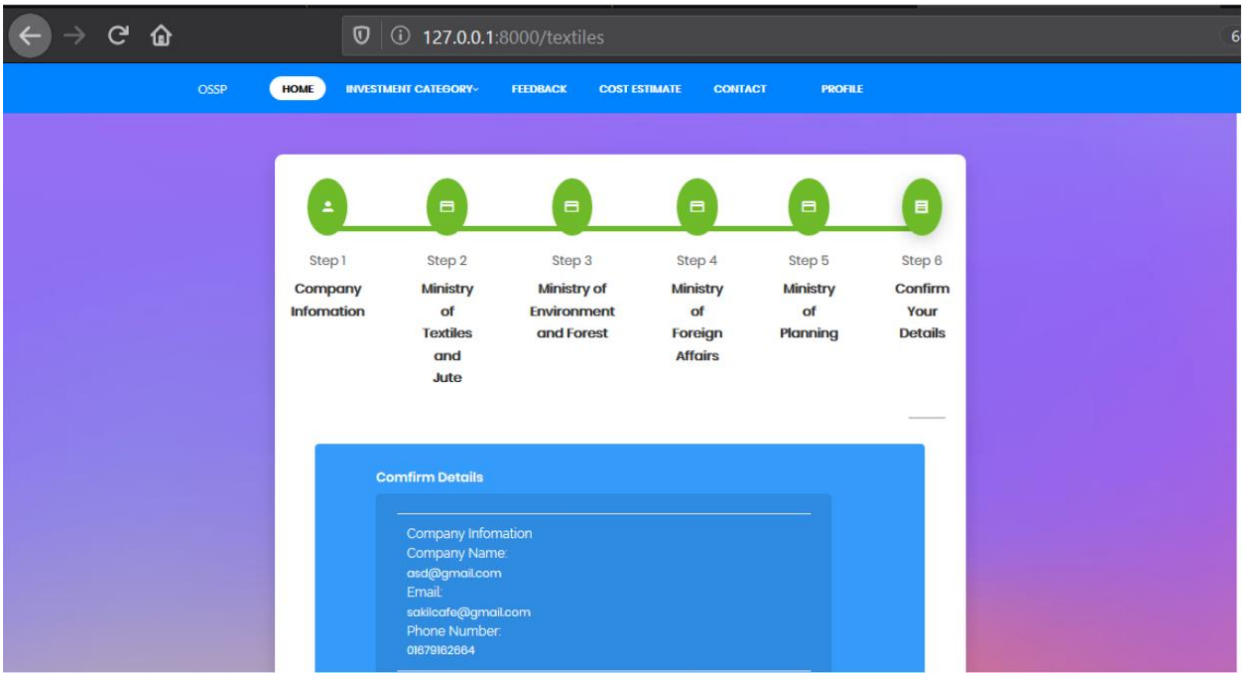












Chapter 7: Project Summary

"One Stop Service Point" is the name of my project. My project had begun in January. I began this project by gathering the necessary data from users. Then I create a design for my project. Following that, I proposed it. Then I got down to business.

The database is the most important component of any system. It is essential for every system to function properly. As a result, I created a database diagram with tables that have suitable relationships. Following that, I created the user interface. Following that, I began writing the project's basic functionality. A quality assurance staff can be found in almost every software organization. If any bugs persist after the project is handed over to the stakeholders, the entire project may be ruined. As a result, a testing strategy is critical. And, after completing the assignment, I am confident in the project's quality.

7.1. GitHub Link

7.2. Limitations

For this project, it has a limitation. Now I will describe it.

Web site only: This system only use for website. It’s could be use in phone browser also.

7.3. Obstacles & Achievements

I feel that if there are no hurdles in the way of a project's development, then there are no challenges. I had no idea how the software development life cycle worked before starting this project. I've learned a lot from working on this project. My supervisor has been really helpful to me since the beginning of this project's growth.

There are a few more challenges and accomplishments that I'll go through later.

Lack of User’s Engagement: Every user in this system has a separate function. And they're almost always preoccupied with their daily routines. As a result, I didn't obtain all of the users in a timely manner.

Scope Change: Some features may need to be replaced or adjusted at times. Then I'll have to go through the reverse engineering procedure. And it was created all over again to satisfy the new criteria. It was also a source of frustration for me at times.

7.4. Future Scope

This system is now solely web-based. This endeavor has taught me a lot about thinking. I intend to release the Android and iOS versions of this system in the future.

7.5. References

I've learned a few things from several platforms. Those references will, of course, be mentioned.

Author (or Company Name): Refsnes data
Publish date: 1998
Website title: W3School
Date of access: 10-01-2019
Website address (URL): https://www.w3schools.com/

Author (or Company Name): John Resig
Publish date: 2006
Website title: jquery
Date of access: 10-01-2019
Website address (URL): http://jquery.com/

Author (or Company Name): Chad Hurley, Steve Chen, Jawed Karim
Publish date: 2005
Website title: YouTube
Date of access: 10-01-2019
Website address (URL): https://www.youtube.com/

Author (or Company Name): Tom Preston-Werner , Chris Wanstrath , P. J. Hyett , Scott Chacon
Publish date: 2008
Website title: Github
Date of access: 20-04-2019
Website address (URL): https://github.com/

Author (or Company Name): Mark Otto, Jacob Thornton
Publish date: 2011
Website title: Bootstrap
Date of access: 20-02-2019
Website address (URL): https://getbootstrap.com/

Author (or Company Name): Google LLC
Publish date: 2005
Website title: Google Maps
Date of access: 20-03-2019
Website address (URL): https://www.google.com/maps/