PES UNIVERSITY

(Established under Karnataka Act No. 16 of 2013)
100-ft Ring Road, Bengaluru – 560 085, Karnataka, India

6th Semester Project Report on

POST & FIX

Submitted by
JEEVAN JAGADISH
(PES1201801855)

Jan – May, 2020

Under the guidance of

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FACULTY OF ENGINEERING
DEPARTMENT OF COMPUTER APPLICATIONS
PROGRAM – MASTER OF COMPUTER APPLICATIONS

CERTIFICATE

This is to certify that the project entitled

POST & FIX

is a bonafide work carried out by

JEEVAN JAGADISH - PES1201801855

in partial fulfillment for the completion of 6th semester project work in the Program of Study MCA with specialization in Data Science under rules and regulations of PES University, Bengaluru during the period Jan. 2020 – May 2020. The project report has been approved as it satisfies the 6th semester academic requirements in respect of project work.

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INTERNSHIP CERTIFICATE

![reckonsys logo]

31st December 2019

Jeevan Jagadish
Email: Jeev12597@gmail.com

Dear Mr Jeevan,

Thanks for your interest in doing an internship with us.

We are pleased to offer you an internship with our firm for the duration of 6 Months at a stipend of INR 10,000 per month (All-Inclusive). You will have to arrange for your stay and travel during the internship and fend for yourself. You shall indemnify us against any personal liability/loss/injury or such things during your internship with us in Bangalore. You need to sign an NDA for some of the firm's work which is confidential for competitive reasons and not disclose/discuss those details with others during or after your internship.

Please note that is not an offer of full-time employment, however on successful completion, you may be provided with a full-time employment role, the details of which will be discussed at that moment.
- You will report to Sathish Visanagiri, CEO & Founder - Reckonsys Tech Labs Pvt. And Your primary work includes the following but not limited to:

- Work on building front-end components using HTML, CSS, Angular 4/5, Jquery and JavaScript.
- - Working time would be 9 AM - 6 PM and every Saturday would be a holiday.

We look forward to having you onboard soon.

And feel free to contact us in case of clarifications/further information.

Yours sincerely

V. Sathish Kumar

Sathish Kumar Visanagiri

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080 6135 6100

Enzyme Tech Park, #1604, 1st Floor, 25th Main Road, Sector 2, HSR Layout, Bangalore - 560102

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Reckonsys Tech Labs Pvt Ltd
CIN # U74900KA2015PTC080624

DECLARATION

I, **JEEVAN JAGADISH,** hereby declare that the project entitled, **POST & FIX,** is an original work done by us under the guidance of **Ms. Deepthi S Narayan,** Assistant Professor, Department of Computer Applications, PES University and is being submitted in partial fulfillment of the requirements for completion of 6th Semester course work in the Program of Study **MCA**. All corrections/suggestions indicated for internal assessment have been incorporated in the report. The plagiarism check has been done for the report and is below the given threshold.

PLACE: Bengaluru

DATE:

JEEVAN JAGADISH
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ACKNOWLEDGEMENT

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ABSTRACT

This project aims at developing a web application that depicts a social networking site which is B2B oriented platform. Using this application, Poster can post their problem statement and Fixer can fix the problem statement based on the bidding in a competitive tender process. Here organization can play both the roles as a Poster and Fixer.

Through this application, it allows the organization to create their profiles and connect by registering with the site. The poster can post their problem statements related to software and hardware domain. The fixer can select the relevant project domain and bids on the basis of cost and time.

The main objective of the application is to help the organization to enhance their business and can grab suitable projects, rather than waiting for clients to come to them. On the other hand, client gets great opportunity to work with professionals in their fields.

INTRODUCTION

1. INTRODUCTION

1.1 OVERVIEW

1.1.1   PROBLEM DEFINITION

Develop secure, consistent and cost-effective web application which can be used to manage Business to Business oriented platform in a more efficient manner. As there is high significant growth of internet around the world the businesses are lacking to find the right talent and professionals who can meet the business needs and this can also increase business competitiveness and flexibility in working towards the live projects.

1.1.2   PROPOSED SOLUTION

POST & FIX is an open-source and cost-effective web application which helps the Poster to post the problem statement and Fixer to fix the problem statement according to their domain. The application is rapidly faster since it is deployed on the Cloud platform which serves as the Platform as a Service (PaaS). Through this application it gives lots of opportunity for the IT professionals like startup companies to enhance their business in the market. This application gives the high-level confidence to the client who post the problem statement(project) since it is fixed by the high IT professionals like entrepreneurs. Finally, the proposed solution helps both IT and Non-IT firms to improve their quality of work and business in the market.

1.1.3   PURPOSE

The purpose of the project is to provide the environment for both IT and Non-IT firms (Organization) to enhance their business perspective and build the network.

POST & FIX is the solution connecting businesses and skilled professionals, it also empowers both poster and fixer to confidently work together in new and more flexible ways. As we know that there are lots of problem statement but we couldn't find the right person to fix it and through this application clients can opt for the right person to fix the problem statement in the competitive tender process. It also helps to build a better economic opportunity for the organization.

This application also gives the opportunity to Non-IT firms where they can bid for the projects like Content Writing, Data collection, Analyst and etc., and it's not meant that IT professionals can only fix the problem statement but they can also have the opportunity to post the problem statement related to the hardware requirements and which in turn plays a dual role in the application.

1.1.4 SCOPE

Emerging application for all IT and Non-IT firms to enhance their business both technically and economically and through the POST & FIX application organization can play Dual role as a Poster and Fixer. Professionals has the opportunity to work for the live project and explore their skills and knowledge. Poster has the wide range of opportunity to select the best talent in the market based on the reviews, rating, bid price and profile they decide who gets the project. Fixer has the feature to filter the projects based on their own domain and bid for the project in the tender process.

POST & FIX provide emerging top skill entrepreneurs like full stack developers, Hardware experts, UX/UI Designers and Data scientist. Fixer gets the opportunity to work for the projects like Block chain, IoT, Machine learning and Artificial intelligence projects.

Once the project is committed on the basis of contract agreement both poster and fixer can communicate through the message to reduce the conflicts. Fixer can work confidently since it is based on the contract agreement and after the contract period of the agreement fixer needs to deliver the product according to their needs. Finally gets paid for the best in the market which in turn helps both poster and fixer to improve their business globally.

1.2 COMPANY PROFILE

Reckonsys Tech Labs Private Limited

Reckonsys Tech Labs Private Limited is a Private joined built up on 29th May 2015. It is named Non-govt organization and is Registrar of organizations. Reckonsys is a product-based company and shows improvement benefits firm worked in making remarkable answers for basic issues by utilizing the correct innovations and top abilities and practices. Reckonsys works with Start-up authors to assemble their MVP's and with existing Enterprises to help take care of intriguing issues to upgrade the organization all around. The Company is professionalised in the different services such as:

The Company is professionalised in the different services such as:

- Mobile App Development
- Web Development
- Software Development
- App Designing (UI/UX)
- Cloud Computing Services
- Bot Development
- Blockchain Technology
- IoT Development.

LITERATURE SURVEY

2.   LITERATURE SURVEY

2.1 BACKGROUND AND MOTIVATION

Existing system called as freelancer is a world's largest freelancing and crowdsourcing marketplace for number of agencies and individual freelancer where agents post the project and freelancer will bid for the project. Though this application was more emerging application but agents and freelancer had to come across lots of drawbacks where they need to pay a huge amount once they are done with the free trial of thirty days so if the agents need to post the problem statement they need to deposit a certain amount as a activation charges.

Through this application freelancer wasn't able to work confidently since the clients use to juggling the projects between different freelancers and it was not sure that freelancer will get paid since it is not based on the contract agreement. The major drawback of the existing system is it doesn't enable the agents to give feedback or rating to their projects.

Freelancer application is a common downfall so being a freelancer is that you will ultimately be isolated from a team. It deals only individual freelancer rather than companies' approach towards the development of the project. So, all the drawbacks of the existing system are taken as a core requirement towards building the proposed project POST & FIX.

2.2 FEASIBILITY STUDY

2.2.1 ECONOMIC FEASIBILITY

The application POST & FIX will have an associated hosting cost with the cloud platform. Since the application doesn't consist of any multimedia data transaction, bandwidth required for processing the operation is moderate level.

Since the application is deployed in the cloud platform maintaining charge will be considered as per the instance is running in the form of hourly bases. Therefore, the project POST & FIX can be financially feasible.

2.2.2 TECHNICAL FEASIBILITY

The project POST & FIX is a web-based application. The main technologies and tools that are associated with POST & FIX are

- HTML
- Sass
- JS
- Python
- PostgreSQL
- Django
- Diagram drawing tools
    - Draw.io
- Poster and video tools
    - Filmora
    - Piktochart.

All the technologies are freely available for the end-user and the technical skills required are manageable. Therefore, the project POST & FIX is technically feasible.

2.2.3 RESOURCE AND TIME FEASIBILITY

Resource that are required for the POST & FIX project includes:

- Laptop
- Moderate network
- Internet.

Therefore, the project POST & FIX has the required resource feasibility.

2.2.4 RISK FEASIBILITY

Risk feasibility can be discussed in different context:

- Risk associated with size:

The application will have a significant amount of code lines. As the system doesn't contain any multimedia aspect, the complete project size will not exceed 600MB.

- Requirement changes:

The requirements are clearly identified during the implementation phase. Being a general product for the end-user the requirements will be changed only if new functionalities like video conference are added to the application POST & FIX.

2.3 ABOUT TOOLS AND TECHNOLOGY

HTML (Hypertext Markup Language) is a web framework written in Python language. It is categorized as a small-scale framework since it doesn't require a specific tools or libraries to take a shot at. It has no database pattern layer, approval, or whatever other segments where prior outsider libraries or devices give regular usefulness.

Bootstrap is a free and open-source CSS system coordinated at responsive, versatile first front-end web advancement. It contains CSS-and JavaScript-based structure layouts for typography, structures, and other interface segments.

Sass (Syntactically awesome style sheets) is an extension of CSS that empowers to utilize highlights like variable, nested rules, inline imports and more. It also helps to keep the code organised and permits us to make templates quicker.

Python is an interpreted, high-level, broadly useful programming language. Made by Guido van Rossum and first discharged in 1991, Python's structure theory underlines code comprehensibility with its outstanding utilization of noteworthy whitespace.

Django is a high-level python web framework that energizes quick turn of events and design. Worked by experienced engineers, it deals with a significant part of the issue of web improvement, so you can concentrate on composing your application without expecting to waste time. It's free and open source.
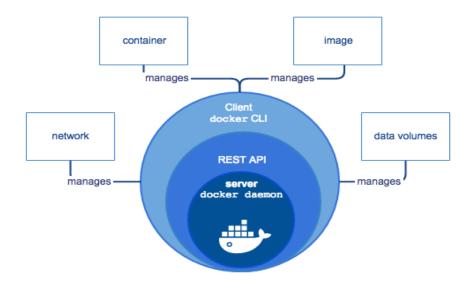
GitLab is a complete DevOps platform, delivered as a single application. This makes GitLab unique and makes Concurrent DevOps possible, unlocking your organization from the constraints of a pieced together toolchain. This tool provides a Git-repository to manage, track and continuous integration/deployment.

CLOUD PLATFORM

Docker is a tool intended to effectively create, deploy and run their applications in a sandbox called as **Containers** and which serves as a PaaS. The key advantage of docker is that it permits clients to amass an application with the entirety of its conditions into a normalized unit for programming improvement process. In contrast to virtual machine, Container don't have high overhead and thus empower increasingly productive use of the fundamental framework and assets.

Docker Engine

Figure 2. 1 Docker Engine

2.4 METHODOLOGY

Figure 2. 2 Agile Methodology

Agile is a term used to describe approaches towards the software development emphasizing in a iterative process, where the team begins with requirements phase, analysis, Designing, implementing according to the business needs, test and finally the product will be delivered to the end user for the user acceptance test (UAT). So, agile follows iterative approach instead of trying to deliver it all at once near the end of the development.

Why Agile?

- Increases the transparency
- Responding to the change over the following plans
- Improved software quality
- On time and project completion

HARDWARE AND SOFTWARE

3.   HARDWARE AND SOFTWARE REQUIREMENTS

3.1 HARDWARE REQUIREMENTS:

Processor- Intel Dual Core

Hard Disk - 100 HDD

RAM – 4GB

Mouse, Keyboard – Any Compatible

3.2 SOFTWARE REQUIREMENTS:

Operating System: Windows 10 / Ubuntu 18.04

Front end: HTML, Sass, Bootstrap, JavaScript

Back end: Python 3.8.0

Database: PostgreSQL 10.12

IDE: PyCharm community edition 2020.1.1

Web framework: Django 3.0

Cloud Deployment: Docker (AWS)

Other Technologies used: GitLab

SOFTWARE REQUIREMENTS SPECIFICATION

4.   SOFTWARE REQUIREMENTS
SPECIFICATION

4.1 USERS:

Figure 4. 1 User Model

The proposed project POST & FIX has different users:

- Organization: It is considered to be an IT or Non-IT company.
- Poster/Fixer: Once the organization is registered with the site, they can be either Poster or Fixer, Poster who can post the project and Fixer who can bid for the project.
- User: The admin will add the users to their organization to perform the rest of the operations.

4.2 FUNCTIONAL REQUIREMENTS:

- Registration and Login

This module is used to register the organization with their details and login using the username and password.

- Add user

Through this module, admin can add the users of the organization to the application.

- Poster Dashboard Module
  - Create Project

  It is used to post the project according their requirements along with the time period.

  - View bids

  It's used to provide the comparative study of the fixer profile, who bids for the

  project.

  - Award project

  Helps the poster to award the project to the fixer on the contract-based agreement.

  - Message

  This module provides real time conversation with the fixer who bids for the project.

  - Review project

  Helps to provide the review of the project by poster and where it helps to build high professional profile.

- Fixer Dashboard Module
  - View project

  This is used to provide the list of recently uploaded projects.

  - Bid project

  It is used to bid for the project according to their domain with the base price.

  - Status

  This module is used to provide the status to their projects like Under review, Selected, Rejected.

  - Search

  It provides a convenient way to filter the project according to their domain.

- Message

This module provides real time conversation with the poster.

- View Review

 It is used to view the status updated by the poster of their project.

4.3 NON-FUNCTIONAL REQUIREMENTS:

- Portability

The application running on one platform can be easily converted to another. Also, it prescribes how well system components may be accessed and may interact from two different environments more efficiently.

- Availability

The ability of the application to deliver services when user requested. And it also describes how likely the system is accessible for a user at a given point of time at any situation.

- Security

The application developed with feature which protects and assures that all sensitive data inside the system will be protected against malware attacks/virus or unauthorized access.

- Scalability

The degree to which the application is able to expand its capabilities or high workloads under which the system will still meet the performance requirements of the business.

- Reliability

The ability of the application to behave consistently in a user-acceptable manner without a failure or interrupt for a given period of time under predefined conditions.

SYSTEM DESIGN

5. SYSTEM DESIGN

5.1 ARCHITECTURE DIAGRAM

Figure 5. 1 Django Architecture Diagram

5.2 FLOW DIAGRAM

Figure 5. 2 Flow Diagram

DETAILED DESIGN

6.   DETAILED DESIGN
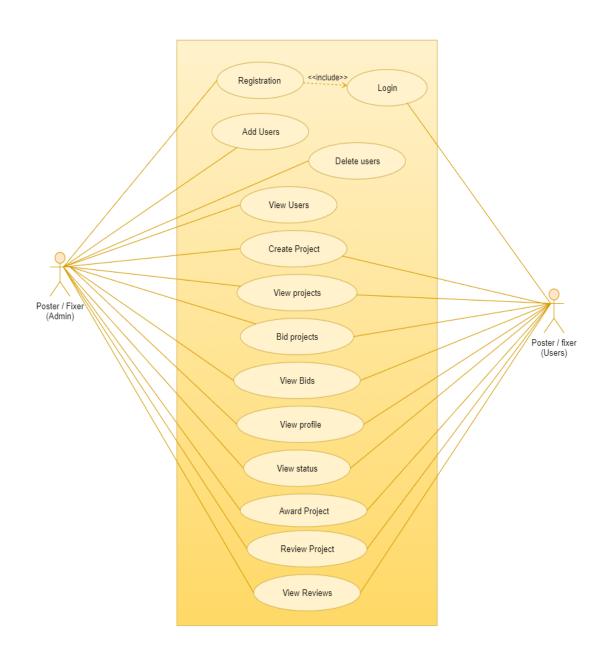
6.1 USE CASE DIAGRAM

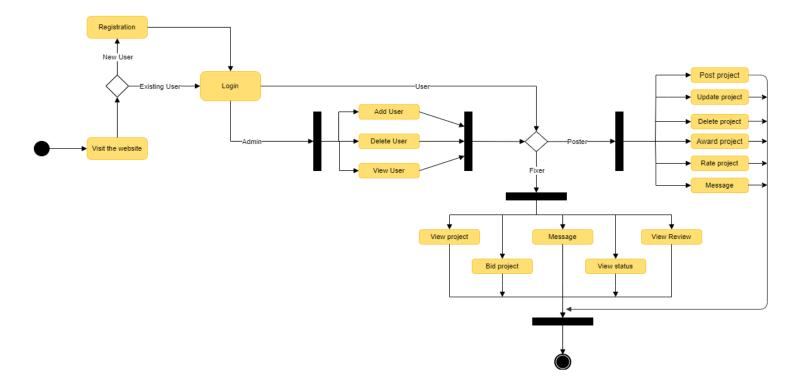Figure 6. 1 Use case Diagram

6.2 ACTIVITY DIAGRAM
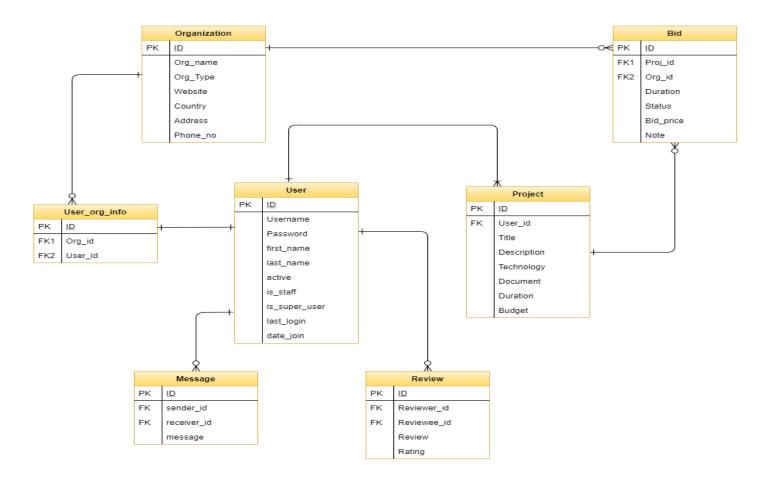

Figure 6. 2 Activity Diagram

6.3 DATABASE SCHEMA DESIGN
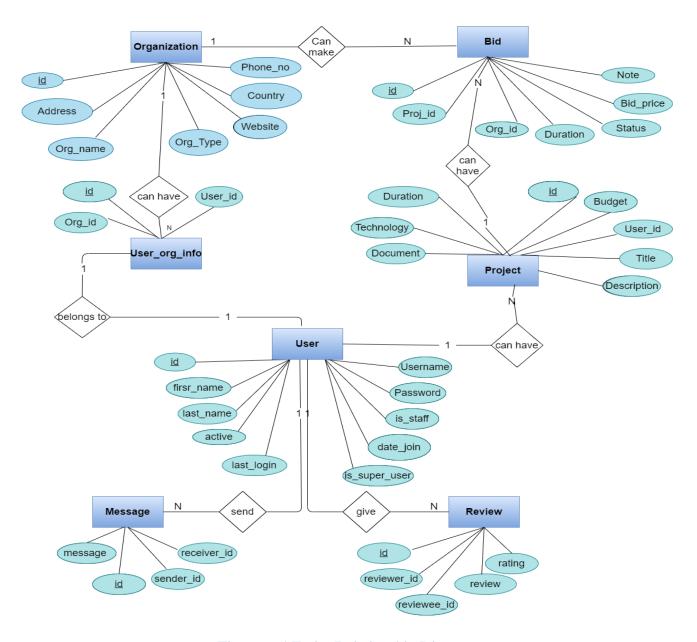

Figure 6. 3 Schema Design

6.4 ENTITY RELATIONSHIP DIAGRAM

Figure 6. 4 Entity Relationship Diagram

SCREENSHOTS

7.   IMPLEMENTATION

7.1 SCREEN SHOTS

HOME SCREEN

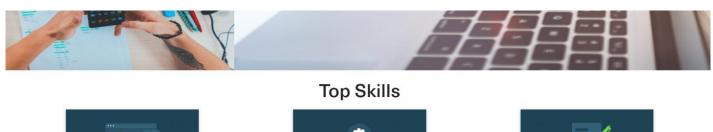Figure 7. 1 Home screen (part-1)

Figure 7. 2 Home page (part-2)

Figure 7. 3 Home page (part-3)

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam

GET IN TOUCH WITH US

Your Name   Your Email
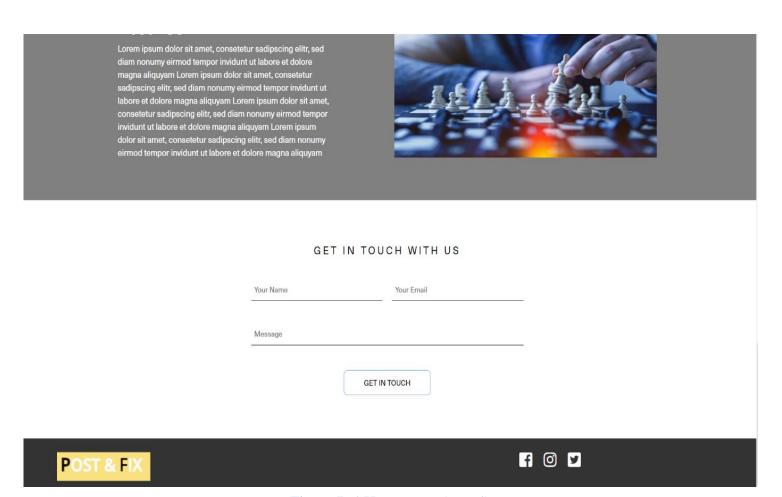
Message

GET IN TOUCH

POST & FIX

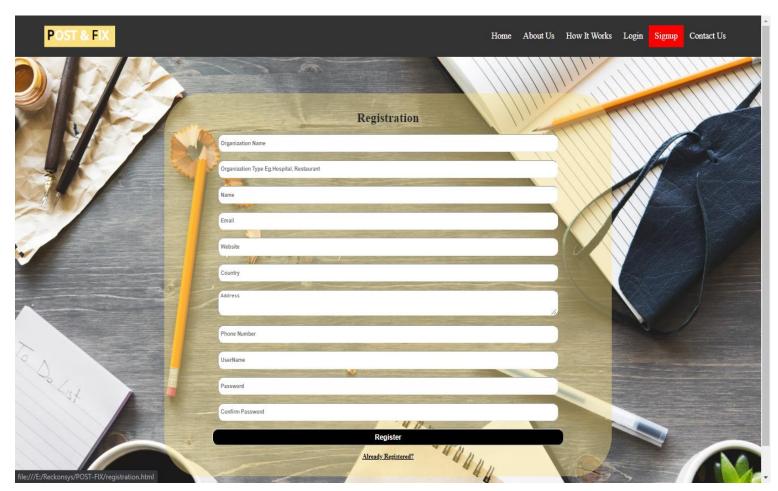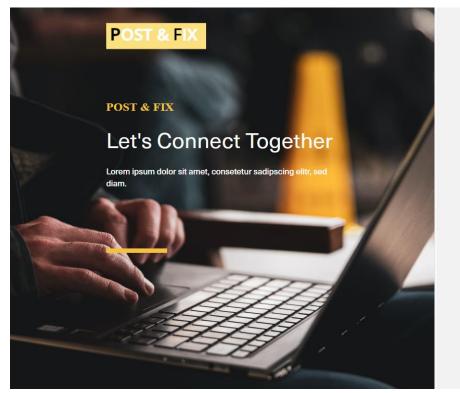Figure 7. 4 Home page (part-4)

REGISTRATION SCREEN

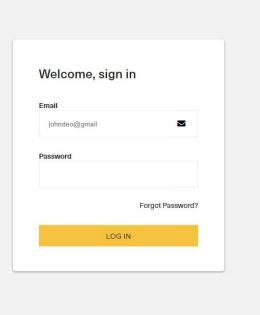Figure 7. 5 Registration Page

LOGIN SCREEN

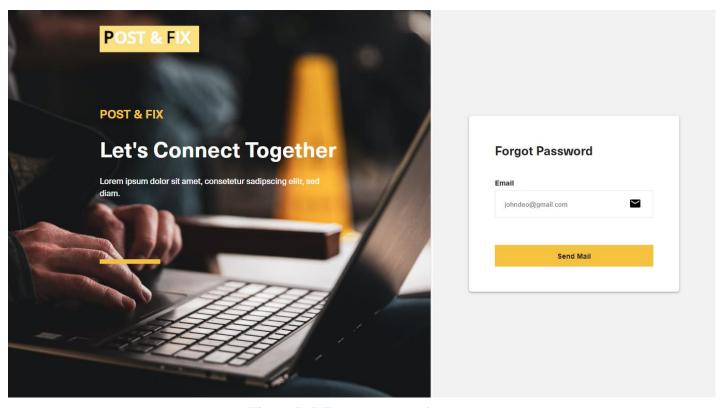Figure 7. 6 Login Page

FORGOT PASSWORD SCREEN

Figure 7. 7 Forgot password screen
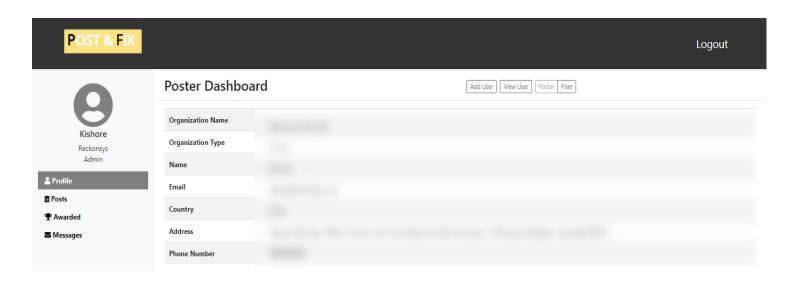
POSTER PROFILE SCREEN

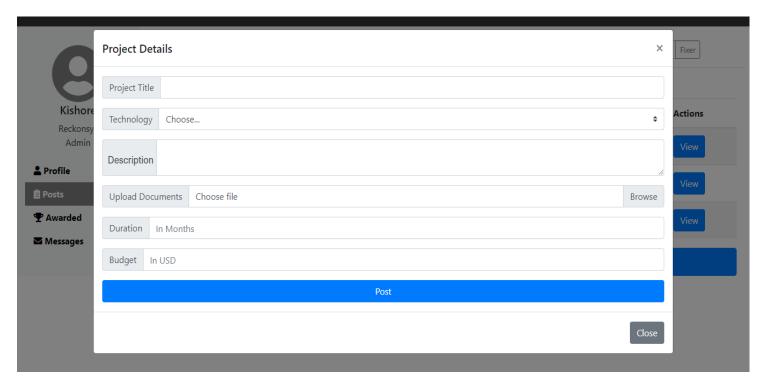Figure 7. 8 Poster profile

PROJECT UPLOAD

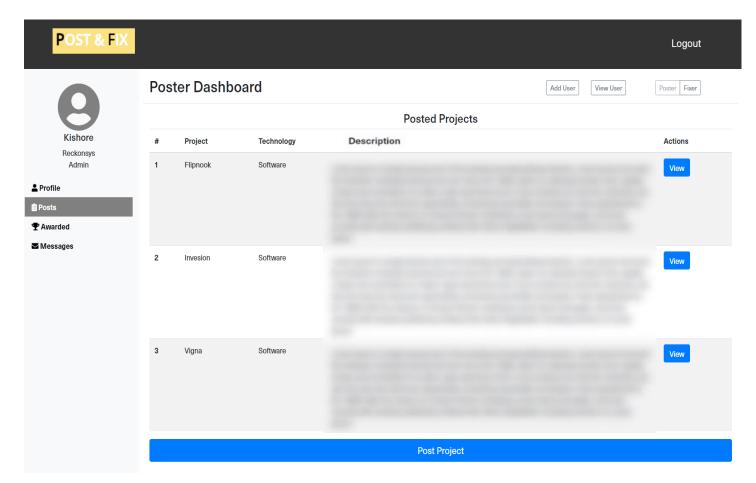Figure 7. 9 Project upload view

PROJECT VIEW SCREEN

Figure 7. 10 Project list view

APPLIED COMPANIES SCREEN

Figure 7. 11 Applied Companies

ADD USER

Figure 7. 12 Add user screen

DELETE USER

Figure 7. 13 Delete user screen

AWARDED PROEJCTS SCREEN

Figure 7. 14 Awarded projects

POST REVIEW

Figure 7. 15 Post review screen

MESSAGE SCREEN

Figure 7. 16 Message screen

FIXER PROFILE SCREEN

<p style="text-align:center">Figure 7. 17 Fixer Profile</p>

PROJECT LIST VIEW

Figure 7. 18 Project list view

BID SCREEN

Figure 7. 19 Bid Screen

BIDED LIST SCREEN

Figure 7. 20 Bided list

SELECTED PROJECTS SCREEN

VIEW RATING SCREEN

Figure 7. 22 View Rating

TESTING

8.   SOFTWARE TESTING

8.1 Manual test cases

Test Case ID	PES_001	Test Case Description	Testing the web application (POST & FIX)		
Created By		Reviewed By		Version	

QA Tester's Log

Tester's Name		Date Tested	May 10, 2020	Test Case (Pass/Fail/Not Executed)	Pass

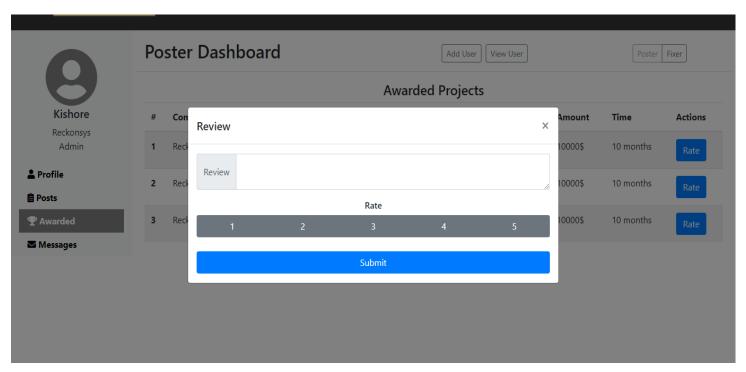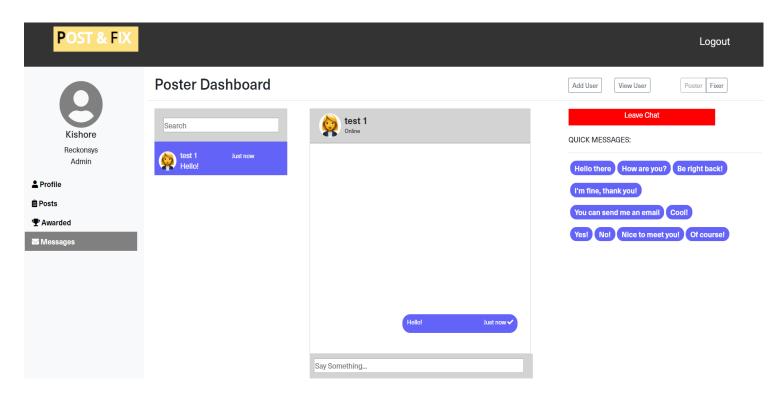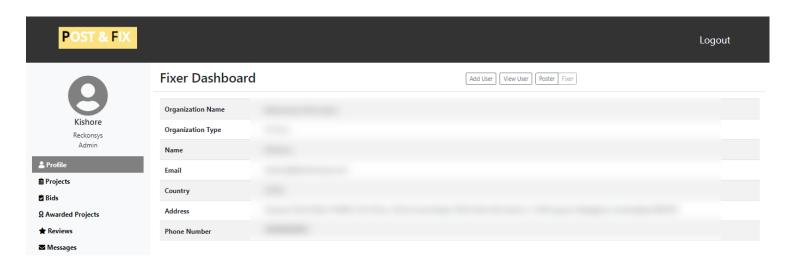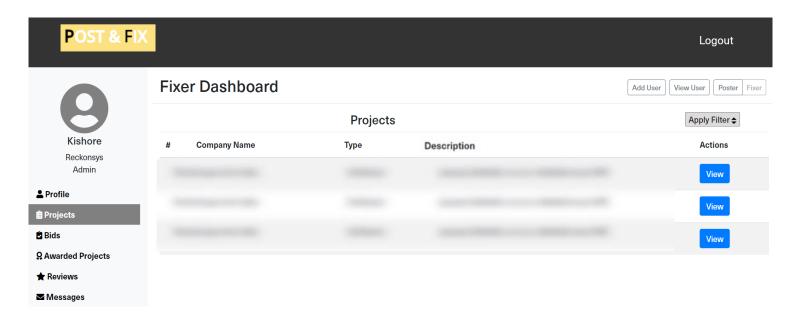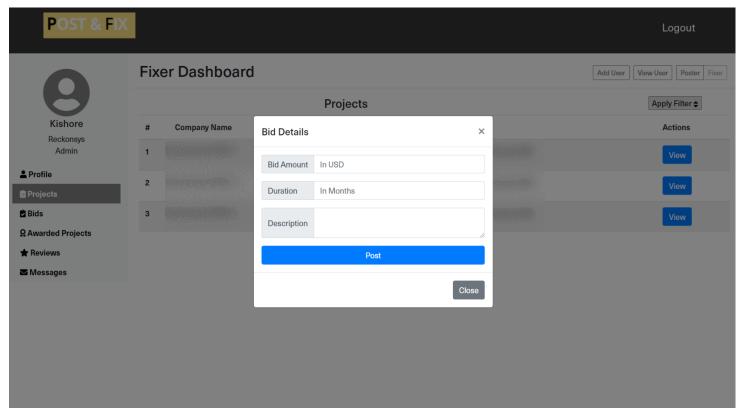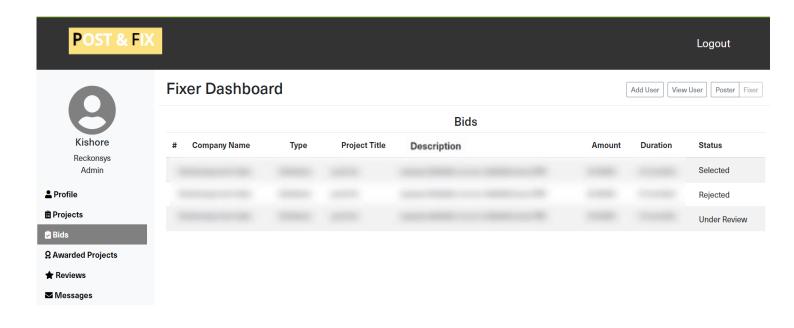| S #	Prerequisites:
1	Access to Chrome Browser/Firefox/IE
2	
3	
4	

S #	Test Data
1	Userid = admin
2	Password = admin@123
3	
4	

Test Scenario   Verify the entire application where the organization is able to POST and FIX the problem statement.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Navigate to https://www.postandfix.com	Site Post & Fix should open	Successfully redirected	Pass
2	Navigate to https://www.abc.com	Incorrect url	404 page not found	Pass
3	Click on the login page and enter the Userid & Password and click login	Login unsuccessful	Successful	Fail
4	Click on the login page and enter the Userid & Password and click login	Login successful	Successful and Redirects to dashboard	Pass
5	User can click on the post project to upload the project	post project screen should be open to upload the project	project uploaded successfully and redirects to dashboard	Pass

Figure 8.1 Manual testing (part-1)

Test Case ID	PES_001	Test Case Description	Testing the web application (POST & FIX)	
Created By		Reviewed By		Version	

QA Tester's Log

Tester's Name		Date Tested	May 10, 2020	Test Case (Pass/Fail/Not Executed)	Pass

S #	Prerequisites:
1	Access to Chrome Browser/Firefox/IE
2	
3	
4	

S #	Test Data
1	Userid = admin
2	Password = admin@123
3	
4	

Test Scenario   Verify the entire application where the organization is able to POST and FIX the problem statement.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
6	User can update the status of the applied companies by clicking on the action button.	project status screen should be open to update the status of the project.	Project status updated successfully and redirects to the main dashboard.	Pass
7	Admin can add users to their organization by clicking on the add users button.	Add users screen should be displayed to add the users to their dashboard.	User added successfully and redirects to main dashboard.	Pass
8	Admin can remove the users from their organization by clicking on the delete button.	Delete users screen should be displayed to remove the users from their organization.	User removed successfully and redirects to main dashboard.	Pass
9	Users can bid for the project by clicking on the bid button.	Bid detail screen should be displayed and user can bid for the project.	Your bid is successful and redirects to main dashboard.	Pass
10	Users can post the feedback of the project delivered by clicking on the action rate button.	Review screen should be displayed and user can rate and post the feedback.	Feedback posted successfully.	Pass

Figure 8.2 Manual testing (part-2)

CONCLUSION

9.   CONCLUSION

The project POST & FIX helps both IT and Non-IT firms to enhance their business as there is a high significant growth of internet usage all around the world and as there are lots of real-time problems but clients are not finding the right talent who can opt for. Through this application poster has a wide range of choice for selecting the best talent who can meet the business needs, this platform provides different technologies which enables fixer to opt for the projects in their domain.

Through this application it provides the convenient way to filter based on the technology, bid price, and duration. Both poster and fixer can work confidently since it is based on the contract agreement with all the protocols given in prior beginning of the project. This platform will recommend to create high professional profile for the startup by bidding for the project and completing before the deadlines and with this they could create a network among themselves for further business activity. Once the project is live on the board, they get paid best in the market asper mentioned in the agreement. This application is recommended for all IT and Non-IT firms to enhance their business globally.

Finally, this application highly recommended platform to improve their business both economically and technically where it helps to post any IT related problem statement and get fixed with the given time duration and bid price it also helps to communicate remotely through real-time conversation with the clients to reduce the conflicts. Through this many startups can be developed and can compete with the different competitors in the market. Admin can add users to their organization to manage the activities parallelly and since all the sensitive data are uploaded no unauthorized person can access. To enhance the business POST & FIX is the right platform for all IT and Non-IT firms.

FUTURE ENHANCEMENTS

10. FUTURE ENHANCEMENTS

Developing the mobile application for the project POST & FIX which helps the user to conveniently use and interact with the client in an easier manner. So, the user has a full control over the tip of the finger to post and bid for the projects in faster and efficient.

The application will be integrated with the feature of face of face communication through video conference which would help the user to have a better interaction with the clients. And this way of connection could be better than footing the bills for travelling costs. Through this feature it helps to have good coordination between the clients and users.

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APPENDIX A

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- https://developer.mozilla.org/en-US/docs/Learn/Server-side/Django/Introduction

- Django for professionals: Production website with python & Django
  - William S Vincent

- Mastering Django Core
  – Nigel George

- PostgreSQL Administration Cookbook 9.5 edition
  – Simon Riggs

- Object oriented modelling and design
  – Rumbaugh.