PG Finder

A Project Report

Submitted by

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Gujarat Technology University, Ahmedabad

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CERTIFICATE

This is to certify that the project report submitted along with the project entitled **PG Finder** has been carried out by **Sathiya Parth Deepakbhai** under my guidance in partial fulfilment for the degree of Bachelor of Engineering in Information Technology, 8th Semester of Gujarat Technological University, Ahmedabad during the academic year 2022-23.

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DECLARATION

We hereby declare that the Internship report submitted along with the Internship entitled **Django Trainee** submitted in partial fulfilment for the degree of Bachelor of Engineering in Information Technology to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at Grownited Pvt. Ltd. under the supervision of Prof. Jignesh Vaniya and that no part of this report has been directly copied from any students' reports or taken from anyother source, without providing due reference.

Name of the Student Sign of Student

Acknowledgment

I am thankful to Vishwakarma Government Engineering College for giving me an opportunity to develop this project. Prof. Jignesh Vaniya (Internal Guide) is the main forcebehind all these. The project became successful only because of their valuable suggestions, proper co-operation and complete guidance in developing this project. It was also the support from the staff members who spend their valuable time in providing us all the relevant and confidential college information which has helped us in preparing our project.

I am thankful to my guide who is the real source of inspiration and encouragement. His constant help, thoughtful suggestions and deep interest has enabled me to make this project successful. I also express my sincere thanks to our H.O.D. Prof. Vibha D. Patel, who allowed to use all the resources of the institute.

I am thankful to all our staff members who helped continuously and inspired me in the project.

Yours sincerely,

Sathiya Parth

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Abstract

This Project is about Paying Guest Information Management System. Paying Guest Information Management System is a way which helps the students and other people who are looking for accommodation in a smart way, the aim of these project is to directly connect users and Paying Guest Owner in a way that Paying Guest owner can advertise their place and user can book their PG easily, this application is having some unique features and functionalities like user can view the place with the help of GPS, share the location share the place and user can also internally advertise the place so they can find their partner.

As we know that, People started migrating in other district or state for their jobs and study purpose. For that, People are not familiar with that state or district. So, they face some problems such as finding appropriate Paying guest house at different districts or outside the state for their nearby working area, finding the best Paying guest house based on their requirements and budget. So here, we introduce such a new system which directly connects users and Paying Guest Owner in a way that Paying Guest owner can advertise their place and user can view that PG easily.

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Abbreviations

SDLC	**Software Development Life Cycle**
PG	**Paying Guest**

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1. Overview of the Company

1.1 About Company

Grownited is an open-source organization for individuals and groups that think unique. Ideas are valuable to individuals, and we know that you have spent energy just thinking it up. We believe that ideas should not sit idle, so we do the work for them. Grownited is a start-up cultivating firm where we grow and nurture ideas into a tangible reality. We endeavor to build new things with you, to build a new, modern, futuristic India. It is a task to bring together a concept and the people to work for it, to make it an actuality. Working in partnership with idea cultivators, Grownited is oriented to become a hub of creativity and coherence woven into one. We believe in the conviction of entrepreneurship by the youth being the future. And we wish to be a part of this future, doing our piece in promoting our beliefs. n these beliefs is another – the future is ours, and it is, thus, our responsibility to nurture the future. In today's global scenario, nothing matters more than experience. For this, we provide intership in over 15 categories for individuals from age 14-26.

1.2 Different product/ scope of work

The framework of the current Indian internships is compromised in a manner that it has stripped young aspirants of their potential and their ambition. Indian internships have been going wrong since ambitious and talented individuals started opting for internships at big corporations. Now the question that arises is, if not these corporate internships, then what? "Grownited Internships" are your answer to this. Grownited is here, as a solution to the lack of opportunities, and a cure to longstanding structural problems. We recognize the urgent need for youngsters to shift from big corporates to robust new start-ups. This shift will allow Indian students to explore their horizons and will help them achieve new heights. These start-ups are the symbol of growth, freedom, and diversity. It removes all the rigidity, and mediocrity from work culture. Furthermore, it acknowledges the contribution of interns in facilitating the growth of startups and encourages new start-ups to take a rise. This essentially adds up to the larger picture of India's long-awaited recognition in the international arena. Our idea is to catalyze and reform one's concept of professional freedom by placing them in innovative new start-ups across the country. This

dynamic learning experience is the essence of the Grownited Internships. We create distinct opportunities where we value you and your growth alongside ours.

1.3 Services

Grownited provides services in following field Web Development, Dedicated Development Team, Product Development, Ecommerce Development, Custom Software Development,Mobile Apps Development, and Software Testing & QA.

Digital Marketing: - When it comes to digital marketing, there is always more to be done. And for that, Grownited zealous digital marketing team puts in continuous effort to make sure that our clients' get the best services in this sector.

Content creation: - In the age of the Internet, it is hard to handpick credibility. With Grownited, be guaranteed that your credibility is in the right hands. Our content creation team offers everything - content writing, photoshoot, video shoot, and conceptualization.

Design: - Grownited knows that communicating an idea is an experience. That simply putting it out there is not enough. Our clients want customers to know their goals and values in every move they make. And so, designing this communication is fundamental. Our team of designers will ensure your message gets across, loud and clear.

Software: - What customers see on the Internet is what they expect to be met with. Grownited understands the importance of a first impression, and the need for it to be a lasting one. Leveraging design and technicalities is our specialty, leaving our clients with the best UI/UX and compatible websites and applications.

2.0 Overview of different plant/unit/department/shop of the organization and Layout of the production/process beingcarried out in company

2.1 List the technical specifications of major equipment used in each department.

Backend

- Java
- Node.JS
- Django

Frontend

- Angular
- React
- Vue.js

Database

- Microsoft SQL Server
- PostgreSQL
- MySQL
- MongoDB

2.2 Prepare schematic layout which shows the sequence of operation for manufacturing of end product.

The production is carried out in following steps

1. Planning
2. Analysis
3. Design
4. Implementation
5. Testing and Integration
6. Maintenance

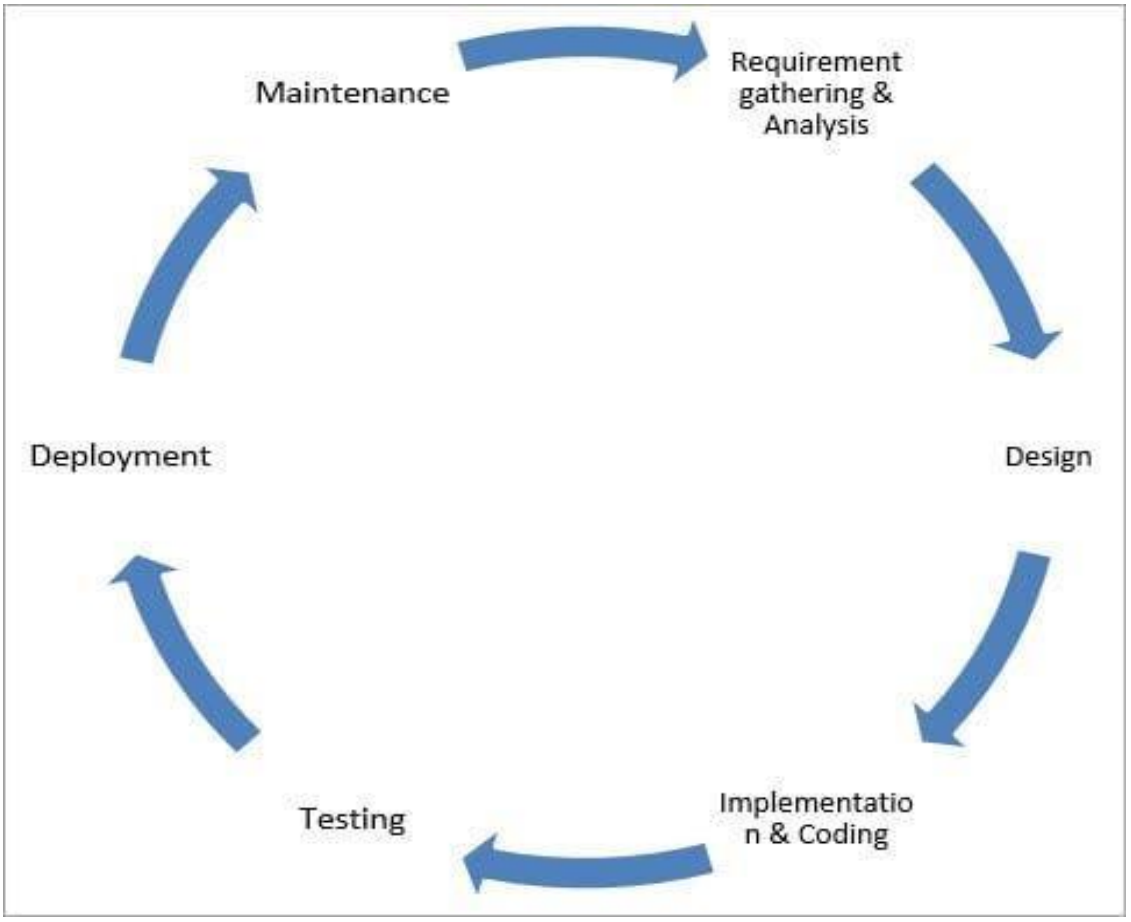

Figure 2.1 SDLC

2.3 Explain in details about each stage of production.

1) Requirement Gathering and Analysis

We have collected all the information regarding project. Once requirement gathering is done, an analysis is done to check the feasibility of the development of a product. Once the requirement is clearly understood, the SRS (Software Requirement Specification) document is created. This document should be thoroughly understood by the developers and also be reviewed by the customer.

2) Design

In this phase, the requirement gathered in the SRS document is used as an input and software architecture that is used for implementing system development is derived. We have design all the public pages like homepage, FAQ Page, contact us page, about us page, login page,

signup page etc. through HTML, CSS, JavaScript.

3) Implementing or Coding

Implementation/Coding started according to the requirement. The Software design is translated into source code. All the components of the software are implemented in this phase. We used MVT Structure to for implementation.

4) Testing

Testing starts once the coding is complete and the modules are released for testing. In this phase, the developed software is tested thoroughly and any defects found are assigned backto get them fixed. Testers refer SRS document to make sure that the software is as per the customer's standard.

5) Deployment

Once the product is tested, it is deployed in the production environment or first UAT (User Acceptance testing) is done depending on the customer expectation.

6) Maintenance

After the deployment of a product on the production environment, maintenance of the product i.e., if any issue comes up and needs to be fixed or any enhancement is to be done is taken care by the developers.

3. INTRODUCTION TO PROJECT

3.1 Project Summary

Finding a room for rent has always been a hassle for people. Especially, nowadays, people have so many choices based on which they want to rent their house. Some people want their house to be in the commercial space, some people prefer to choose the area of their house relating to the life style they want to live. Basically, in this era people want to rent their house like online shopping. No one wants to roam around here and there to find a house so People would prefer an online software to rent a house.

So basically, our web application put the PG owner and guests on the same platform where PG owner can register themselves and add their PG and PG details, and various users can add feedback / ratings / comments and might rent that PG and access their services. Additionally, any guest can connect with PG owners with email for other queries.

3.2 Purpose

This Project is about Paying Guest Information Management System. Paying Guest Information Management System is a way which helps the students and other people who are looking for accommodation in a smart way. As we know that, People started migrating in other district or state for their jobs and study purpose. For that, People are not familiar with that state or district. So, they face some problems such as finding appropriate Paying guest house at different districts or outside the state for their nearby working area, finding the best Paying guest house based on their requirements and budget. So here, we introduce such a new system which directly connects users and Paying Guest Owner in a way that Paying Guest owner can advertise their place and user can view that PG easily.

3.3 Objective

- ✓ To help students and professionals in finding affordable and suitable paying guest accommodations in a particular city or area.
- ✓ To create a platform that connects paying guest providers with potential tenants, simplifying the process of finding accommodation for both parties.
- ✓ To provide users with a comprehensive list of paying guest accommodations, including their location, pricing, and amenities, allowing them to make informed decisions.
- ✓ To offer a seamless user experience, with a user-friendly interface and intuitive search functionality, that makes finding a paying guest accommodation easy and stress-free.
- ✓ To enable users to comments and rate paying guest accommodations, creating a community-driven platform that encourages transparency and accountability among providers.
- ✓ To provide paying guest providers with a reliable platform to promote their accommodations and increase their occupancy rates.
- ✓ To offer additional features such as online booking, payment processing, and customer support, to make the process of finding and booking a paying guest accommodation more convenient for users.

3.4 Scope

The scope of the PG Finder web application is that it can connect large number of people over a common platform to help each other from the available accommodation that they have. The project scope is that the project provides a facility to add rooms to allow other users to take it on rent. The owner can add/delete/edit the room details. Another user can see the details of the room and if they want then they can take it on rent by contacting to the owner through our website. This application is also having some unique features and functionalities like user can view the place with the help of Maps, share the location of the place and user can also internally advertise the place.

3.5 Technology and Literature Review

Literature Review/Background Study

We don't have such an existing system proper like this but there is a similar system isthere in the market: -

- We study all the existing system and they also provided the features but some customers face the problem and from that we got an idea to build the project.
- Also, many customers faced problems regarding the user-friendly system.
- However, we got idea to provide the service with extra features and more user- friendly way.

Technology

The front end used in our project is HTML, JavaScript, CSS and Bootstrap, and the back end used is Python, Django framework along with PostgreSQL database. We will follow the Prototype model for developing this Project and whole Project will be developed using the SDLC scenario.

HTML

HTML an initialize of Hyper Text Markup Language for web pages. It provides a means to describe the structure of text-based information in document by denoting text as headings, paragraphs, lists and so on and to supplement that text with interactive forms, embedded images and other objects.

CSS – Bootstrap Framework

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.
Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

JavaScript

JavaScript supports the development of both client and server components of web- based applications. On the client side, it can be used to write programs that are executed by a web

browser within the context of the web page. On the server side, it can be used to write web server programs that can be process information submitted by a web browser and then update the web browser display accordingly.

Python – Django Framework

Python is an interpreted, interactive, object-oriented programming language. It incorporates modules, exceptions, dynamic typing, very high-level dynamic data types, and classes. It supports multiple programming paradigms beyond object-oriented programming, such as procedural and functional programming.

Django is a high-level Python web framework that enables rapid development of secure and maintainable websites.

PostgreSQL

PostgreSQL is an advanced, enterprise class open-source relational database that supports both SQL (relational) and JSON (non-relational) querying. It is a highly stable database management system, backed by more than 20 years of community development which has contributed to its high levels of resilience, integrity, and correctness. PostgreSQL is used as the primary data store or data warehouse for many web, mobile, geospatial, and analytics applications.

3.6 Project Planning

Project Planning is concerned with identifying and measuring the activities, milestones and deliverables produced by the project. Project planning is undertaken and completed sometimes even before any development activity starts. Project planning consists of following essential activities:

- Scheduling manpower and other resources needed to develop the system.
- Staff organization and staffing plans.
- Risk identification, analysis, and accurate planning.
- Estimating some of the basic attributes of the project like cost, duration and efforts.

3.6.1 Project Development Approach and Justification

The Activities we follow for the project is listed below: -

- Planning the work
- Analysis and design of object
- Accessing and controlling risk
- Estimating Resources
- Allocation of Resources
- Organizing the work
- Database design

We have used Prototype Model in our project because as you can see in the diagram prototype model will to take initial requirements and as per the feedback of the end user again planning is done new design is made. After the satisfaction of the end user development is done.

Steps:

- Construct a partial implementation of a total system.
- Then slowly add increased functionality.
- The new added functionality for the system can be implemented in groups.

Prototype Model:

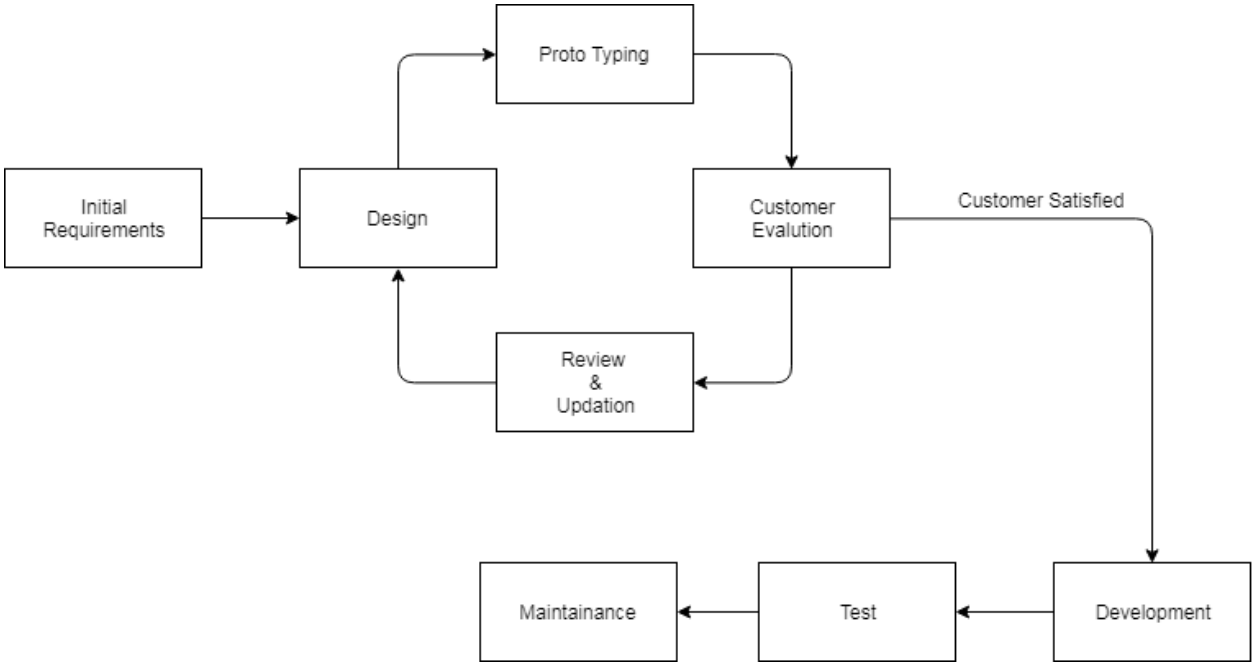

Figure 3.1 Prototype Model

Requirement Gathering:

- Requirement is gathering from the different sources like internet, experts, and people as per the guidance of project coordinator.
- The detailed analysis is done on the information gathered.
- During the analysis Number of different modules are identified various features are identified.
- The constraints are identified.

Planning Phase:

Planning is a critical activity in software development. A good plan based on the requirement of the system and should be done before later phases begin. It Includes activities like:

- Cost estimation to find best affordable cost.
- Task scheduling and time line management.
- Work organization and team structure designing.

Modeling Phase:

The System specification is translated into a software representation. The Software engineer at stage is concerned with:

- Data Structure
- Software Architecture
- Algorithmic detail
- Interface representations

By the end of this phase the software engineering should be able to identify the relationship between the hardware, software and the associated interfaces. Any faults in the specification should ideally not be passed 'down-stream'.

Refinement of Requirement as per Suggestion:

The project idea is honestly and properly explained the experts, an industrial expert, end user, project coordinator, faculties. As per their suggestion, the changes are made and also expanded the list of requirements. We have been repeatedly doing this step-in order to achieve a satisfactory system through planning, modeling and construction.

Construction Phase:

- Coding is done.
- The implementation and testing are done.
- The designs are translated into software domain.
- Detailed documentation from the design phase can significantly reduce the coding effort.
- Testing on this stage focuses on making sure that errors are identified and the software meets its required specification.
- All the program units are integrated and tested to ensure that the complete system meets the Software requirements.

Deployment Phase:

After construction the project is delivered to the end user. The system is handover to the end user for the first to use to them. The problem which did not arise during the previous phase will be detected and that will be solved in this last phase.

- Meet the changing customer needs.

- Adapted to accommodate changes in the external environment.
- Correct errors and oversights previously undetected in the testing phase.
- Enhancing the efficiency of the software.

Observe that feedback loops allow for corrections to be incorporated into the model. When changes are made at any phase, the relevant documentation should update to reflect that change.

3.6.2 Project Effort and Time, Cost Estimation

Effort Estimation

Each company determines the output it expects from its team members. Let us call the average output of a team member per man-hour as the unit output. Assume that one has to deliver an end-to-end login module's functionality for an application. The time spent on the login functionality should include the corresponding time required for gathering the requirements, doing a requirement analysis, architecture inputs, form design, object/class design, implementing the business rules, data validation and storage, framework (i.e., code for login module's constants, enumerations, utilities), testing, debugging, deployment up to user acceptance, etc. Now, the estimator has to figure out how many man-hours it would take to complete the login module, keeping all these factors in mind.

Time Estimation

In this project, I am only one who is going to implement it thoroughly, so approximately 3 months are required for the development of the project.

Cost Estimation

It is the approximate cost require for the development of the project. In this project development cost is negligible but the initial cost of the hosting web application is quite more.

3.6.3 Roles and Responsibilities

This phase defines the role and responsibilities of each and every member involved in developing the system. To develop this system there was only one member working on the whole application. He was responsible for developing each and every part of the system. He has sufficient knowledge in several programming languages.

- **Software Designers: -** They are the most obvious users. Software Designers need to design the flow of web application, Database, Appearance of the web Application as per the requirement by taking care of all the constrains, risks, hardware components, etc.
- **Software Developer:** - Software developer will transform the design document prepared by software designer into an appropriate code. As per the requirement they will used appropriate a software development technology such that it satisfied the end user.
- The end users are:
  - PG owner
  - Guest/Renter

PG Owner

The PG owner is an end user who will be able to generate post for the PG with all the necessary details in order to rent to out to the guest.

Guest/Renter

The guest is an end user who does not have any accommodation, will be able find out the accommodation of his choice by surfing various PGs displayed after applying the multiple filters like PG type, nearby locality, rent cost, etc.

3.7 Project Scheduling (Gantt Chart)

A Gantt chart is a special type of bar chart where each bar represents an activity. The bars are drawn along a timeline. The length of each bar is proportional to the duration of time planned for the corresponding activity. In Gantt chart used for software project management, each bar consists of white and shade part. The shaded part of the bar shows the length of time each task is estimated to take.

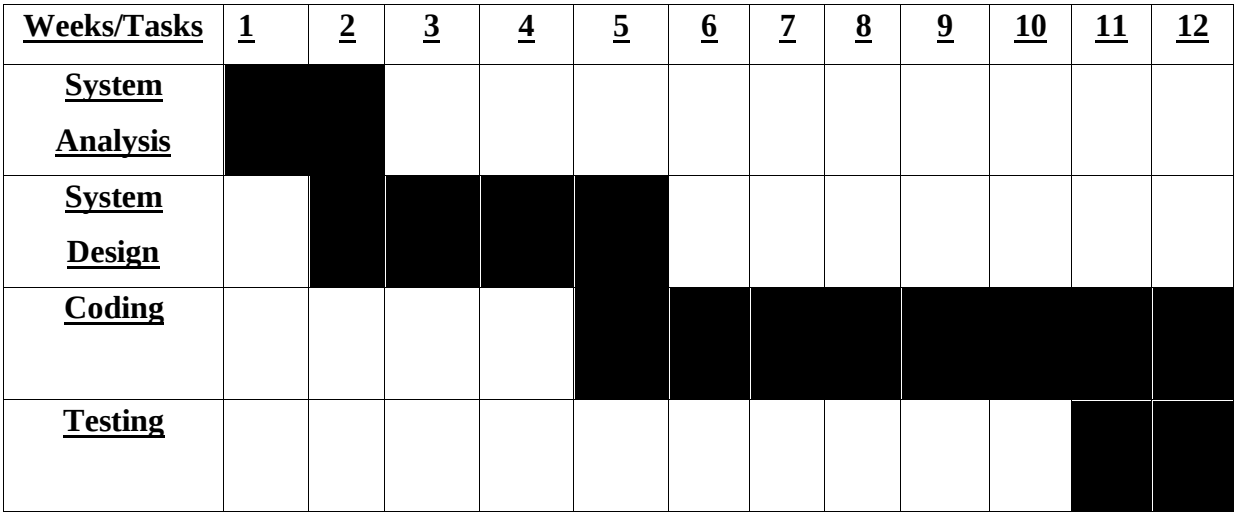

Figure 3.2: Gantt Chart

4. SYSTEM ANALYSIS

4.1 Study of Current System

- Currently there is a system in the market named Magicbricks Company which provides service for finding property as well as rental house
- It provides the services for repairing all types of things or cleaning all types of things.
- It also provides massage, salon all type of services at home.

4.2 Problem and Weakness of Current System

- Well, one of the biggest loopholes of the current system is its recommendation system which is not there, so we are going to implement robust recommendation system which will help the guest to find his best PG according to his specification.
- Another major missing functionality is that this website doesn't have the review and rating system.

4.3 Requirements of New System

- In the new system, the user once gets the PG from PG owner then guest will provide feedback and give some rating so that if the PG has more than a certain number of negative feedbacks than strict actions will be taken towards that owner which might results in the ban from the website that will improve the integrity of the website.
- With the growing trend of AI & ML, it is essential to inculcate AI & ML algorithm in the website, so we are going to implement recommendation algorithm which will display results according to their feedback and rating, by this way user (guest) will get best rating PGs at top most index.

4.4 System Feasibility

4.4.1 Does the system contribute to the overall objectives of the organization?

Our project is capable to be implemented at an organization level. And, having goals that outline an organization's focus can help employees stay focused and create cohesion in the workplace. These objectives should align with a company's vision and communicate its values. In this article, we discuss why the objectives of an organization are important, how to organize these objectives, the goals of organizational objectives and elements of good objectives. The objectives of an organization are important because they help every member of the organization, from stakeholders to entry-level employees, understand the company's mission.

4.4.2 Can the system be implemented using the current technology and within thegiven cost and schedule constraints.

We have implemented this project using the existing version of all the technologies used in it. We have no invested a single coin in this project. We have tried to cover all the user requirements to provide the maximum comfort to them, so we can achieve the long-term objectives with the maximum unique features. As requirements are gathered an overall version of system functions and features begins to materialize.

At project inception, software engineers ask a set of questions that establish:

- Basic understanding of problem.
- The people who want to use various services.

4.5 Activity of New System

4.5.1 Use Case Diagram

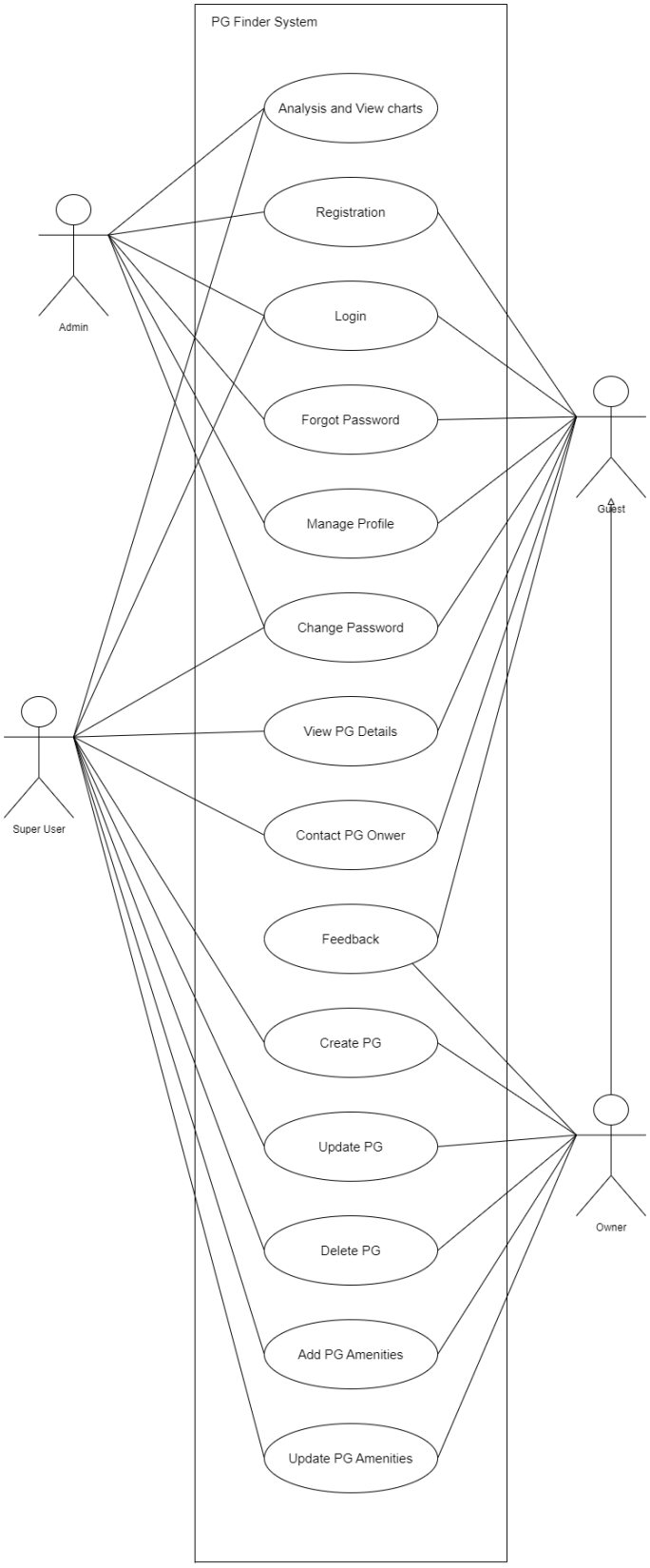

Fig 4.1 Use Case Diagram

4.5.2 Activity Diagram

1. Authentication Activity Diagram

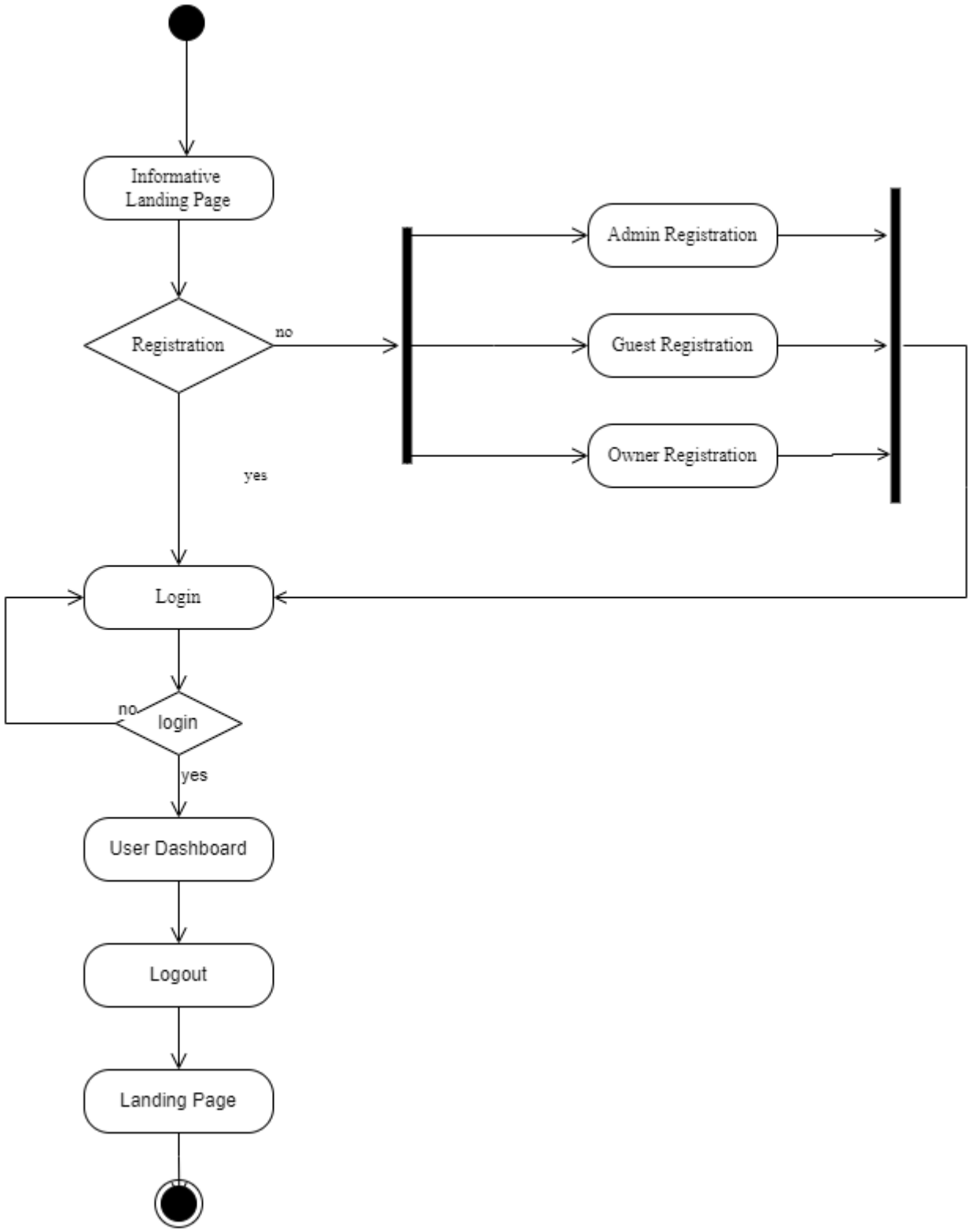

Figure 4.2 Authentication Activity Diagram

2. Owner Activity Diagram

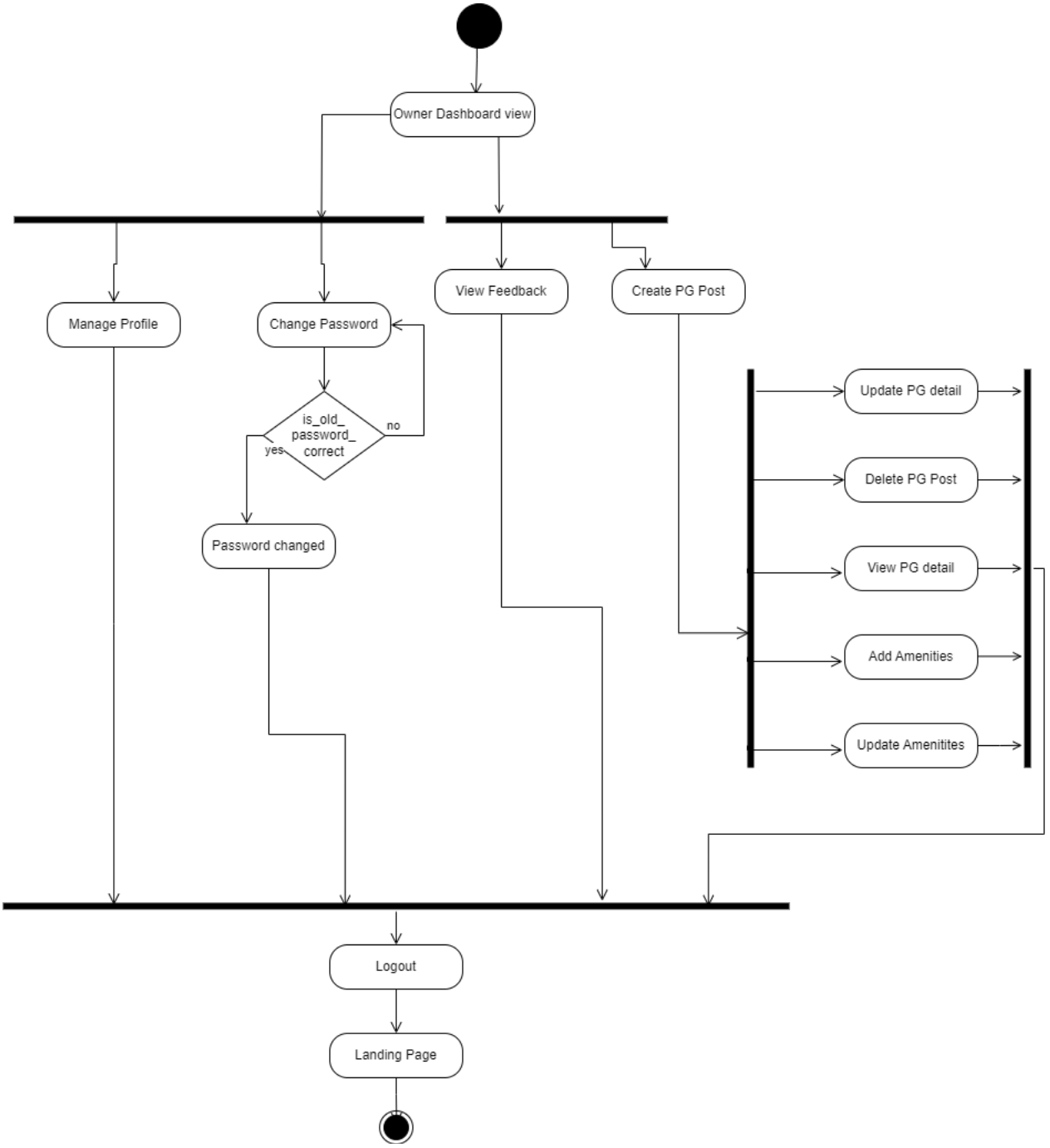

Figure 4.3 Owner activity diagram

3. Guest Activity Diagram

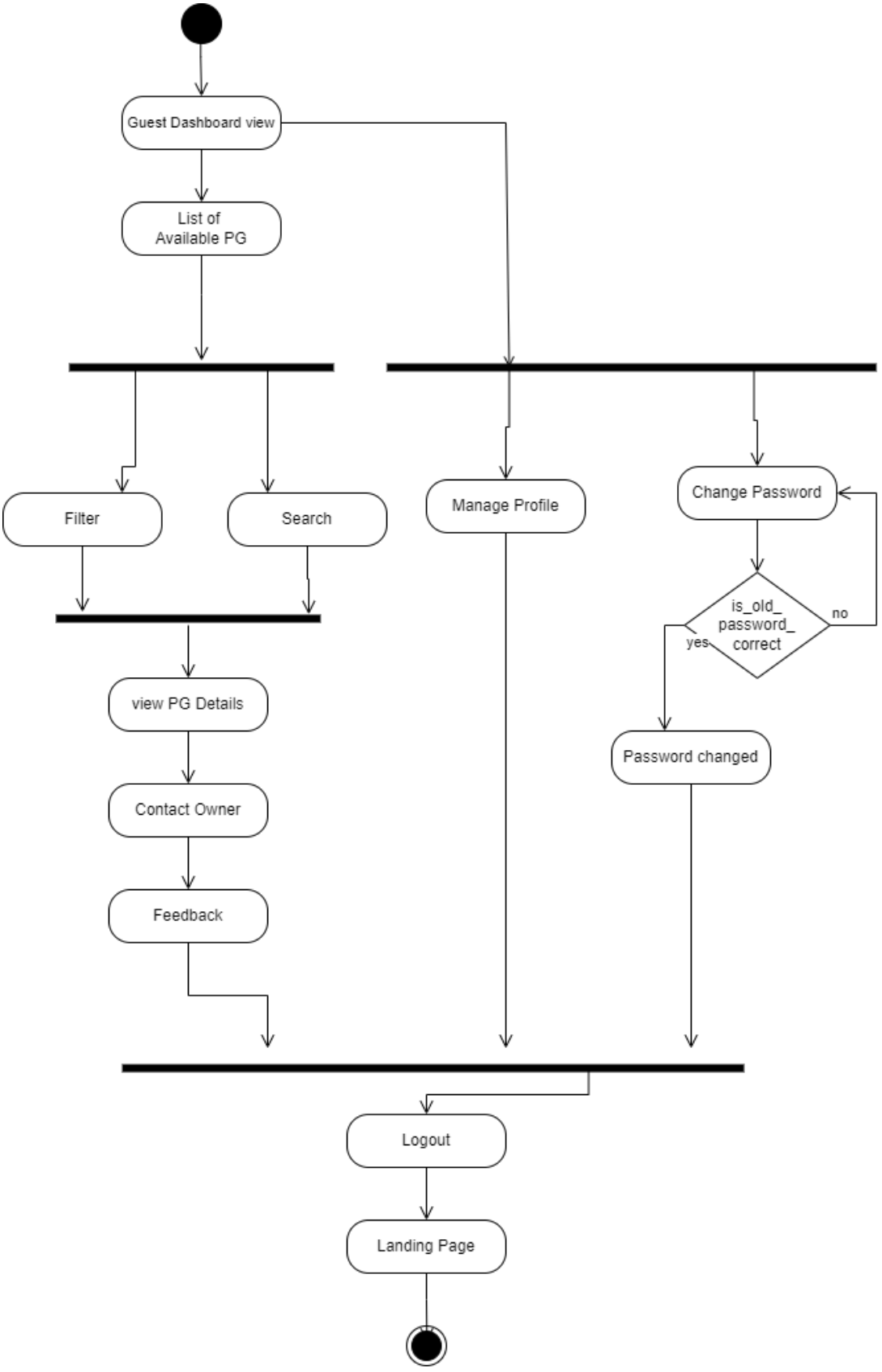

Figure 4.4 Guest Activity Diagram

4. Admin Activity Diagram

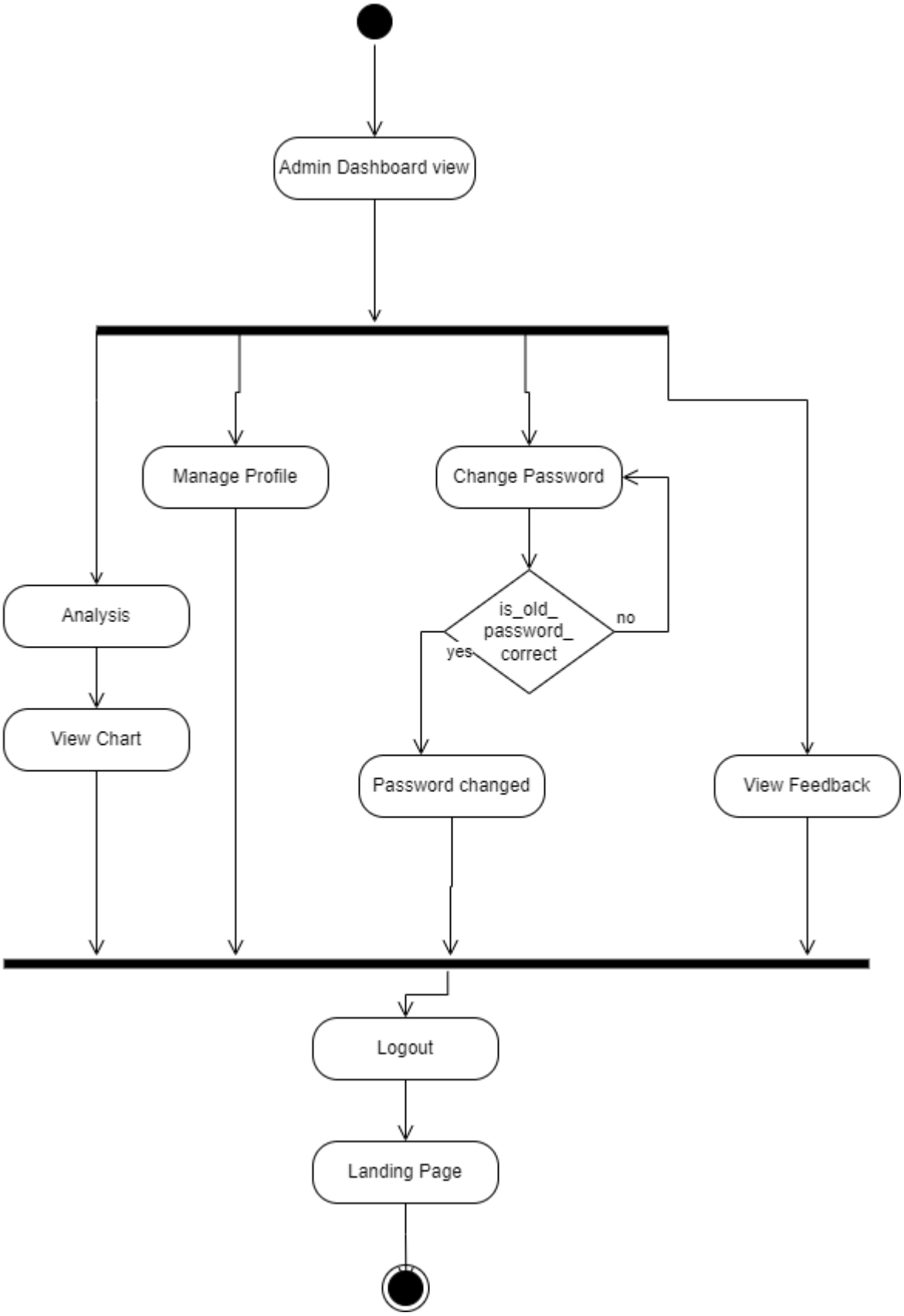

Figure 4.5 Admin Activity Diagram

4.6 Features of New System

Friendly & Legitimate Owners

We want you to be completely satisfied with our service and feel comfortable at home. In order to guarantee this, our PG owners go through a feedback procedure. If owner get more than certain negative feedbacks then that owner might get banned from the site.

Transparency and Security of private data

We have made the use of the authentication module in order to prevent unauthorized access to the website. Along with that to reduce breaching of data, this time we made the use of the PostgreSQL database system which is one of the most secure data storage systems.

Filters and Sorting of the resultant PGs

This time we have provides lots of filters to the user (guest), so that user can find out the accommodation according to his requirements by applying various filters. Especially, we also included sorting algorithm which will sort the resultant PGs according to their reviews and ratings

Map Accessibility

Additionally, we have also included map view so that the user (guest) can get the exact information regarding the location of the PG. In near future we will also include some advance map functionality like nearby available PG.

Able to contact to owner

We have also provided the mechanism by which guest can directly contact to the owner of the corresponding PG in order to discuss few things.

4.7 Modules and Their Description of System

4.7.1 Authentication Module

- **Login Module**

  Clicking on Login link in header should open a login page and allow user to log in to the system. This Login screen would be central place to allow different types of users logging in to the system i.e., Customer, Service Provider and Admin users. This would redirect them to respective landing page

- **Registration Module**

  Users should be able to register themselves using sign up screen. This should be a separately designed page where users would be redirected when they click on 'Don't have an account' link in Login Dialog. Users shouldstraightaway be able to login to the system once they create their account with PG Finder.

4.7.2 PG Owner Module

- Owner should be able to add their PG, update the details of the PG and delete the PG.
- Along with PG registration, owner should also be allowed to add the amenities provided by the PG, along with that owner can update the amenities as well.
- Manage profile functionality will also be provided to the owner so that owner can change their personal details.
- Owner will also be facilitated with change password functionality in the case if owner forgot his login credentials.
- Additionally, owner will be able to view his all the PGs under the one roof in 'My PGs' tab.

4.7.3 Guest Module

- The major functionally for that guest will have the access is going to be 'Search PG', using this feature, guest will be able to find out his accommodation according to his requirements by applying multiple filters.

- Dashboard will also be provided to the guest where guest is going to see all the nearby PG.

- Manage profile functionality will also be provided to the guest so that guest can change their personal details.

- Guest will also be facilitated with change password functionality in the case if guest forgot his login credentials.
- Guest will also be able to give feedbacks and ratings to the PG.

4.7.4 Admin Module

- Admin will be able to view the Analysis report of the PG.
- Admin will be able to acknowledge the message from the user through contact us form.
- Admin will be able to view the comments on the particular PG post.

4.7.5 Super user Module

- In this application, the admin will have all the root accesses in order to maintain the reputation of the web application in the market.
- As super user will be able to remove any guest or owner if they will perform any kind of suspicious activity, for example, the user will high number of negative reviews and feedback is going to be bane from the web application.

4.8 Selection of Hardware and Software Characteristics

Hardware Requirements

- Minimum 2.27 Ghz processor
- RAM: 2GB minimum Software Requirements.
- Hard Disk - 200 MB or Higher

Software Requirements

- Operating System
  - Windows 10
- IDE
  - Visual Studio Code (For live preview) – version 1.76
    - Extensions: Tabnine, Pylance, GitLens, Python, Python Snippets
- Database
  - PostgreSQL – Version 4
- Language
  - Python – Version 3.11.2
- Framework
  - Django – Version 4
  - Bootstrap 5.0 and Bootstrap 4.0
- Software
  - Nicepage (To design frontend templates)
- Repository management system
  - Git - CMD
  - GitHub - IDE

5. System Design

5.1 System Design & Methodology

Design Methodology

The Activities we follow for the project is listed below: -

- Planning the work
- Analysis and design of object
- Accessing and controlling risk
- Estimating Resources
- Allocation of Resources
- Organizing the work
- Database design

We have used Prototype Model in our project because as you can see in the diagram prototype model will to take initial requirements and as per the feedback of the end user again planning is done new design is made. After the satisfaction of the end user development is done.

Steps:

- Construct a partial implementation of a total system.
- Then slowly add increased functionality.
- The new added functionality for the system can be implemented in groups.

Prototype Model:

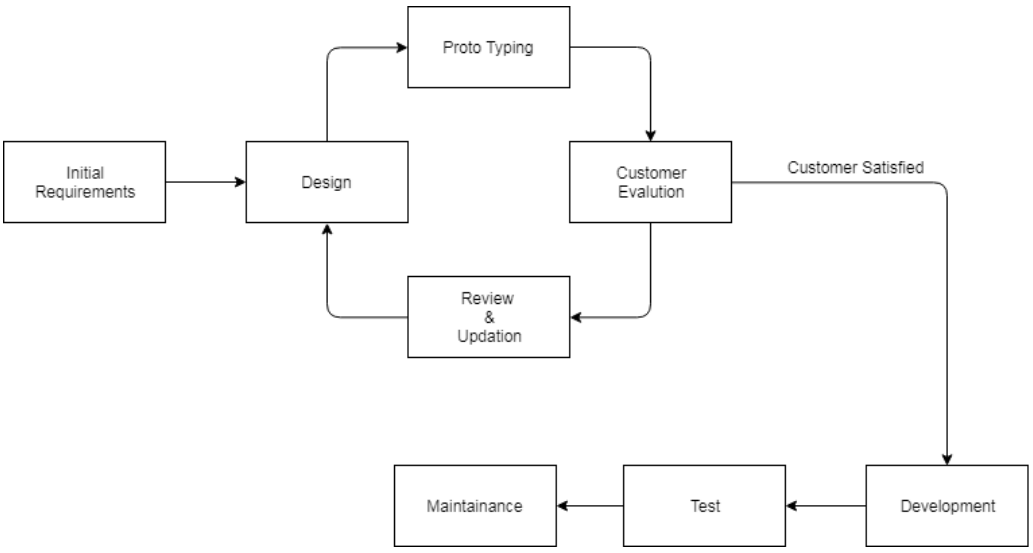

Figure 5.1 Prototype Model

E-R Diagram

An entity-relationship (ER) diagram illustrates the relationships between entities in a database. ER diagrams often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes.

A relationship captures how entities are related to one another, Relationships can be thought of as verbs, linking two or more nouns. Examples: An owns relationship between a company and a computer, a supervises relationship between an employee and a department, a performs relationship between an artist and a song, a proves relationship between a mathematician and a conjecture

The three main cardinal relationships are:

One-to-one (1:1): For example, if each student in a database in associated with one enrollment id.

One-to-many (1: M): For example, student have attendance for multiple subjects.

Many-to-many (M: M): For example, in our system multiple faculties sends an attendance report to multiple students according to their subjects.

ER Diagram: -

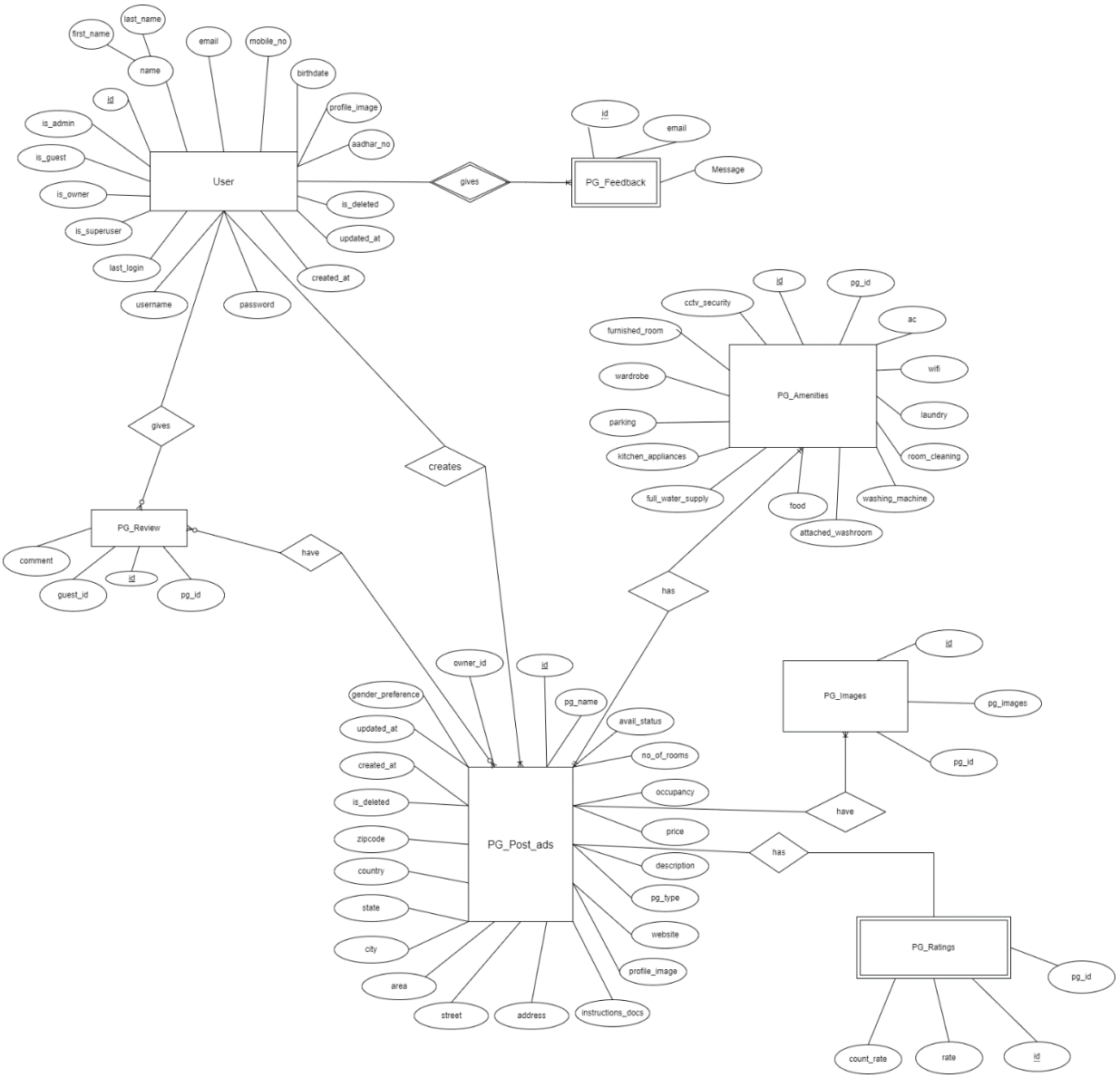

Figure 5.2 ER diagram

5.2 Database Design

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

PG Finder – Data Dictionary

User Table

No.	Field Name	Data-Types	Constraint
1.	Id	IntegerField	Primary Key
2.	first_name	CharField (10)	Not null
3.	last_name	CharField (10)	Not null
4.	email	EmailField	Unique Key
5.	Mobile_no	IntegerField (10)	Unique Key
6.	birthdate	DateField	Not null
7.	aadhar_no	IntegerField (12)	Unique Key
8.	profile_image	ImageField	Null
9.	username	CharField (10)	Unique Key
10.	password	CharField (20)	Not null
11.	is_admin	BooleanField	Not null
12.	is_owner	BooleanField	Not null
13.	is_guest	BooleanField	Not null
14.	is_superuser	BooleanField	Not null
15.	created_at	DateTimeField	Not null
16.	updated_at	DateTimeField	Not null
17.	is_deleted	BooleanField	Not null

Table 5.1 User

PG Post Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	owner_id	IntegerField	Foreign Key
3.	pg_name	CharField (10)	Not null
4.	avail_status	BooleanField	Not null
5.	no_of_rooms	PositiveIntegerField	Not null
6.	occupancy	CharField (10)	Not null
7.	price	PositiveIntegerField	Not null
8.	description	TextField	Null

9.	pg_type	ChatField (15)	Not null
10.	website	CharField (50)	Null
11.	profile_image	**ImageField**	Not null
12.	instuctions_docs	FileField	Null
13.	address	TextField	Not null
14.	street	TextField	Not null
15.	area	TextField	Not null
16.	city	ChatField (15)	Not null
17.	state	ChatField (15)	Not null
18.	country	ChatField (15)	Not null
19	zipcode	**ChatField (15)**	Not null
20.	gender_preference	**ChatField (15)**	Not null
21.	created_at	BooleanField	Not null
22.	updated_at	BooleanField	Not null
23.	is_deleted	BooleanField	Not null

Table 5.2 PG Post

PG Amenities Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	pg_id	IntegerField	Foreign Key
3.	ac	BooleanField	Not null
4.	wifi	BooleanField	Not null
5.	laundry	BooleanField	Not null
6.	room_cleaning	BooleanField	Not null
7.	washing_machine	BooleanField	Not null
8.	attached_washroom	BooleanField	Not null
9.	food	BooleanField	Not null
10.	full_water_supply	BooleanField	Not null
11.	kitchen_appliances	BooleanField	Not null
12.	parking	BooleanField	Not null
13.	wardrobe	BooleanField	Not null
14.	furnished_room	BooleanField	Not null
15.	cctv_security	BooleanField	Not null

Table 5.3 PG Amenities

PG Images Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	pg_id	IntegerField	Foreign Key
3.	Images	ImageField	Not null

Table 5.4 PG Images

PG Rating Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	pg_id	IntegerField	Foreign Key
3.	Rate	IntegerField	Not null
4.	count_rate	IntegerField	Not null

Table 5.5 PG Rating

PG Comments Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	pg_id	IntegerField	Foreign Key
3.	user_id	IntegerField	Foreign Key
4.	comment	TextField	Not null

Table 5.6 PG Comments

Feedback Table

No.	Field Name	Data-Types	Constraint
1.	id	IntegerField	Primary Key
2.	email	EmailField	Not null
3.	message	TextField	Not null

Table 5.7 Feedback Table

5.3 System Procedural Design

5.3.1 Design Pseudo code or algorithm for method or operationAdmin Side

Step 1: Enter the URL to open the system

Step 2: Click on Login Button for Login

Step 3: Provide user name and password

Step 4: If username and password both is correct then it will login successfully.

Step 5: It will show Admin dashboard

Step 6: Admin can able to perform many operations.

Step 7: After completing his task, admin can logout from the website.

Guest Side

Step 1: Enter the URL to open the system

Step 2: Click on Login Button for Login

Step 3: Provide user name and password

Step 4: If username and password both is correct then it will login successfully.

Step 5: It will show guest dashboard

Step 6: Now the guest will surf various PGs by applying filters and will get his desired PG.

Step 7: Logout User.

Owner Side

Step 1: Enter the URL to open the system

Step 2: Click on Login Button for Login

Step 3: Provide user name and password

Step 4: If username and password both is correct then it will login successfully.

Step 5: It will show owner dashboard

Step 6: Now owner will add his PG's all details.

Step 7: Then owner will add amenities those are provided in corresponding PG

Step 8: Now owner can update and delete his PG as well as make some changes to the amenities

Step 9: Logout User

5.3.2 Flow Chart

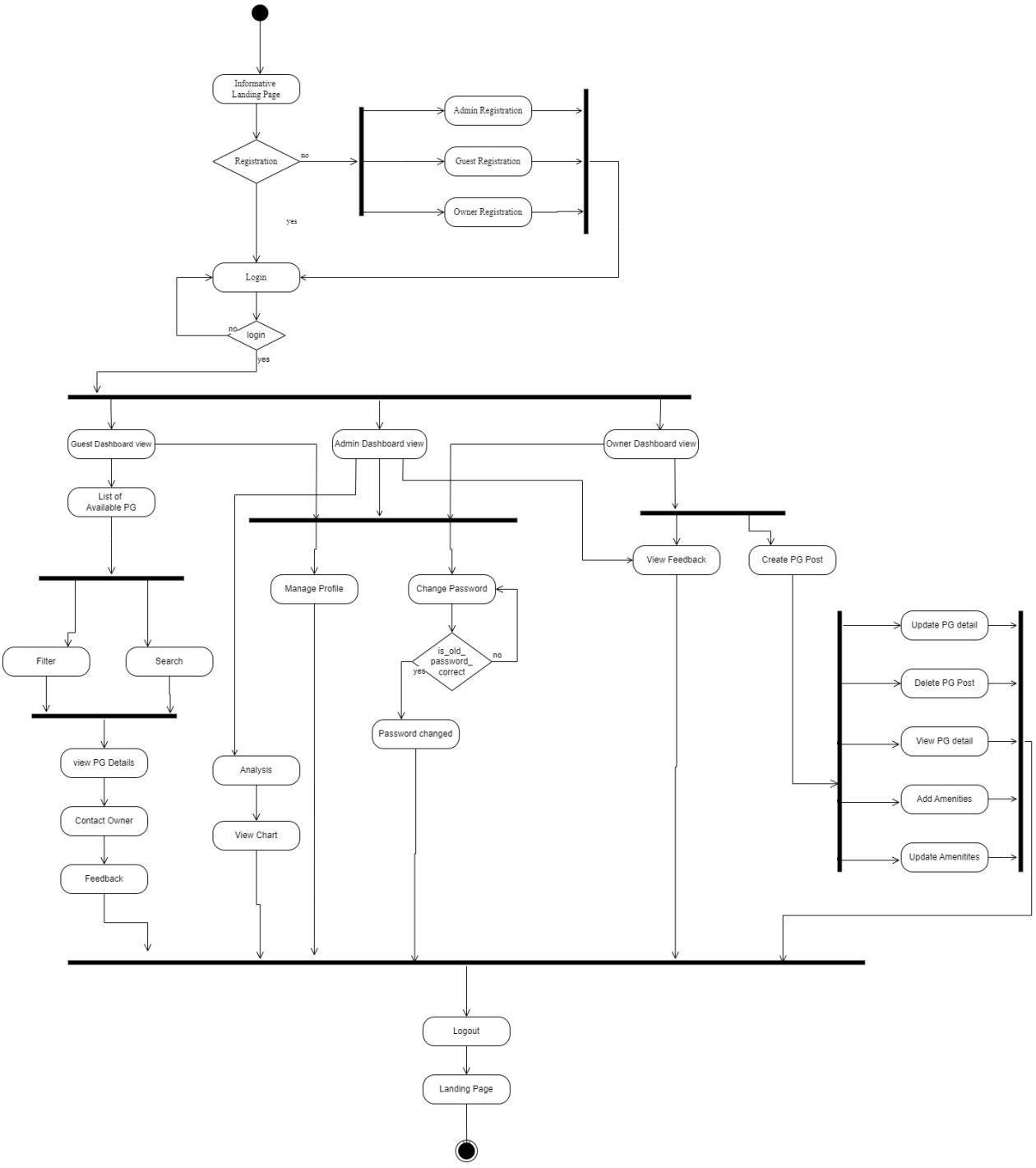

Figure 5.3 Flow Chart|

6.0 Implementation

6.1 Implementation Platform

- Our project is suitable to all type of users like single and multi-users.
- Multi users are allowed to operate the website at the same time.
- We provide the interface which is user friendly.
- We have GUI (graphical user interface) by which all type of users can easily access the application.
- One user at a time and also multi users can access the website at the same time and useall the services.
- If we don't provide the GUI in the website then user won't like our website.
- For better performance and reliability, we have to include GUI in the website.
- So, for the more security and performance we have to use the GUI

6.2 Technology Specification

User Authentication

- Identification and authentication are used to establish a user's identity.
- Each user is required to log in to the system.

Password Protection

- Every user who is to be allowed to access the portal is given his own username and password and given his own access rights so that only authorized and authenticated users can access the project.

Confidentiality

- We provide confidentiality to all the users.
- In that one user cannot access the data of the other users.
- For that we provide one key to each user to secure its data.

Scalability

- We provide the scalable website to make sure that every user can access the website in a proper order.

- User likes those type of website which are in one particular order that usercannot wait for the usage of the services.

6.3 Results

Landing Page

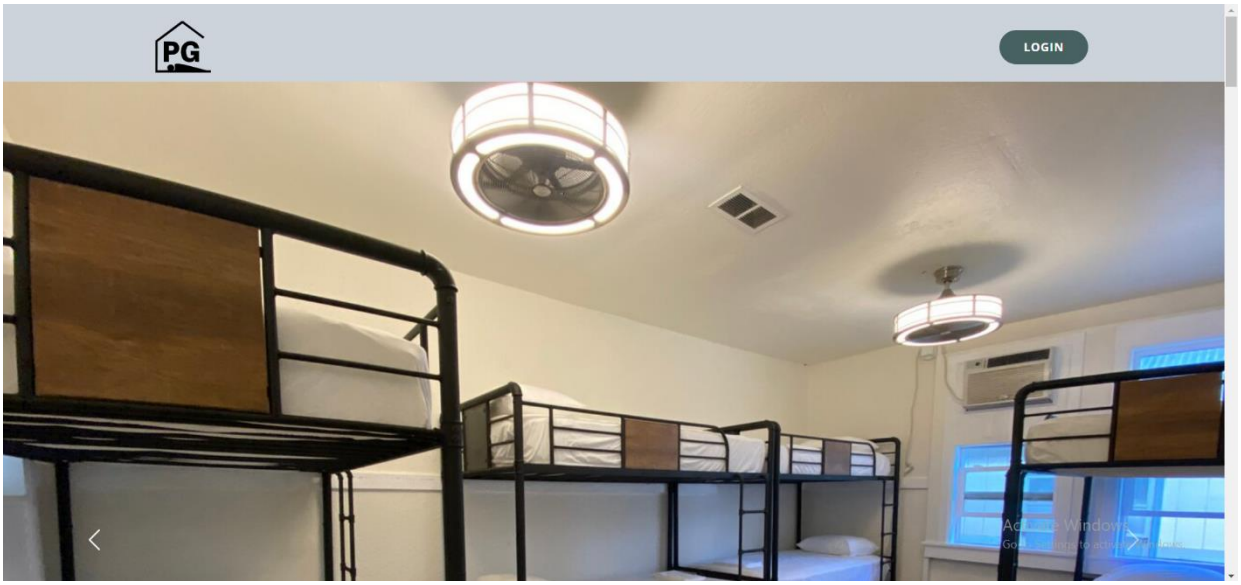

Figure 6.3.1.1 Dashboard

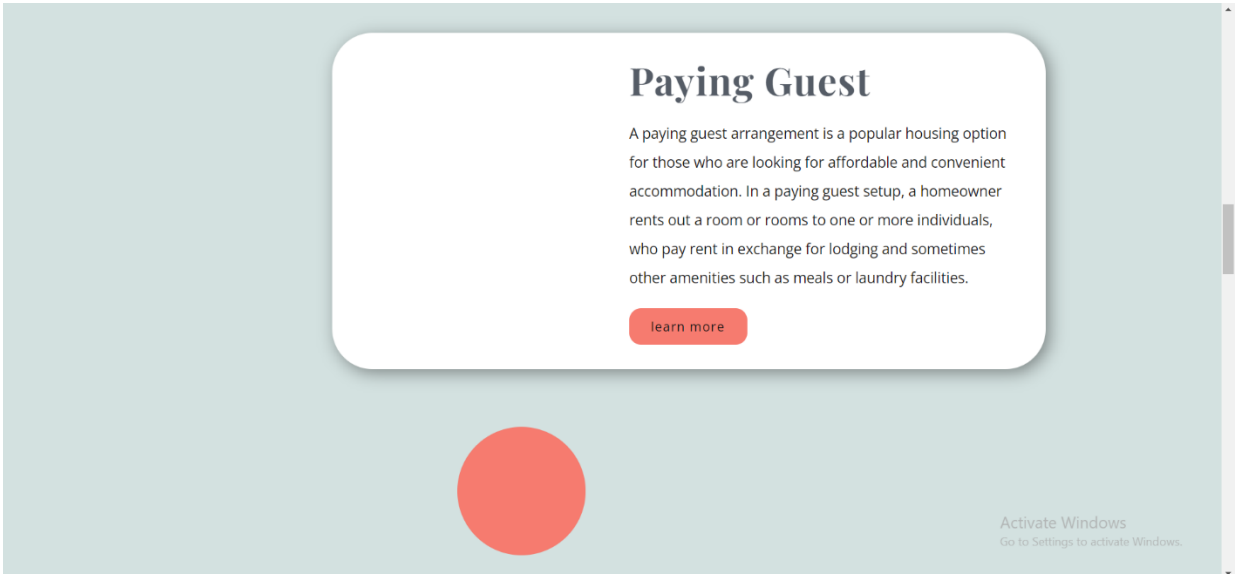

Figure 6.3.1.2 Dashboard

Figure 6.3.1.3 Dashboard

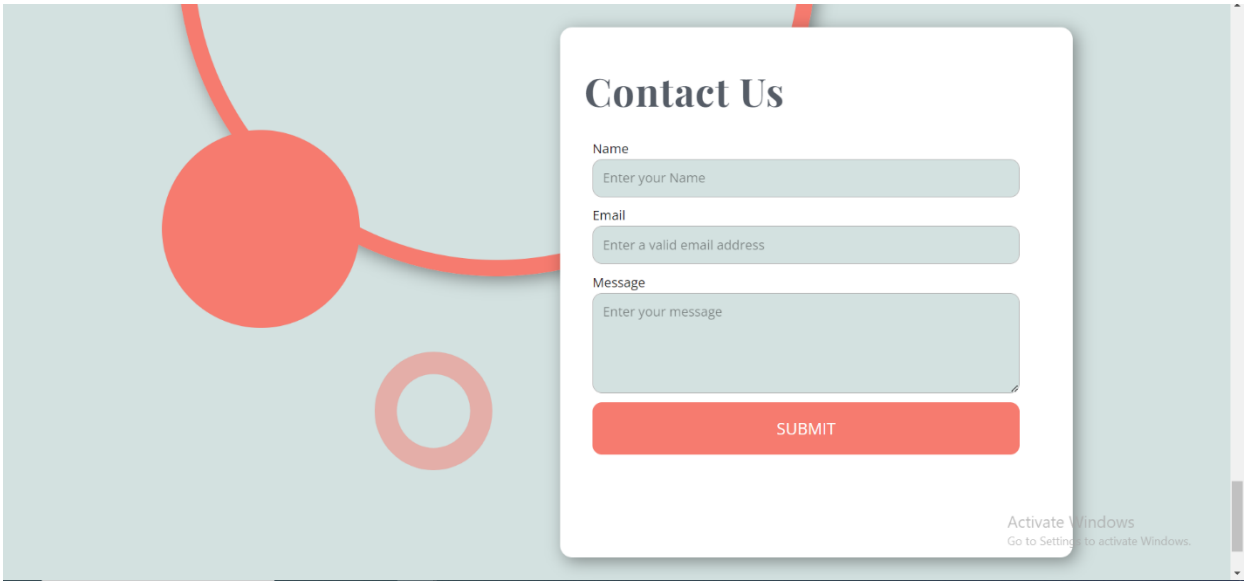

Figure 6.3.1.4 Dashboard

Login Page

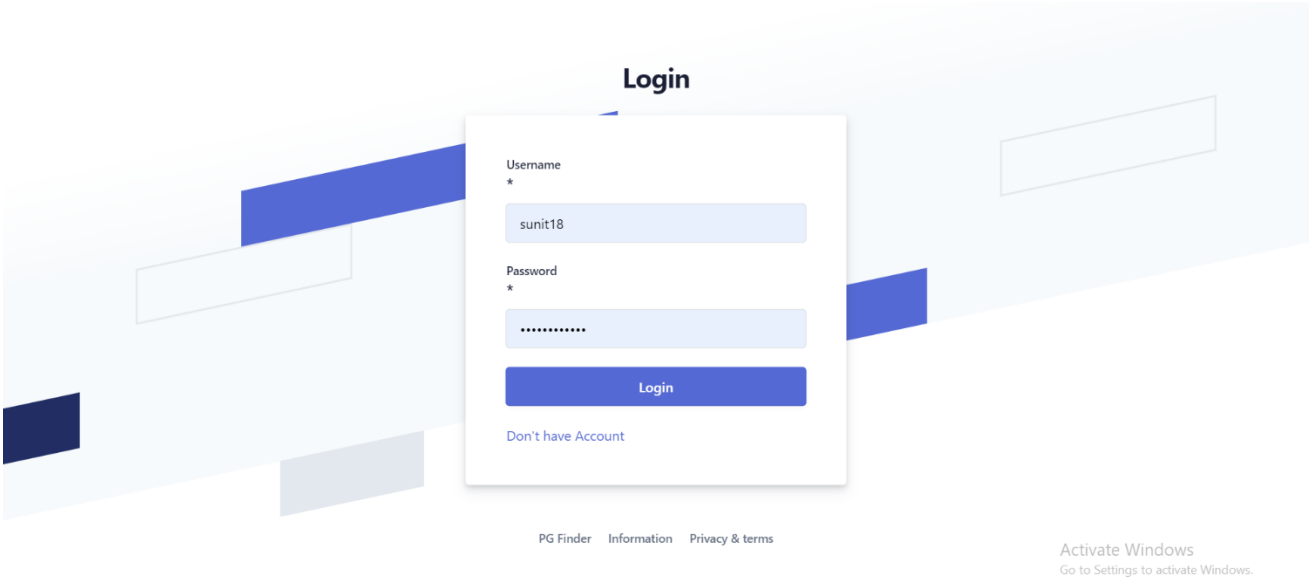

Figure 6.3.2 Login

Registration Choices

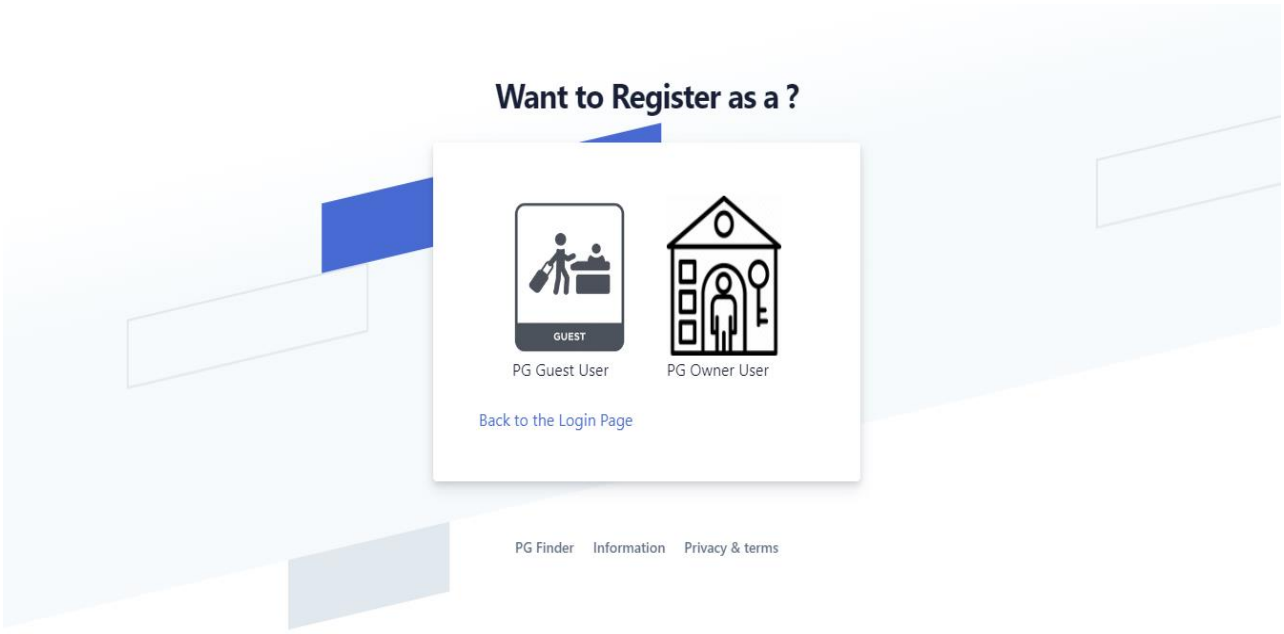

Figure 6.3.3 Registration Choices

Owner Create Account

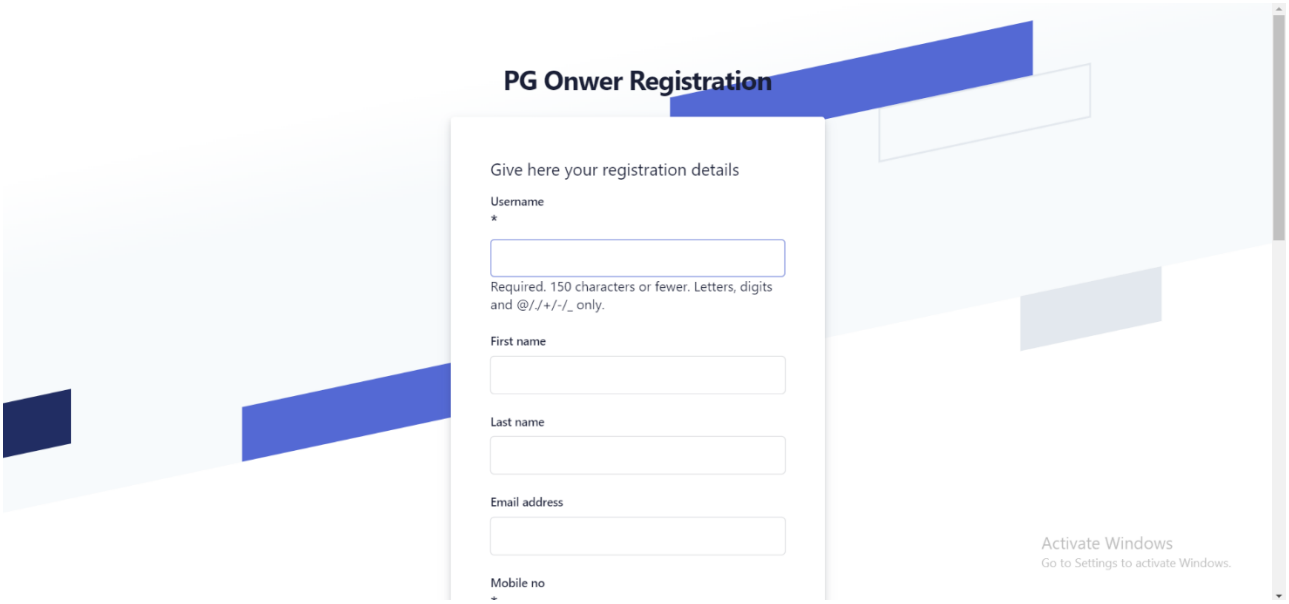

Figure 6.3.4 Owner Create Account

Guest Create Account

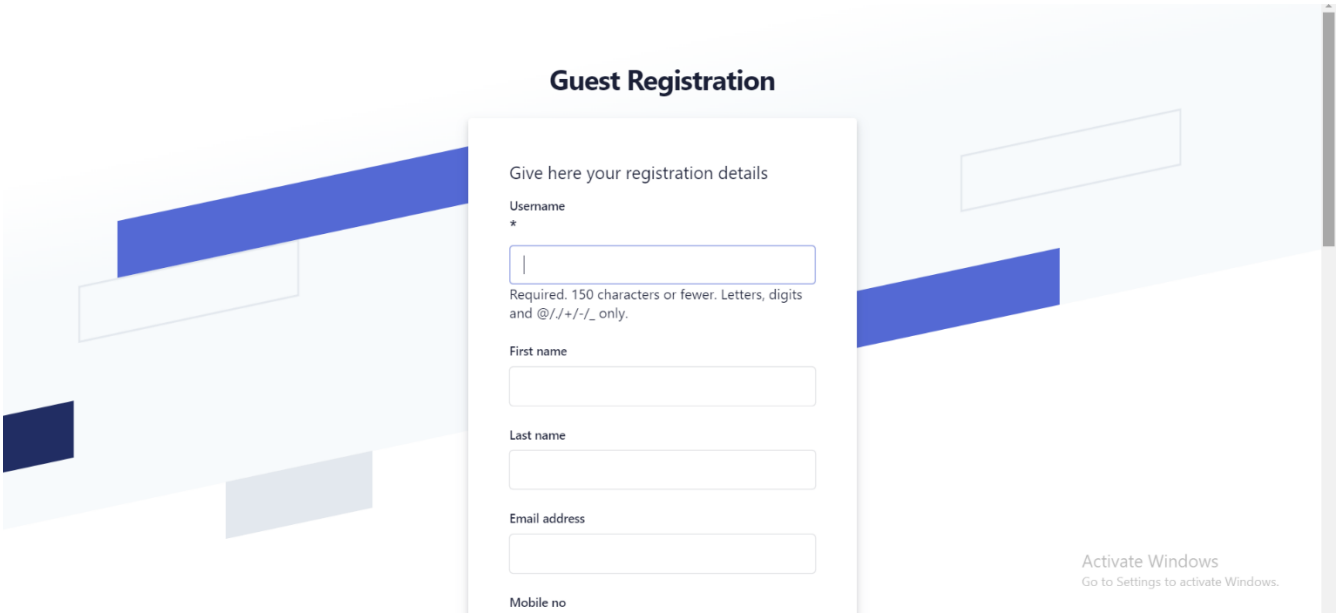

Figure 6.3.5 Guest Create Account

Owner Dashboard

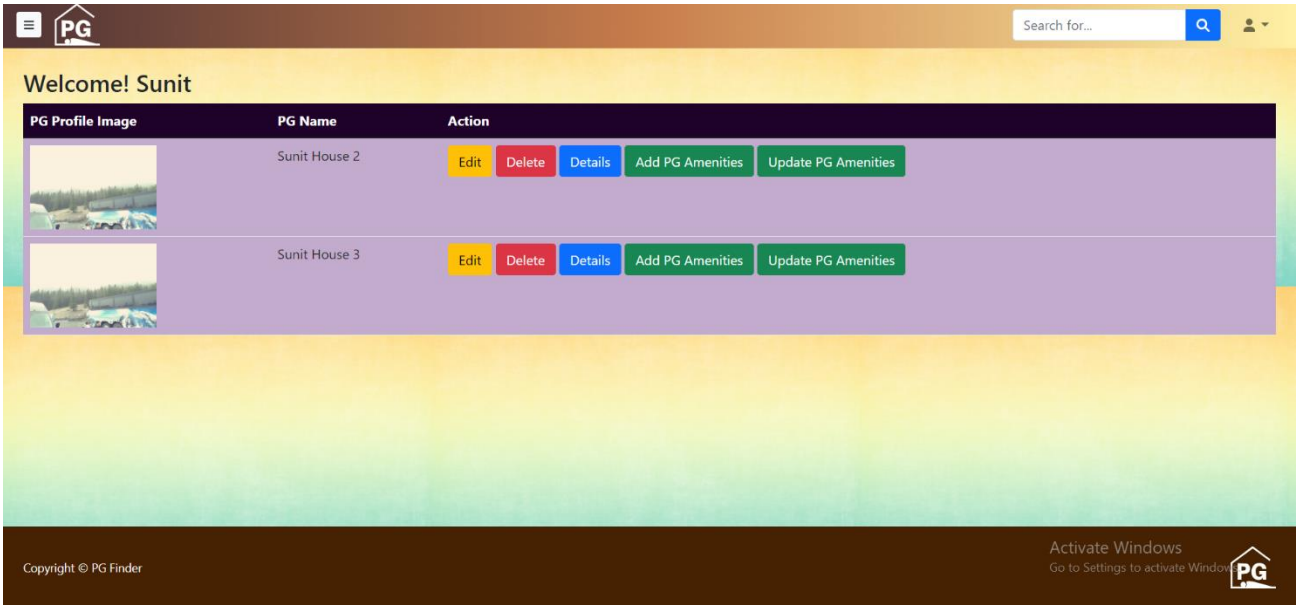

Figure 6.3.6 Owner dashboard

Owner Create PG

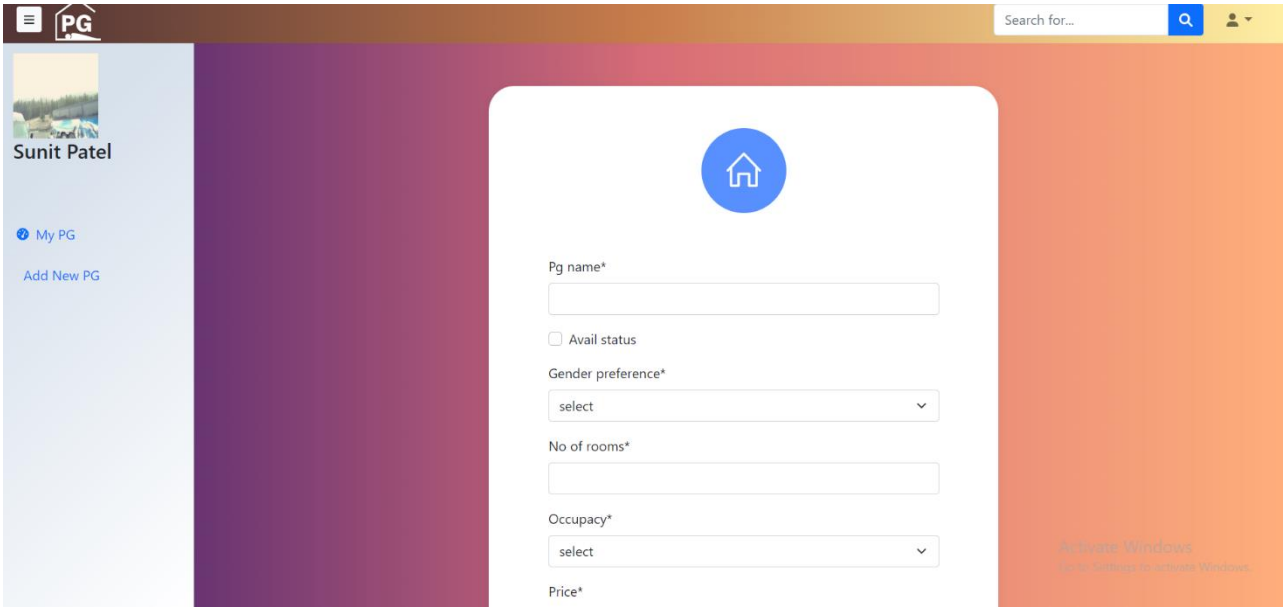

Figure 6.3.7 Owner Create PG

Owner Update PG

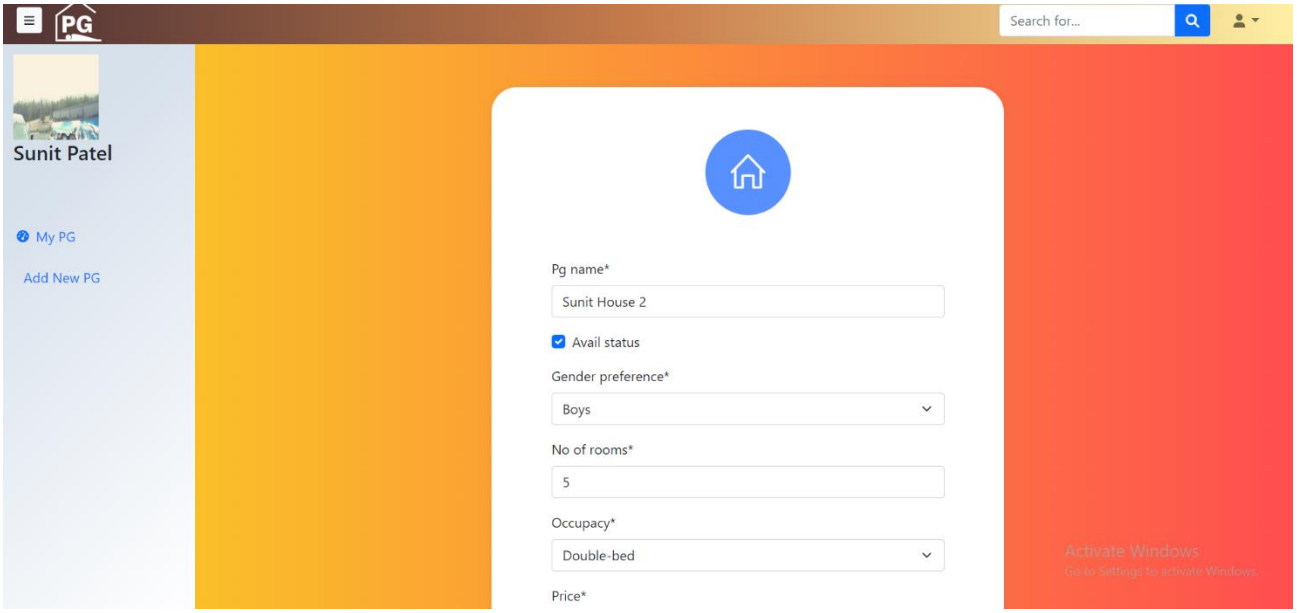

Figure 6.3.8 Owner Update PG

Owner PG Detail View

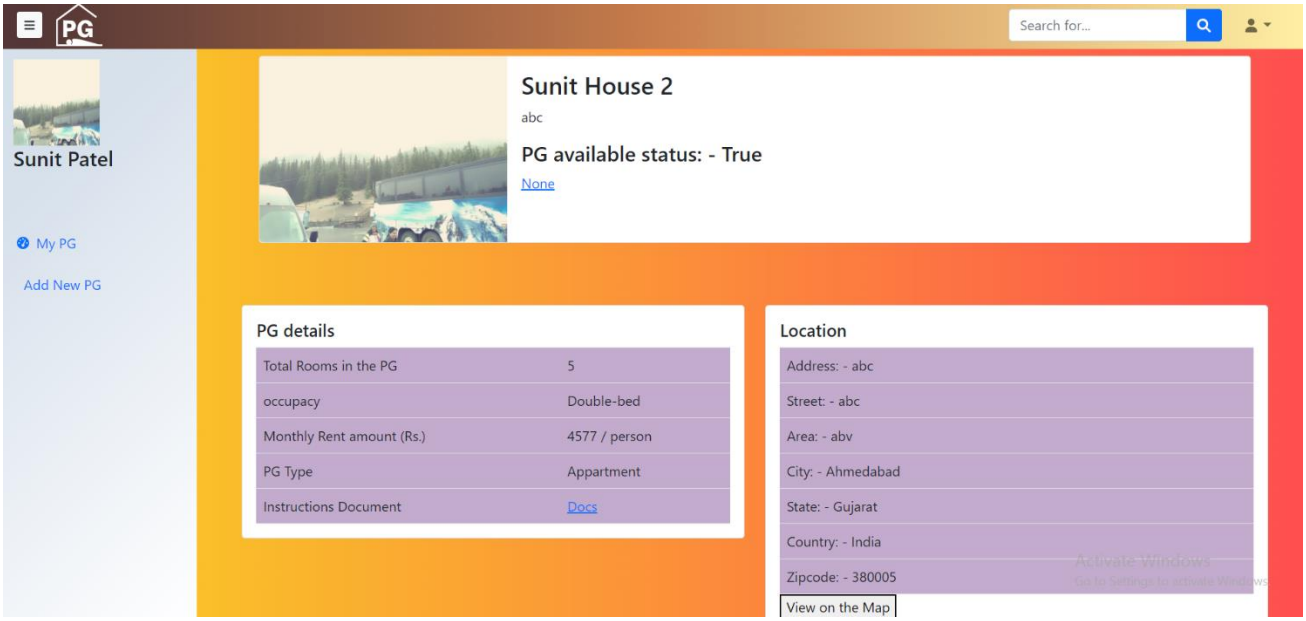

Figure 6.3.9 PG Detail View

Add Amenities

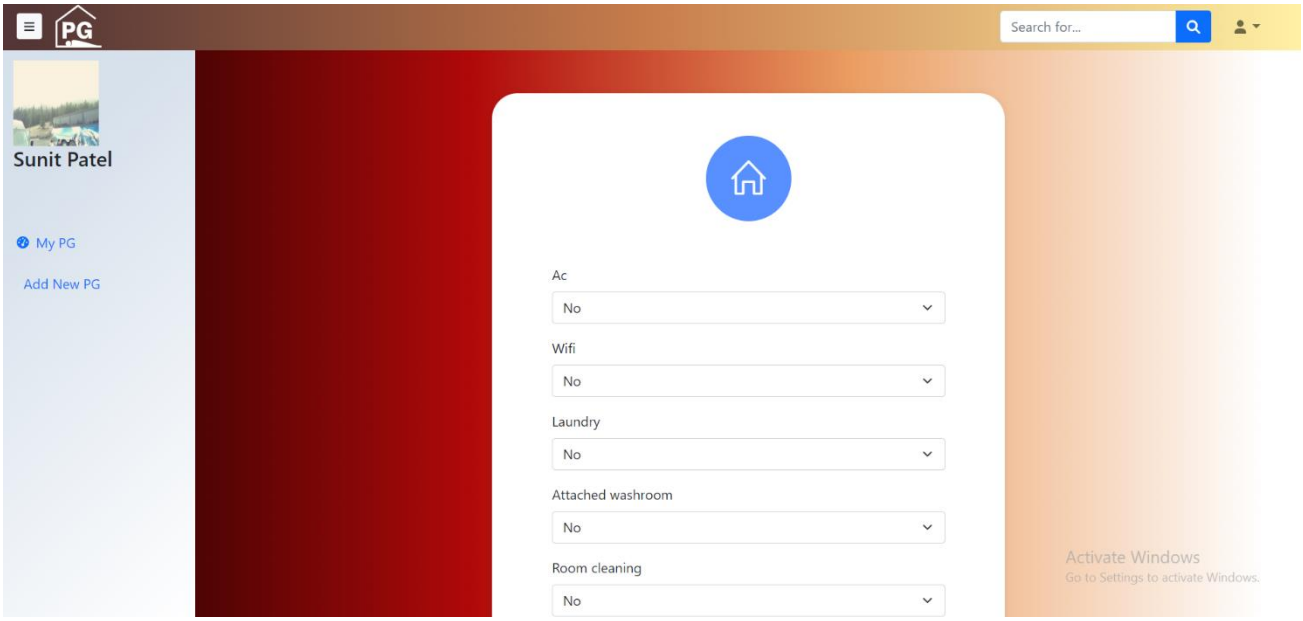

Figure 6.3.10 Add Amenities

Update Amenities

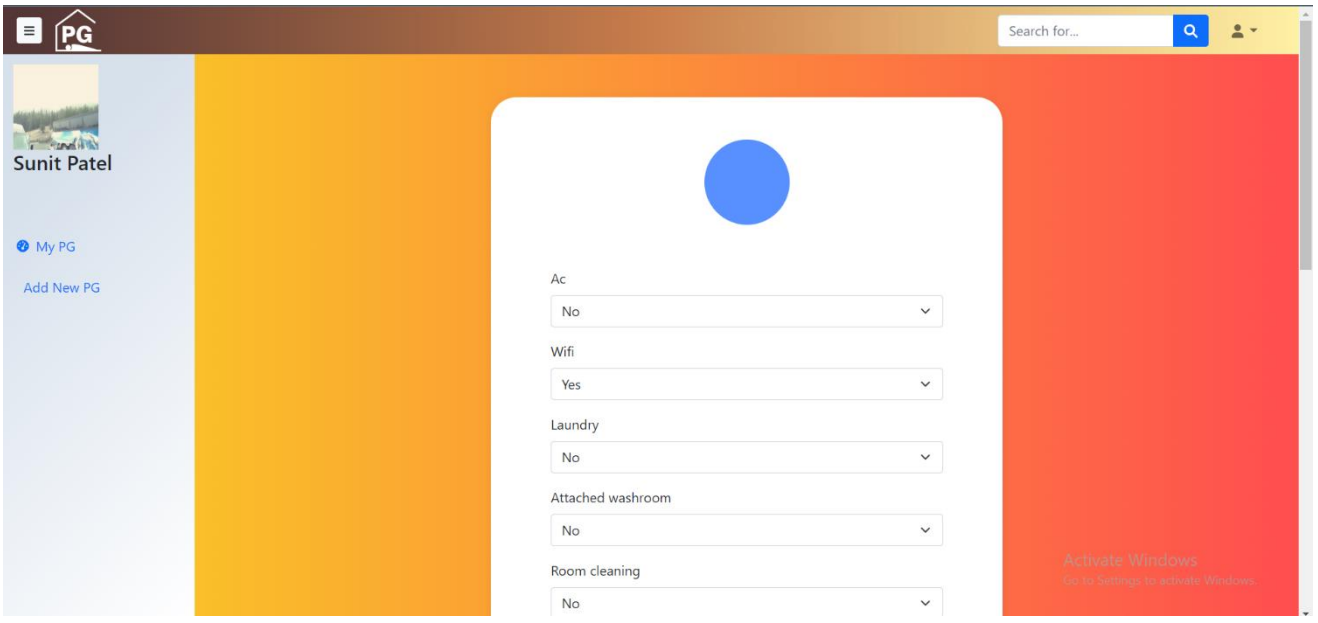

Figure 6.3.11 Update Amenities

Delete PG

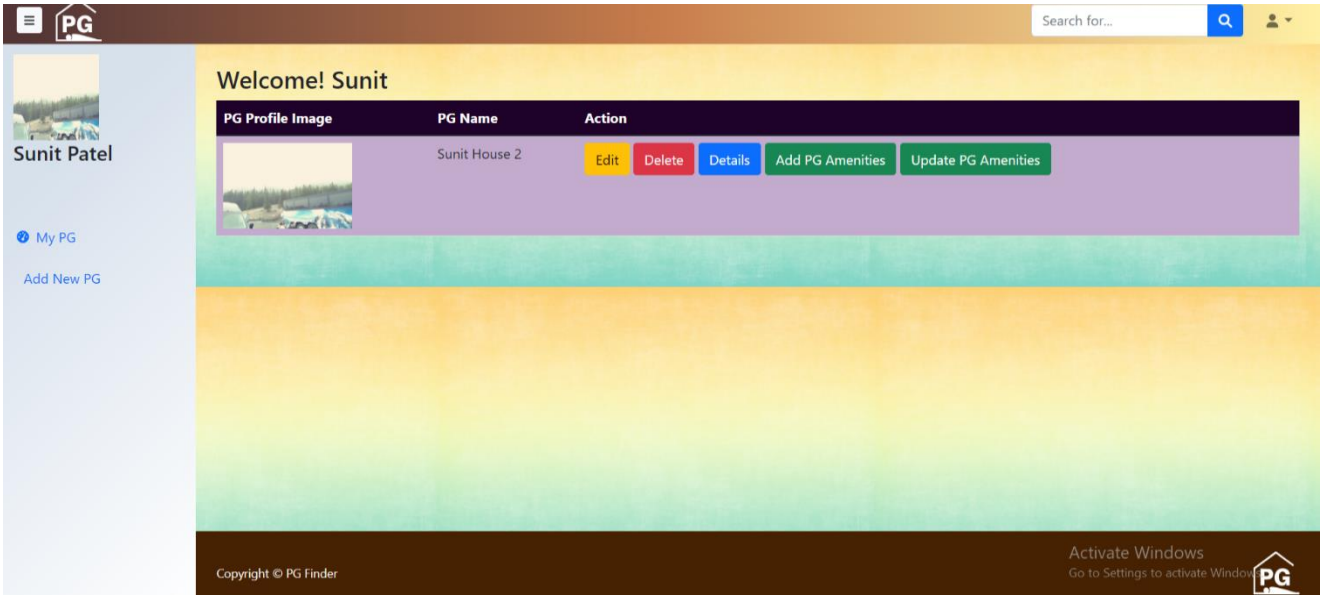

Figure 6.3.12 Delete PG

Owner Manage Profile

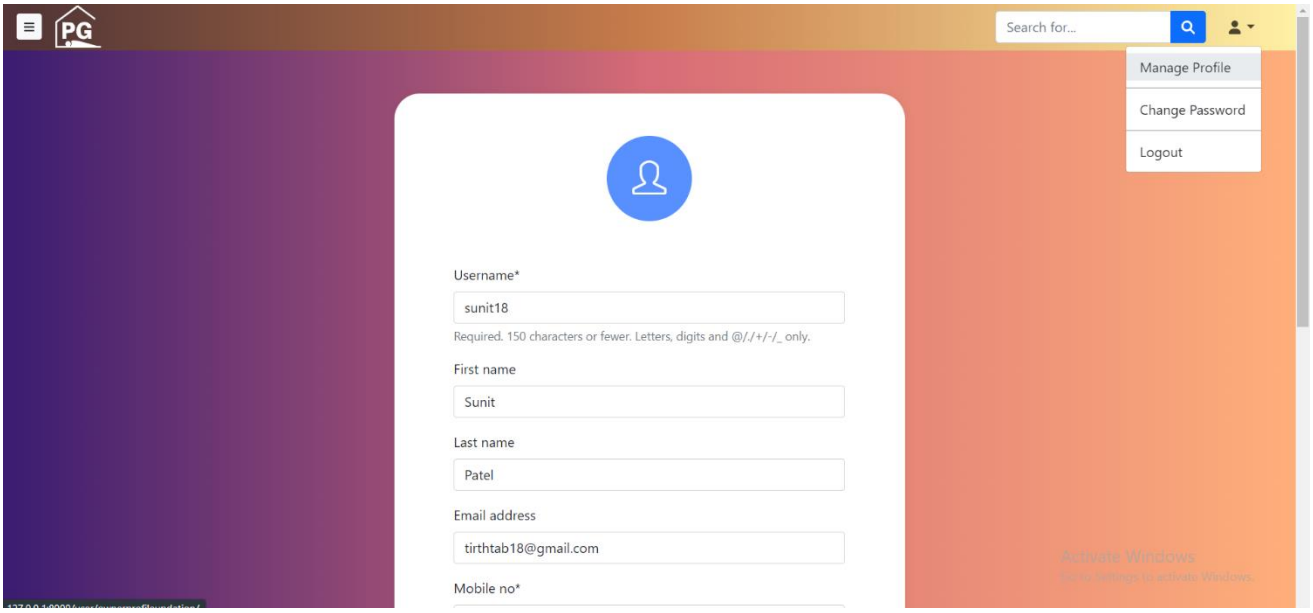

Figure 6.3.13 Owner Manage Profile

Owner Change Password

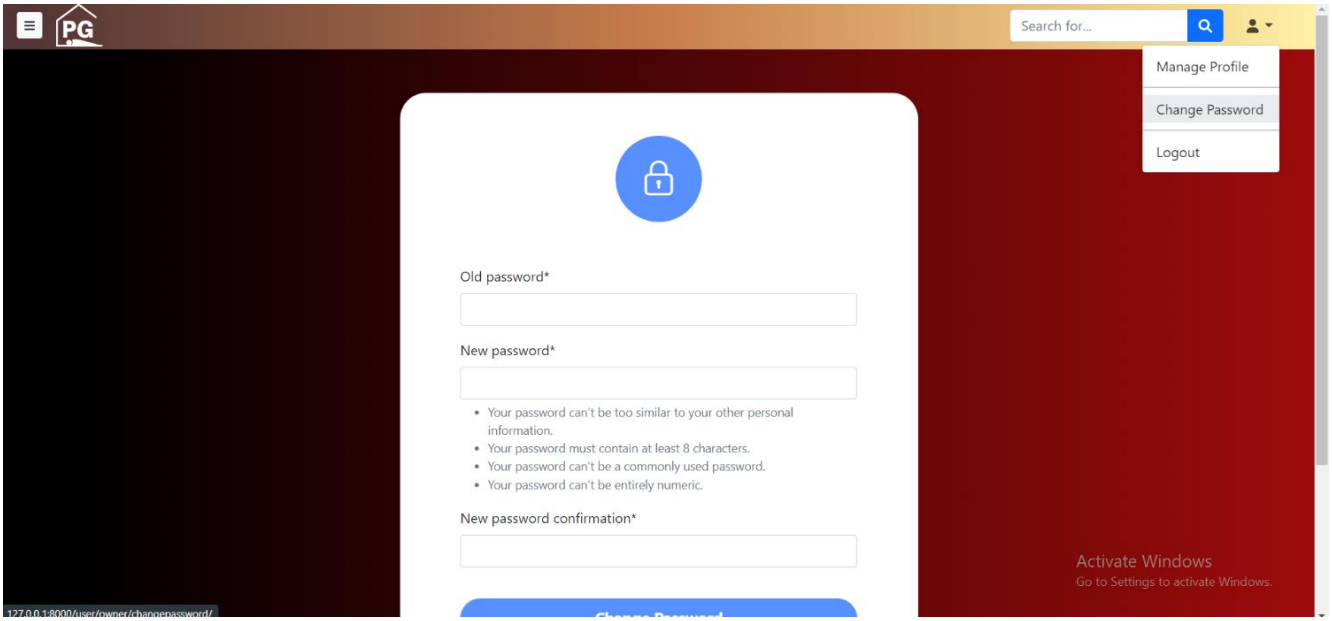

Figure 6.3.14 Owner Change Password

Guest Dashboard

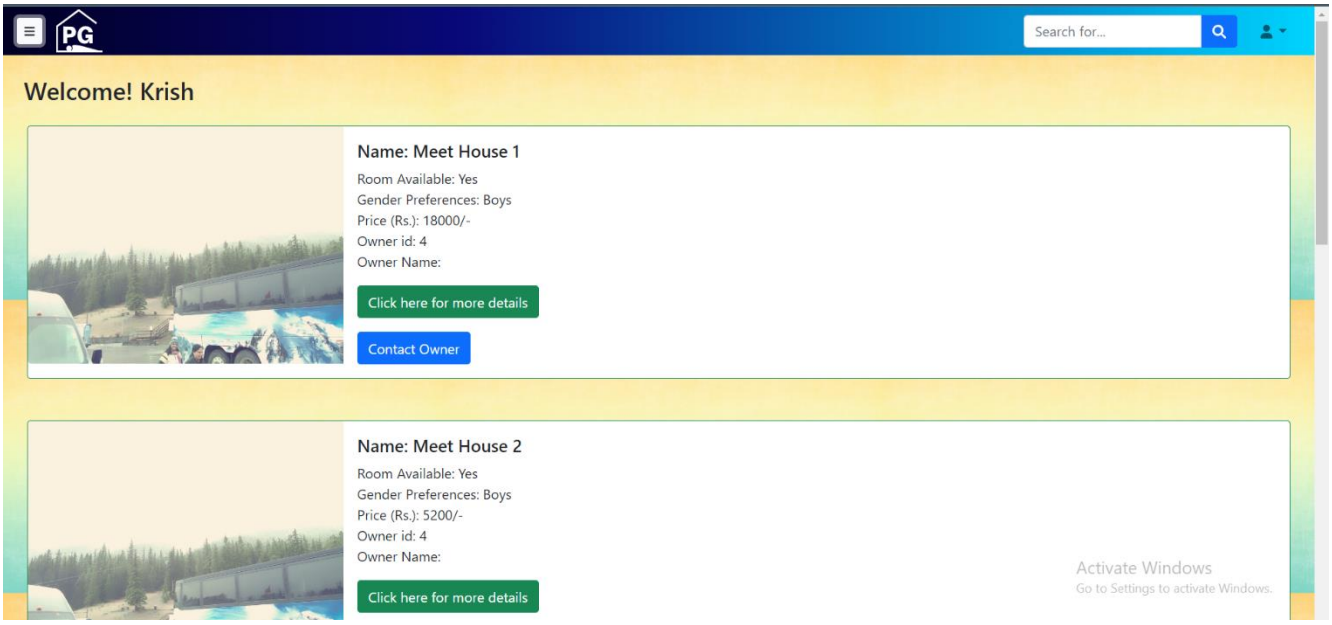

Figure 6.3.15 Guest Dashboard

List of PG at guest side

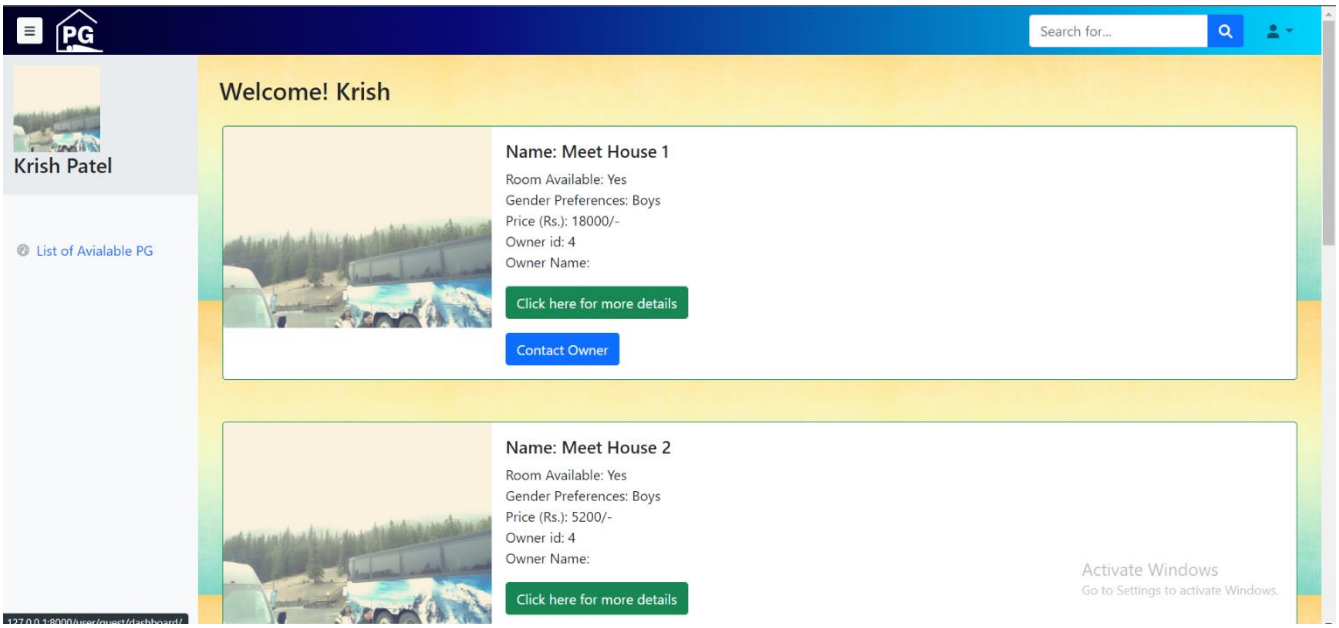

Figure 6.3.16 List of PGs

PG Detail at guest side

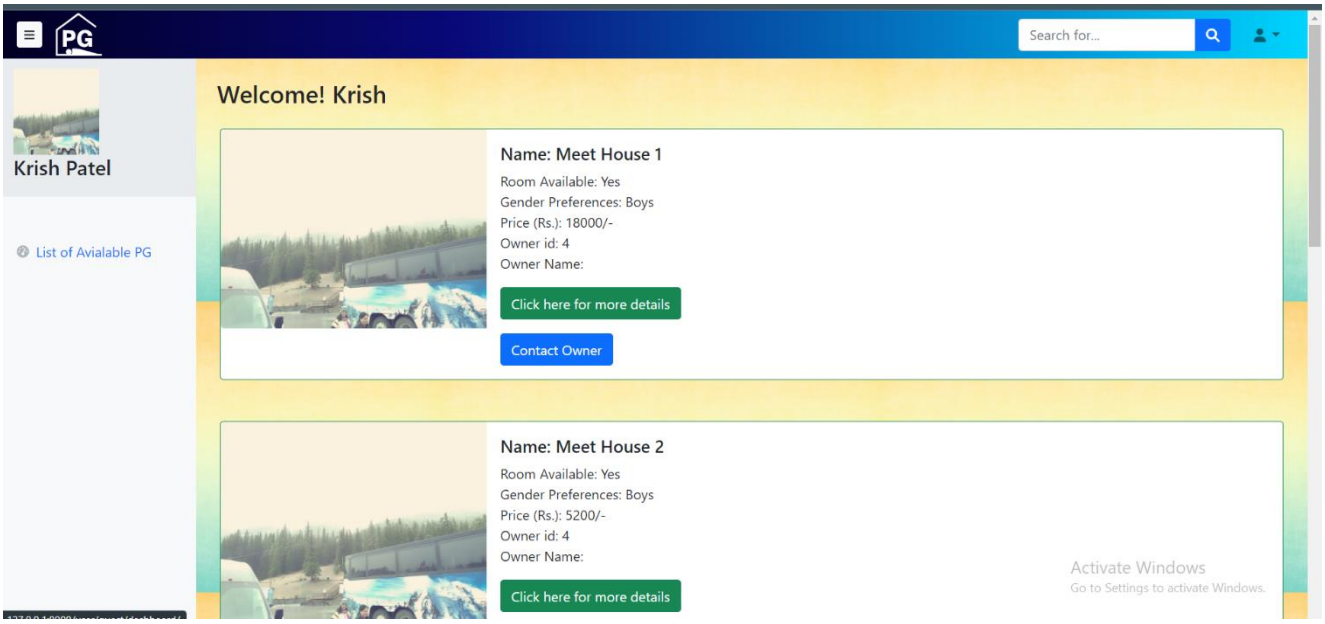

Figure 6.3.17 List of PGs

Contact Owner

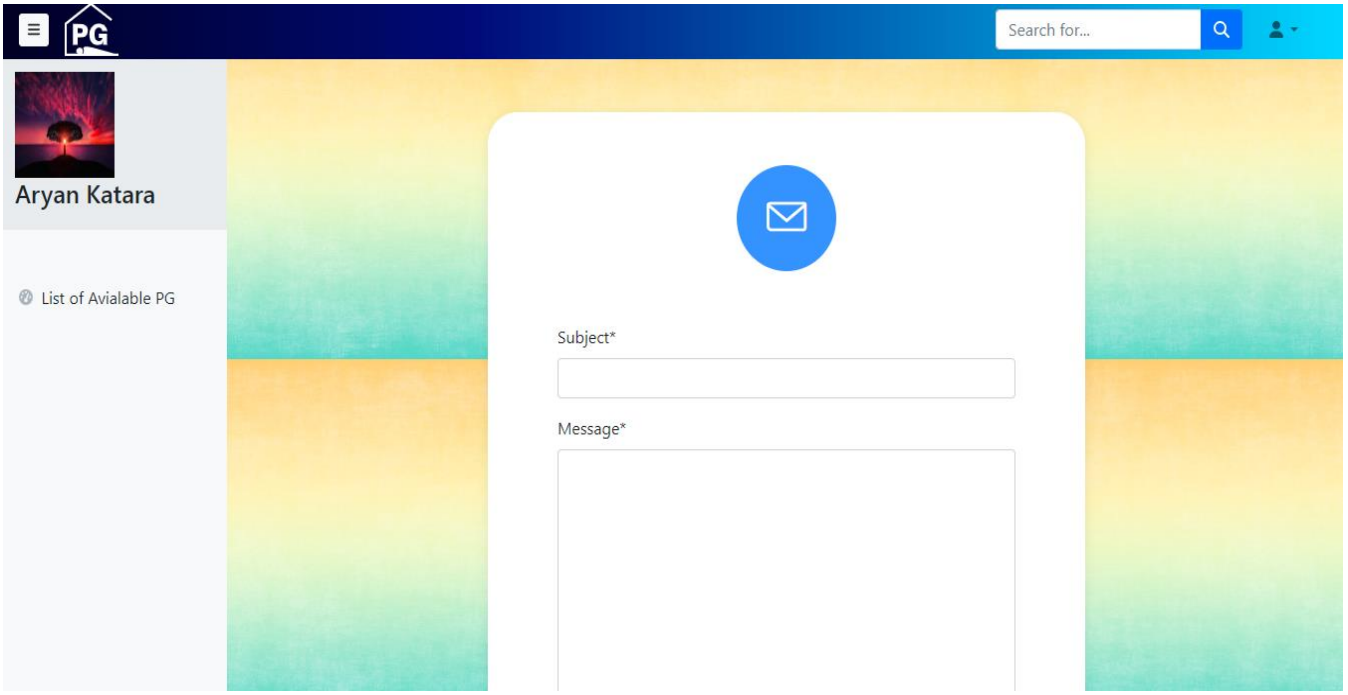

Figure 6.3.18 Contact Owner

Guest Manage Profile

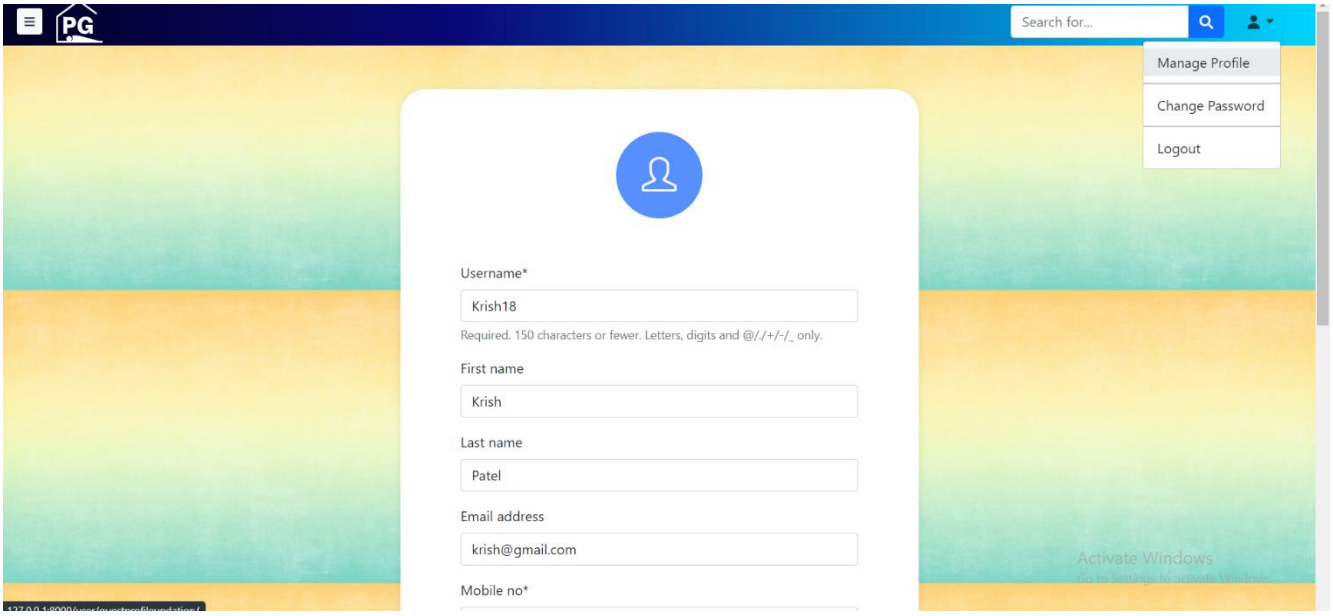

Figure 6.3.19 Guest Manage Profile

Guest Change Password

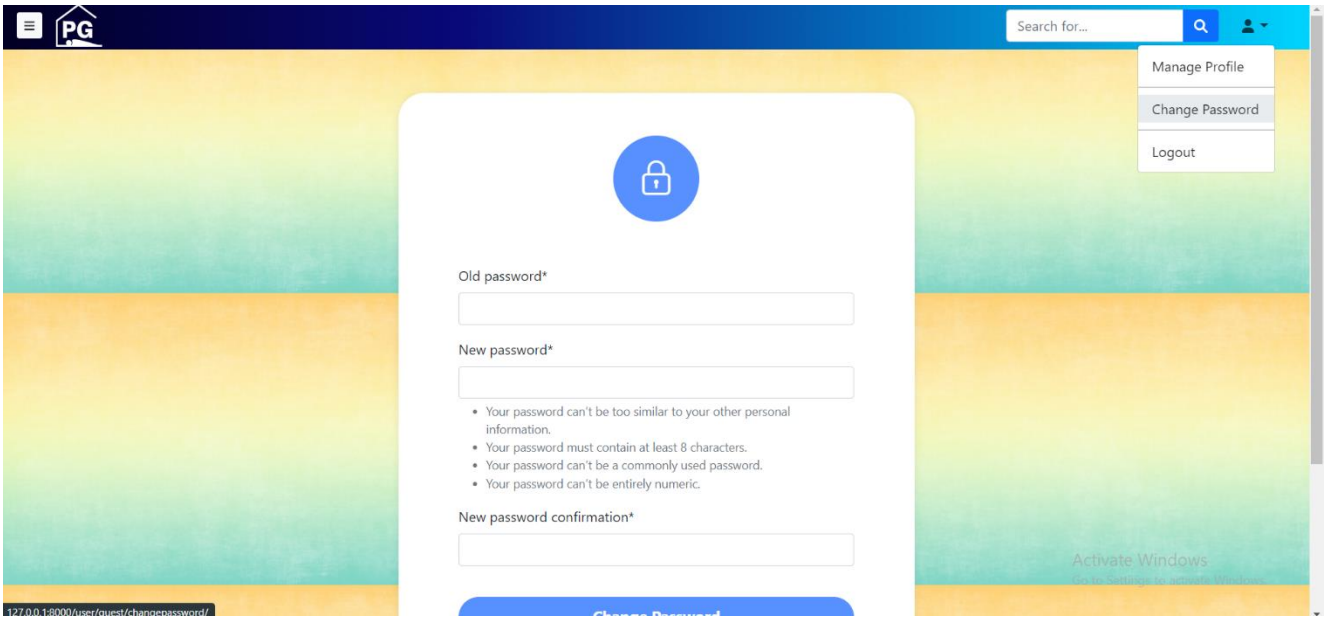

Figure 6.3.20 Guest Change Password

Forget Password

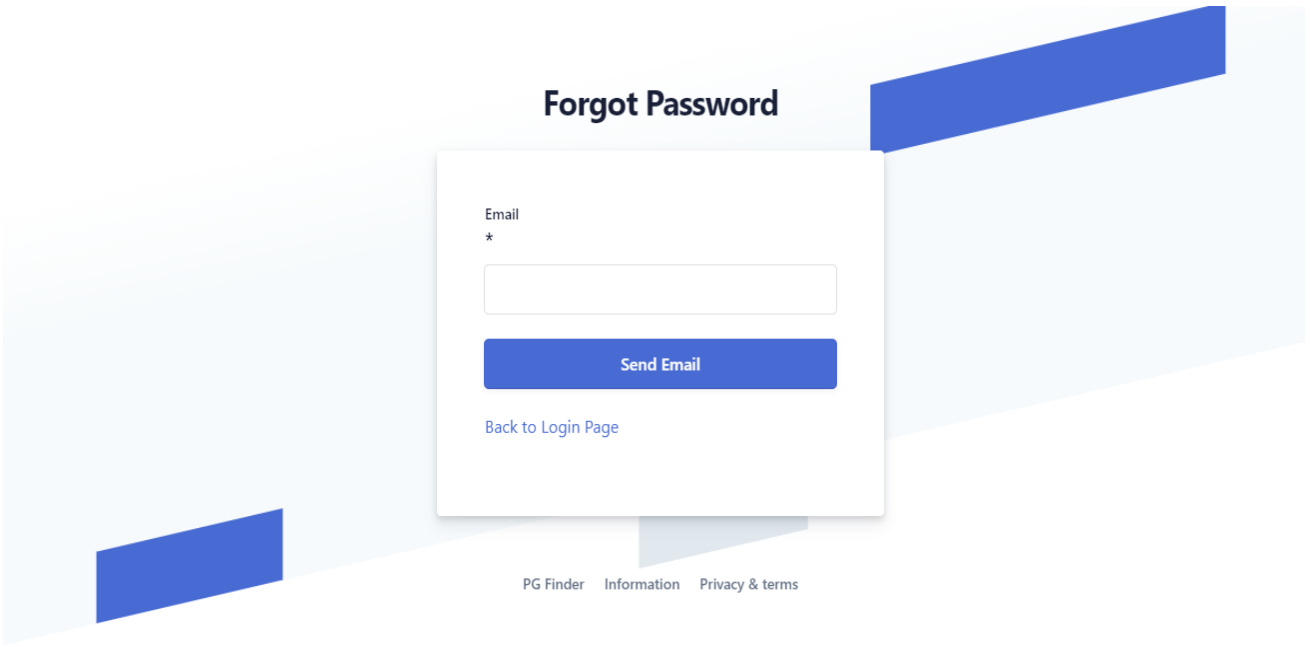

Figure 6.3.21 Guest Change Password

7. Testing

7.1 Testing Plan/ Strategy

In this project we have done the manual testing to verify that all our functionality works properly or not. The testing process is carried out when we had completed the implementation of all the functionality so here the testing had been done at the end of the internship.

In this project, we have done the functional testing that check each functionality works properly or not. All the testing procedure is carried out manually.

First of all, we create the test cases for each functionality and what should be our expected output should be note down. Then we check all the functionality and check the actual output and compare with expected output. If match then we can pass the test case else we have to give the remarks that what changes should have to done.

7.2 Test Results and Analysis

7.2.1 Test Cases

Table 7.1 Test Cases

Test ID	Test Condition	Expected Output	Actual Output	Remark
1	Email Should be Sent after account has been created	Send the Email	Perfectly Send the Email.	No
2	User Authentication Functionality	Login, Logout, Create Account should be done properly.	Done Properly all the Authentication functionality	No
3	PG Pages	All pages regarding PG should works properly such as add PG, update PG, delete PG, details of PG, etc.	All the pages related to PG works correctly.	No
4	Guest Pages	Customer can see all the PG, its details, Profile as well should be able to apply filters	All the guest pages had properly displayed with all details.	No
5	Owner Pages	Owner should be able to perform all the operations like manipulate PG, manage profile as well as have view of dashboard	All the owner pages had properly displayed with all details.	No
6	Admin Screens	Admin should be able to view the analytical charts and feedback.	Admin is able to view the analytical charts and feedback.	No

8. Conclusion and Discussion

8.1 Overall Analysis of Internship

During the internship first of all they gave the basic knowledge of computer languages and then they assigned the project. In project first of all we have to design the system based on the requirements given as per the SRS (Software Requirements Specification) then we have to design the databases for our website. After designing the database, we have to integrate all the webpageswith database and lastly, we have to do testing of our website. After completing the project.

8.2 Dates of Continuous Evaluation (CE-I and CE-II)

- 04/02/2023
- 18/02/2023
- 04/03/2023
- 18/03/2023
- 01/04/2023
- 15/04/2023
- 29/04/2023

8.3 Problem Encountered and Possible Solutions

We have facing new challenges every next day, because we have implemented the project in Django using Class based view methodology. As this methodology have recently been included in the Django framework so it doesn't have ample amount of learning material on the learning platform, we need to learn from the Django documentation itself, which was quite difficult for us to adopt as a fresher.

It was very difficult for us to customized the things according to our requirement using class-based view methodology, because our most of the time is spent on the research of the particular approach and technique to fulfill our requirement.

8.4 Summary of Internship

During Internship they have assign us the project, entitled PG Finder. So, the PG Finder is a platform where the service providers i.e., User can register themselves for providing or getting the services through the portal. We have learnt so many things, we have brush-up our basic programming skills in C language and Java language. Also, we have learned new framework called Django framework with the recent industrial used class-based methodology. We have got ample amount of confidence on ourselves to kick start our career in software engineering industry.

8.5 Conclusion

During this internship, first of all we know that how the corporate works. Then during this internship, we learn the many technologies like Python, Django framework, Postgres database, UI/UX page designing, front-end designing using JavaScript, HTML, CSS, bootstrap and we completed the project.

8.6 Limitation and Future Enhancement

In our project the limitation is that the guest is not able to share the PG with the other users. Secondly viewing the exact location on the map is not done yet and user is not able to operate GPS service for the direction on the map.

In future we thinking to implement Machine learning and Artificial Intelligence technique for proper recommendation of the PG to the Guest users based on the likes and overall top-rated PG. We will surely overcome the above-mentioned challenges and the upcoming challenges.

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- https://stackoverflow.com/questions/31916408/is-django-can-modify-variable-value-in-template