VIDHYADEEP INSTITUTE OF COMPUTER & INFORMATION TECHNOLOGY, ANITA-KIM.





VEER NARMAD SOUTH GUJARAT UNIVERSITY (VNSGU)

PROJECT REPORT ON

"DG-ESTATE"

AS A PARTIAL REQUIREMENT FOR THE DEGREE OF BACHELOR OF COMPUTER APPLICATIONS

[B.C.A]

3 YEARS INTEGRATED COURSE

YEAR: 2019 - 2022

GUIDED BY: SUBMITTED BY:

Drashti Bhatt Darshan Nariya (Internal Guide) Seat No: 2019031804 (E19110403000110036)

ORGANIZATION:

KG Krunch Solutions

VIDHYADEEP INSTITUTE OF COMPUTER & INFORMATION TECHNOLOGY, ANITA-KIM.





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Darshan Nariya Seat No: 2019031804 (E19110403000110036)

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VIDHYADEEP INSTITUTE OF COMPUTER & INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that the Project report, submitted for the Project entitled "DG-Estate" has been carried out by "Darshan A Nariya" seat no: '2019031804' (E19110403000110036) at BCA Department of Vidhyadeep Institute of Computer & Information Technology, Kim for partial fulfilment of BCA degree to be awarded by Veer Narmad South Gujarat University. This Project work has been carried out under my Supervision and is to my satisfaction.

Place: - KIM		
Date: -		
Internal Guide		Head of Department
	JURY	

Project Progress Report

Date: 30/03/2022

Name: Darshan A Nariya

Seat No: 2019031804

En. No: E19110403000110036

To,

Project Coordinator,

Vidhyadeep Institute of Computer

& Information Technology (BCA)

Kim (Anita).

SUBJECT: "DG-Estate" / Real Estate Website

Respected Sir/Madam,

I am so glad to present my project report on "**DG-Estate**" which is prepared as a part of six semester project in BCA.

Tools & Technical stack: Laravel 8, WAMP v4 Stack, Bootstrap, JQuery, Font Awesome, Data Tables, Fancy Apps, CKEditor.

Internal Guide Signature

Completed Tasks:

Date	Task Name
6/1/2022	Laravel Base Created, Category and City added.
10/1/2022	Features, Property module added.
18/1/2022	Gallery module, hash security added.
21/1/2022	Site Settings, users list module added, problems fixed.
22/1/2022	Frontend started, home carousal, navbar, added.
24/1/2022	Category showing on home page and few fixes.
25/1/2022	Category and city listed in navbar, property page started.
27/1/2022	Features added in property module.
30/1/2022	Facilities module, font awesome, phone and email added.
1/2/2022	Pagination, property sorting, and bug fixes
6/2/2022	Admin redirect from home page, route authentication, blade format update and property search added.
19/2/2022	Ajax delete profile image, save property added, code formatted, clutter cleared
23/2/2022	DB migrations fixed, review section started, property filter added.
2/3/2022	Review added, reviews listed in admin panel.
6/3/2022	Reviews can be deleted from admin.
8/3/2022	Change password, few fixes, admin dashboard started.
12/3/2022	Dashboard (partly), CMS, and frontend fixes added.
14/3/2022	Fancy box, CK-Editor added.

Acknowledgement

I n successfully completing of this project, many websites, blogs, posts, videos, discussions have helped me. I would like to thank all these, I have also upvoted these blogs, videos whenever it was possible.

Every single problem in this project gave me a challenge, and I like challenges, it gave me huge confidence boost whenever I solved any challenging problem.

The Company where I worked (KG Krunch Solutions) was also a big help, while I didn't make my project there, but I learned a lot while working there.² I will be always thankful to the company and team.

This project doesn't just show how much I know it also shows how much I don't know. So, I'm looking forward to learn new things every day.

Now let's come to the college "VIDHYADEEP INSTITUTE OF COMPUTER & INFORMATION TECHNOLOGY", while admin department was a pain to work with, where I had some uneasy experiences, our department's professors were easy on us, gave us lot of freedom. It was an experience in its own, and I thank all the faculty. ³

For upcoming days and new things, I'm ready, one day at a time, finally thanks to all the people and things that helped me directly or indirectly.

Darshan Nariya

¹ Because I'm introvert I didn't really ask someone else to help me actually.

² Because I only learn things when I'm under pressure.

³ Fun fact: every semester there was one new faculty replacing other.

Index

1	INT	TRODUCTION PROFILES	1
	1.1	PROJECT PROFILE	1
	1.2	COMPANY PROFILE	
2	OB	JECTIVE OF PROJECT	3
	2.1	USER	3
	2.2	ADMIN	
	2.3	ROOT	
3	En	VIRONMENT DESCRIPTION	
	3.1	HARDWARE REQUIREMENTS	
	3.1.		
	3.1.	2 ClientSOFTWARE REQUIREMENTS	
	3.2 3.2.	· ·	
	3.2.		_
	3.2	DEVELOPMENT ENVIRONMENT	
	3.3.		
	3.3.		
	3.3.		
		METHODS & TECHNOLOGIES	
	3.4.		
	3.4.		
	3.4.	•	
	3.4.		
	3.4.		
	3.4.		
	3.4.	·	
4	Sys	STEM PLANNING	
	4.1	FEASIBILITY STUDY	12
	4.1.		
	4.1.		
		REQUIREMENT SPECIFICATION	
	4.2.	*	
	4.2.		
	4.2.		
5	Pro	OPOSED SYSTEM	17
	5.1 5.2	SUMMARYSCOPE	
	.1.4	LD AD 1	

6	DETAII	L PLANNING	18
	6.1 DAT	га-Flow Diagrams	18
	6.1.1	Context Level DFD	20
	6.1.2	Admin DFDs	21
	6.1.3	Root DFDs	29
	6.1.4	User DFDs	37
	-	γabase Structure	
		TITY RELATION DIAGRAM	
		OCESS SPECIFICATION	
	6.4.1	Admin/Root Flow-Charts	
	6.4.2	User Flow-Charts	72
7	System	M DESIGN	81
	7.1 Rot	JTES LIST	81
	7.1.1	UserController Routes	81
	7.1.2	AdminController Routes	83
	7.1.3	SiteController Routes	85
	7.2 DIR	ECTORY STRUCTURE	86
8	FRONT	END LAYOUT	92
	8.1 Use	ER	92
	8.1.1	Home Page	
	8.1.2	Property pages	
	8.1.3	Auth pages	
	8.1.4	Other Pages	
	8.2 ADM	MIN/ROOT PAGES	105
	8.2.1	Dashboard	105
	8.2.2	Category	106
	8.2.3	City	108
	8.2.4	Facility	110
	8.2.5	Property	112
	8.2.6	Gallary	114
	8.2.7	Reviews	115
	8.2.8	Users	116
	8.2.9	CMS	117
	8.2.10	Site Settings	119
	8.2.11	Other	120
9	B UG TI	RACKING	121
	9.1 TRA	ACKING BUGS	121
	9.1.1	User/Admin/Root Login Module	121
	9.1.2	Category Module	121
	9.1.3	City Module	122
	9.1.4	Facility Module	122
	9.1.5	Property Module	123
	9.2 TES	T CASE	125

9.2.1	Test Case Selection	125
9.2.2	White Box Testing Case	125
	Test Coverage Metrics	
9.3 L	JNIT TESTING	126
9.4 I	NTEGRATION TESTING	126
	MITATIONS AND FUTURE ENHANCEMENT	127
10 Ln	MITATIONS AND FUTURE ENHANCEMENT	
10 Ln		127

1 Introduction Profiles

1.1 Project Profile

Title	DG-Estate
Organization	KG-Krunch Solutions
Category	Local Property listing Website
Duration	3 Months
Front-End	Blade (Laravel Framework)
Back-End	Laravel Framework (PHP) + MySQL
Guide	Drashti Bhatt (Internal Guide)
Submitted by	Darshan Arvind Bhai Nariya Seat No: 2019031804 (E19110403000110036)
Submitted to	Vidhyadeep Institute of Computer & Information Technology

1.2 Company Profile

Company Name	KG Krunch Solutions
Proprietor Name	Ashish Gajera
Business Type	Solutions Provider
Address	411, Platinum Plaza, Neat VT circle, Sarthana Jakat Naka, Surat
Contact No	+919727143568
Website	http://kgkrunch.com
Email	info@kgkrunch.com
Service Range	Global

2 Objective of Project

User 2.1

The main User side Objectives are:

- To enable users to surf all listed properties.
- Users can surf properties without the need of creating account.
- Users can filter properties by category, city, and search by property title.
- Users can create account and manage their profile, save properties, review properties, and change their password.

Admin 2.2

The main Admin side Objectives are:

- Admin can add, and update existing category, facilities, city, property.
- Admin can add and delete images in property gallery.
- Admin can delete user reviews.
- Admin can give other users admin access.

2.3 Root

The main Root side Objectives are:

- Root has access to all above features.
- Root is only one who can delete existing category, facility, city, property, and users.
- Root can manage website's Home, About, FAQ, Terms page in CMS.
- Root can manage website's other settings in Site Settings option.

3 Environment Description

3.1 **Hardware Requirements**

3.1.1 Server

Processor	3 rd Gen and above
Memory	4 GB and above
Storage	6 GB and above

3.1.2 **Client**

Processor	3 rd Gen and above	
Memory	4 GB and above	
Storage	6 GB and above	

Software Requirements 3.2

Server 3.2.1

Operating System	Windows 7 or above (10 recommended), any Linux based, 64bit arch.	
Server	Apache v 2.4 and above	
Php	Php v 6 and above	
MySQL	MySQL v 7 and above	

3.2.2 Client

Operating System	Windows 7 or above (10 recommended), 64bit arch.
Browser	Any Chromium based Browsers

Development Environment 3.3

Hardware 3.3.1

Processor	Ryzen 5 3550H
Memory	8 GB
Storage	256 GB

Software 3.3.2

Windows	10/11 64bit	
WAMP server	V 4.1	
Chrome	V 99.0.4844.82 64bit	
Git	Windows V 2.34.1	
Composer	V 2.2.3	
VS Code	V 1.50^	
Diagrams.net/Draw.io	V 17.2.3	

3.3.3 Dependencies

Laravel	V 8.x	
Bootstrap	V 5.1.3	
Bootstrap Examples	V 5.1	
JQuery	V 3.6.0	
Font Awesome	V 4 & V 5	
Data Tables	V 1.11.4	
Data Tables Bootstrap	V 1.11.4	
Fancy Apps	V 4 Fancy Box & Carousal	
CKEditor	V 4	

Methods & Technologies 3.4

3.4.1 PHP

PHP is a general-purpose scripting language geared toward web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Pre-processor.

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code which may be any type of data, such as generated HTML or binary image data would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response.

MySQL 3.4.2

MySQL is an open-source relational database management system (RDBMS). Its name is combinations of "My", the name of co-founder Michael Widenius' daughter, and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, and Perl/PHP/Python". Applications that use the MySQL database include: TYPO3, Mode, Joomla, WordPress, php DB, MyDB, and Dural. MySQL is also used in many high-profile, large-scale websites, including Google (though not for searches), Facebook, Twitter, Flicker, and YouTube.

3.4.3 Laravel

Laravel is a free, open-source PHP web framework, created by "Taylor Otwell" and intended for the development of web applications following the model-viewcontroller (MVC) architectural pattern and based on Symfony. Some of the features of Laravel are a modular packaging system with a dedicated dependency manager, different ways for accessing relational databases, utilities that aid in application deployment and maintenance, and its orientation toward syntactic sugar.

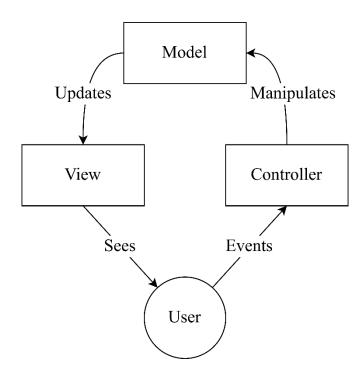
MVC 3.4.4

Model-view-controller (MVC) is a software design pattern commonly used for developing user interfaces that divide the related program logic into three interconnected elements. This is done to separate internal representations of information from the ways information is presented to and accepted from the user.

Traditionally used for desktop graphical user interfaces (GUIs), this pattern became popular for designing web applications. Popular programming languages have MVC frameworks that facilitate implementation of the pattern.

The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data. For example, a Customer object will retrieve the customer information from the database, manipulate it and update it data back to the database or use it to render data.

The View component is used for all the UI logic of the application. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.



Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output. For example, the Customer controller will handle all the interactions and inputs from the Customer View and update the database using the Customer Model. The same controller will be used to view the Customer data.

3.4.5 **Bootstrap**

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

3.4.6 **JQuery**

Query is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License. As of May 2019, jQuery is used by 73% of the 10 million most popular websites. Web analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. ¡Query also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, theme-able widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

3.4.7 Composer

Composer is an application-level package manager for the PHP programming language that provides a standard format for managing dependencies of PHP software and required libraries. It was developed by Nils Adermann and Jordi Boggiano, who continue to manage the project. They began development in April 2011 and first released it on March 1, 2012. Composer is strongly inspired by Node.js's "npm" and Ruby's "bundler". The project's dependency solving algorithm started out as a PHP-based port of openSUSE's libzypp satsolver.

4 System Planning

Feasibility Study 4.1

4.1.1 **Summary**

DG-Estate is property listing website where properties can only be listed by admin and root, while common users can surf through verity of properties by category, city, and search them by their title, logged in users can save properties, give reviews and manage their profile.

Real Estate website has so much potential to grow up in future, website can be upgraded into a platform where common users can also post their property for rent/sale, but these are future possibilities so we have to make this project scalable for the future.

For future scalability we can opt for Frameworks of any particular language, MVC architecture is preferable for such objectives mentioned above.

4.1.2 **Technological Considerations**

For these objectives described in summary we have to handle a database for that and all these handling have to be done on server side for security purpose. below are few server-side languages can be considered.

Server-Side Languages:

- Node.js (JavaScript)
- PHP
- Java
- Ruby
- Python

From above list **PHP** is great option because it can be embedded inside HTML syntax, and has many frameworks which makes many tasks easy.

PHP Frameworks:

- Laravel
- CodeIgniter
- **Symfony**

Above three are most popular framework of PHP and using one of these will also make changes in website later easier, because they use MVC architecture.

Laravel is huge consideration because of its eloquent modelling method which makes database queries more human readable, also its syntax is convenient once you get hang of it.

Requirement Specification 4.2

Requirements of client describe as follow:

- System should be easy to operate.
- System should provide secure and accurate data.

4.2.1 Users

Users are registered users whom have signed up in website. New Users have default type 'U'.

Login

- Registered users have to insert their own registered email and password in login form to successfully log in.
- If User's entered email is not registered show error that email is not registered.
- If User's entered password doesn't match then show invalid credentials error message.
- If credentials match add user in session.

Signup

- To Signup User has to provide name, email, and password with confirmation.
- If entered email already exists then show error.
- If password doesn't match with confirmation show error.
- If no errors occurs then register user.

Logout

- Check if user is logged in first.
- If user is logged in then remove user from session.

User Profile

- Login required.
- Profile includes image, bio, email options.

User Change Password

- Login required.
- User have to provide old password and new password with confirmation to change password.

Save Property

- Login required.
- If user is logged in show save property button in properties.
- Saved properties can be seen in specific saved page.

Review

- Login required.
- Logged in users can give reviews to properties.

4.2.2 Admin

User who is type 'A' is considered **Admin**.

Login

- Admin have to login in admin specific page to access Admi Panel.
- After entering correct username and password admin session is started.
- Admin is redirected to Admi Panel dashboard after successful login.

Logout

- Login required.
- If admin is logged in remove admin session.

Category

- Login required.
- Admin can Add/Update Categories.

City

- Login required.
- Admin can Add/Update Cities.

Facility

- Login required.
- Admin can Add/Update Facilities.

Property

- Login required.
- Admin can Add/Update Properties.

Gallery

- Login required.
- Admin can Add/Delete Images in property Gallery.

Reviews

- Login required.
- Admin can Delete user's reviews.

Users

- Login required.
- Admin can give Admin access to other users.

4.2.3 Root

Root is super user of this website who has access to all the features and functionalities available on the website. All functionalities mentioned for Users and Admin is also accessible by Root. User with type 'R' is considered Root.

- In addition of above accessibilities Root has few more options to manage
- Root can Delete Category/City/Facility/Property/User.
- Root can modify Page content from CMS menu which is only accessible by type 'R' User or Root user.
- Root can change site title, logo, and contact details from Site Settings option.

5 Proposed System

Summary 5.1

"DG-Estate" enables Users to surf local properties listed by Admin/Root by Category, City and search them by property title. Users can then contact individual property dealer who listed his property by the contact information they provided.

Users can save, review properties if they are logged in.

Website allows management by two levels Admin and Root. Admin and Root has most Access and Functionalities in this website, and Root has more Control than Admin.

5.2 Scope

For now, Scope of this website "DG-Estate" is Local, but it will be accessible to the global if client chooses to select global hosting.

Admin Panel allows Admin and Root to manage website content. Admin Panel allows access according to the type of user that is logged in.

Website is using MVC structure which will help in future scalability if in future client thinks about adding new features.

6 Detail Planning

Data-Flow Diagrams 6.1

A Data-Flow Diagram is a way of representing a flow of data through a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow — there are no decision rules and no loops.

Symbols and Notations Used in DFDs

- 1. External entity: an outside system that sends or receives data, communicating with the system being diagrammed. They are the sources and destinations of information entering or leaving the system. They might be an outside organization or person, a computer system or a business system. They are also known as terminators, sources and sinks or actors. They are typically drawn on the edges of the diagram.
- 2. **Process:** any process that changes the data, producing an output. It might perform computations, or sort data based on logic, or direct the data flow based on business rules. A short label is used to describe the process, such as "Submit payment."
- 3. Data store: files or repositories that hold information for later use, such as a database table or a membership form. Each data store receives a simple label, such as "Orders."
- 4. **Data flow:** the route that data takes between the external entities, processes and data stores. It portrays the interface between the other components and is shown with arrows, typically labelled with a short data name, like "Billing details."

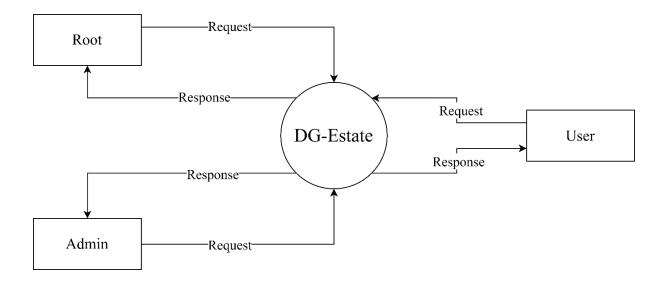
Notation	Symbol
External Entity	
Process	
Data Store	
Data Flow	

Types of Data-Flow Diagram

A data flow diagram can dive into progressively more detail by using levels and layers, zeroing in on a particular piece. DFD levels are numbered 0, 1 or 2, and occasionally go to even Level 3 or beyond.

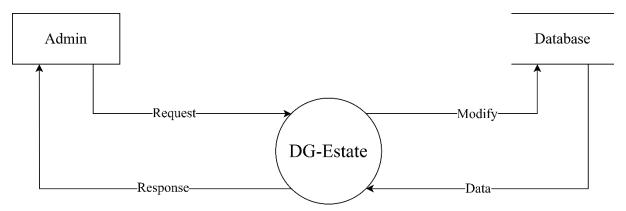
- **DFD Level 0** is also called a Context Diagram. It's a basic overview of the whole system or process being analysed or modelled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities.
- DFD Level 1 provides a more detailed breakout of pieces of the Context Level Diagram. You will highlight the main functions carried out by the system, as you break down the high-level process of the Context Diagram into its subprocesses.
- **DFD** Level 2 then goes one step deeper into parts of Level 1. It may require more text to reach the necessary level of detail about the system's functioning.

6.1.1 Context Level DFD

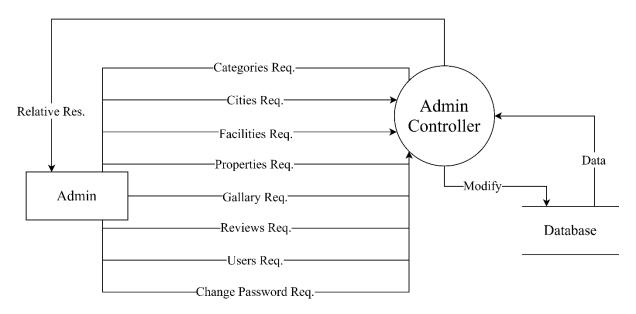


6.1.2 **Admin DFDs**

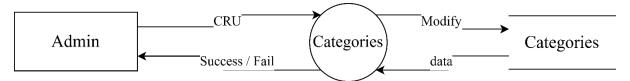
Admin level 0



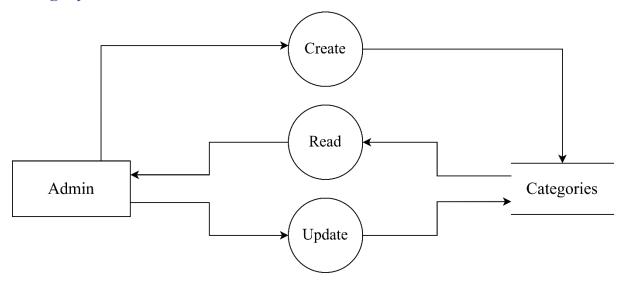
Admin level 1



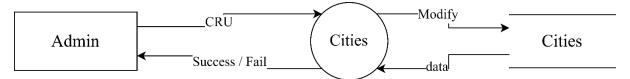
Category level 0



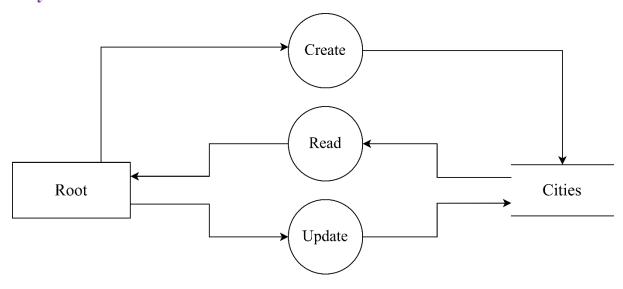
Category level 1



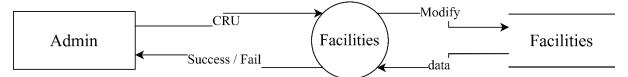
City level 0



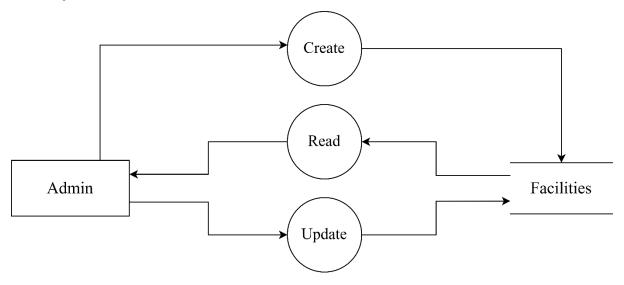
City level 1



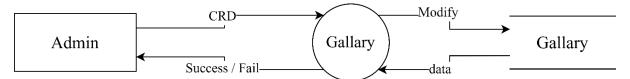
Facility level 0



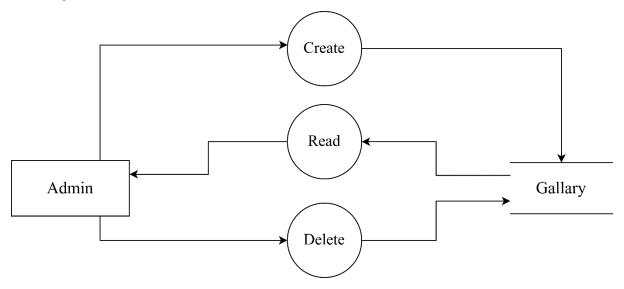
Facility level 1



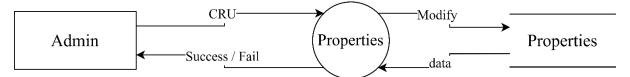
Gallery level 0



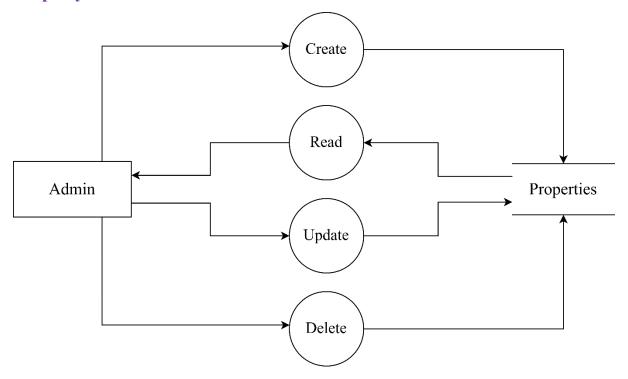
Gallery level 1



Property level 0



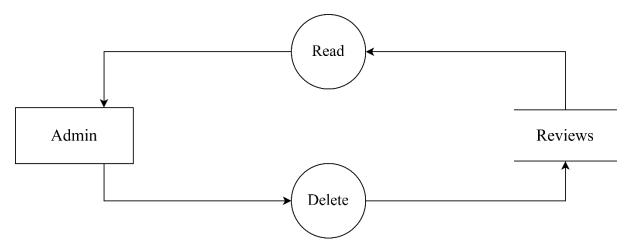
Property level 1



Reviews level 0



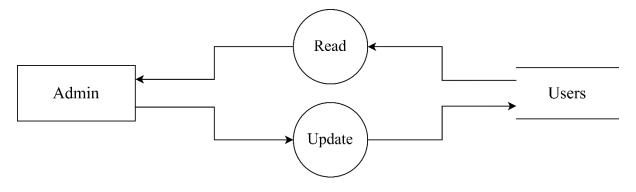
Reviews level 1



Users level 0

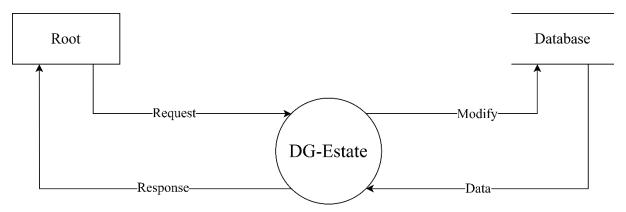


Users level 1

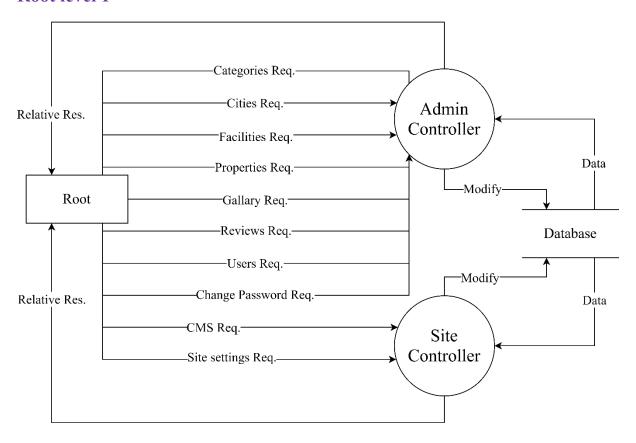


6.1.3 Root DFDs

Root level 0



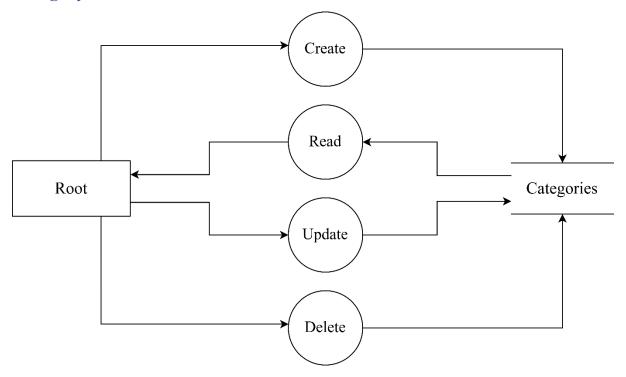
Root level 1



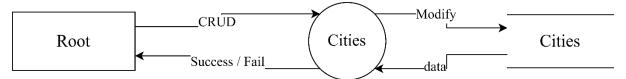
Category level 0



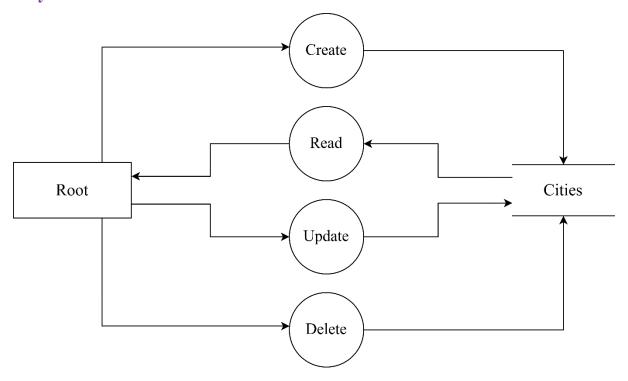
Category level 1



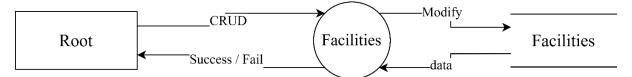
City level 0



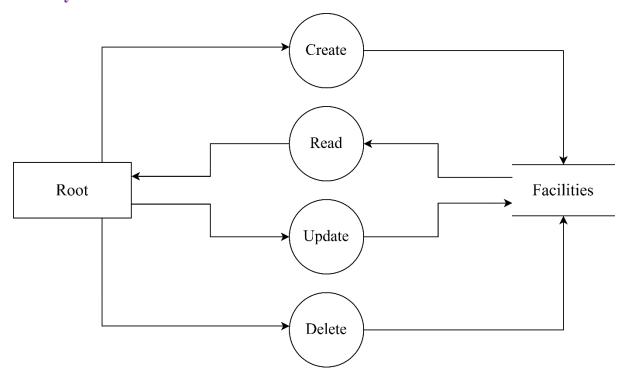
City level 1



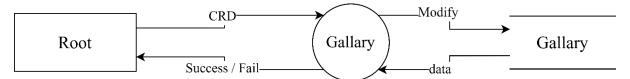
Facility level 0



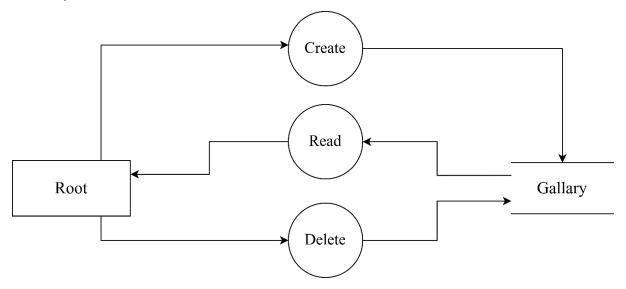
Facility level 1



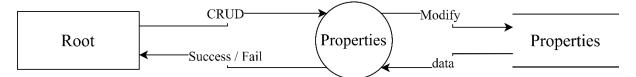
Gallery level 0



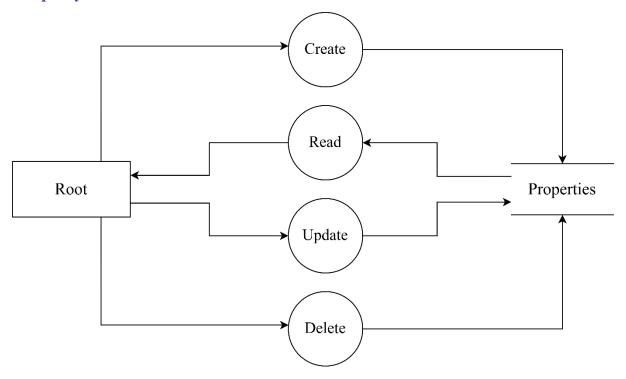
Gallery level 1



Property level 0



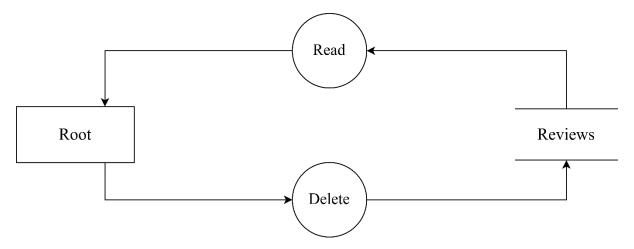
Property level 1

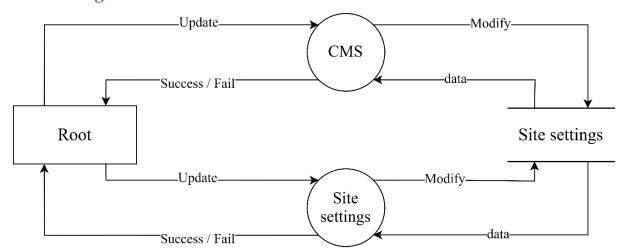


Review level 0



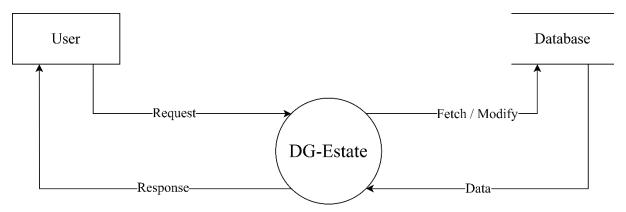
Reviews level 1



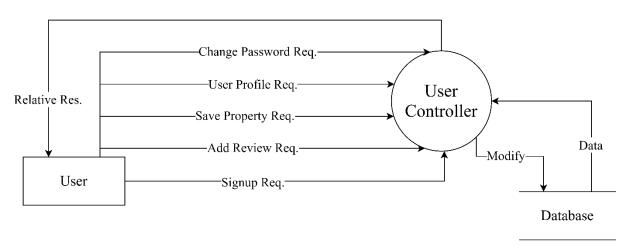


6.1.4 **User DFDs**

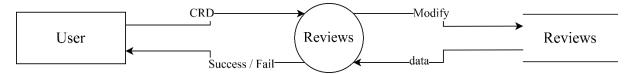
User level 0



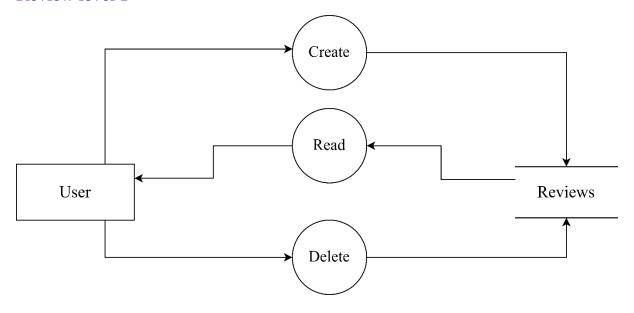
User level 1

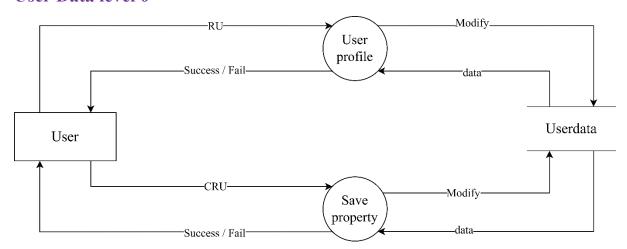


Review level 0

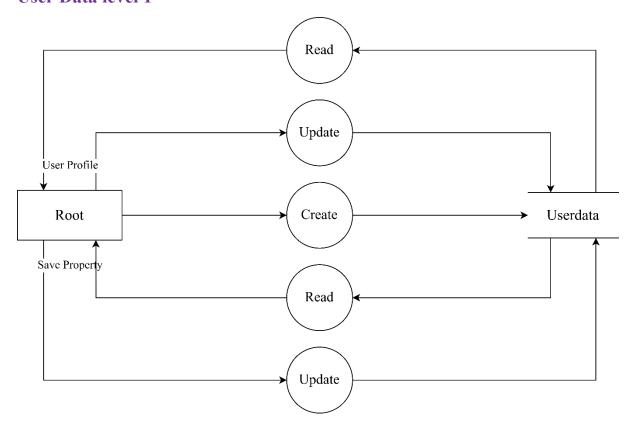


Review level 1

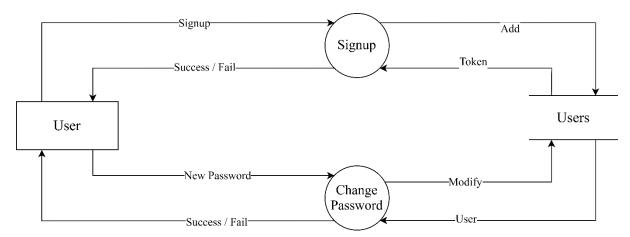




User Data level 1



Users level 0



6.2 Database Structure

Every Table will have default created_at and updated_at timestamps.

Categories Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
UK	Name	Varchar	No	
	Slug_name	Varchar	No	
	Image	Varchar	No	

Cities Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
UK	City	Varchar	No	
	Slug_city	Varchar	No	
	Status	Enum ('0', '1')	No	Default ('0')

CMS Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
UK	Key	Varchar	No	
	Value	Text	Yes	

Facilities Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
UK	Faci	Varchar	No	
FK	Slug_faci	Varchar	No	
	Fa	Varchar	Yes	
	Color	Varchar	Yes	

Gallaries Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
FK	Pro_id	Bigint (20)	No	
	Gal_image	Varchar	No	

Properties Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
	Public	Tinyint (1)	No	Default (1)
	Title	Varchar	No	
	Title_slug	Varchar	No	
	Price	Decimal (10, 0)	No	
	Featured	Tinyint (1)	No	
	Purpose	Enum ('sale', 'rent', 'pg')	No	
FK	Category	Bigint (20)	No	
	Image	Varchar	Yes	
	Fe_image	Varchar	Yes	
FK	Faci	Varchar	Yes	
	Rooms	Int	No	
	Bathrooms	Int	No	
FK	City	Bigint (20)	No	
	Address	Varchar	No	
	Cont_ph	Varchar	No	
	Cont_em	Varchar	No	
	Area	Int	Yes	
	Description	Text	Yes	
	Video	Text	Yes	
	Floorplan	Varchar	Yes	

Мар	Text	Yes	

Reviews Tables

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
FK	U_id	Bigint (20)	No	
FK	Pro_id	Bigint (20)	No	
	Review	Text	No	

Site Settings Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
UK	Key	Varchar	No	
	Value	Text	Yes	

Users Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
	Name	Varchar	No	
UK	Email	Varchar	No	
	Password	Varchar	No	
	Type	Enum ('U', 'R', 'A')	No	

User_data Table

#	Name	Type	Null	Extra
PK	Id	Bigint (20)	No	AI
	Image	Varchar	Yes	
	About	Varchar	Yes	
	Saved	Text	Yes	

Entity Relation Diagram 6.3

Notation

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how "entities" such as people, objects or concepts relate to each other within a system.

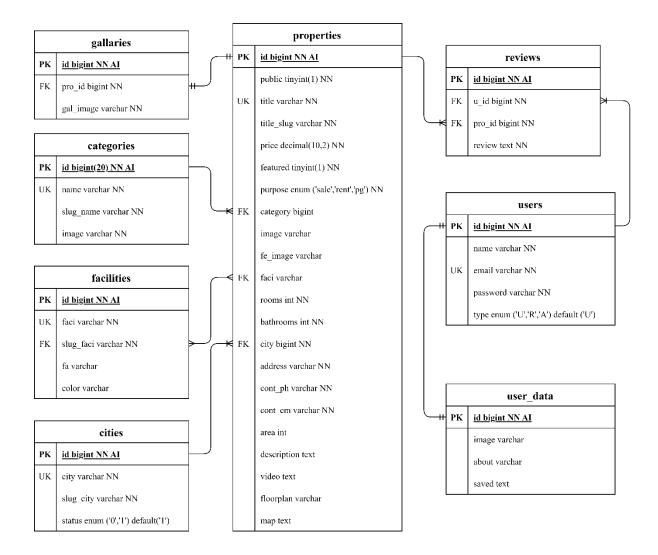
ER diagrams are related to data structure diagrams (DSDs), which focus on the relationships of elements within entities instead of relationships between entities themselves. ER diagrams also are often used in conjunction with data flow diagrams (DFDs), which map out the flow of information for processes or systems.

Symbol

Symbols and Notations Used in Crow's Foot ERD Style (here)

Totation	Symbol
Entity	Entity PK UniqueID Row 1 Row 2
One to One	++
One to Many	—— K
Many to Many	>

ER Diagram



Process Specification 6.4

A Process Specification is a method used to document, analyse and explain the decision-making logic and formulas used to create output data from process input data. Its objective is to flow down and specify regulatory/engineering requirements and procedures.

A variety of approaches can be used to produce a process specification, including:

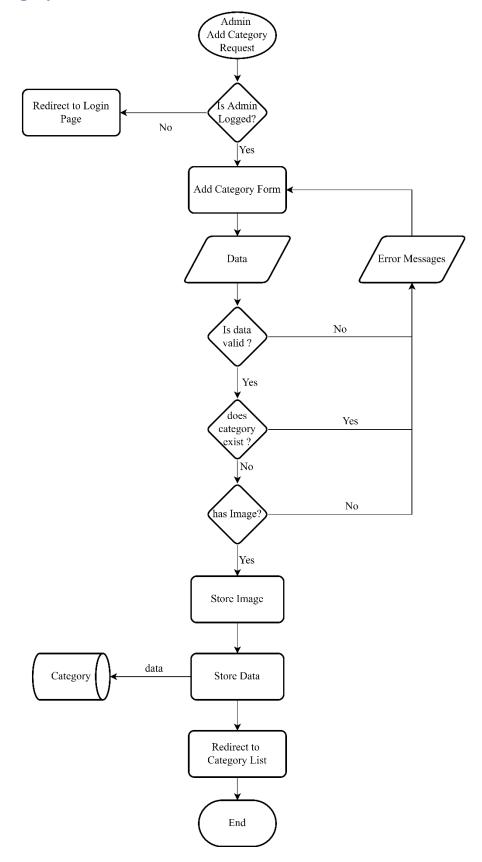
- Decision Tables
- Structured English
- Use Cases
- Flow Charts

Here Flow-Charts are used to describe process in in-depth detail.

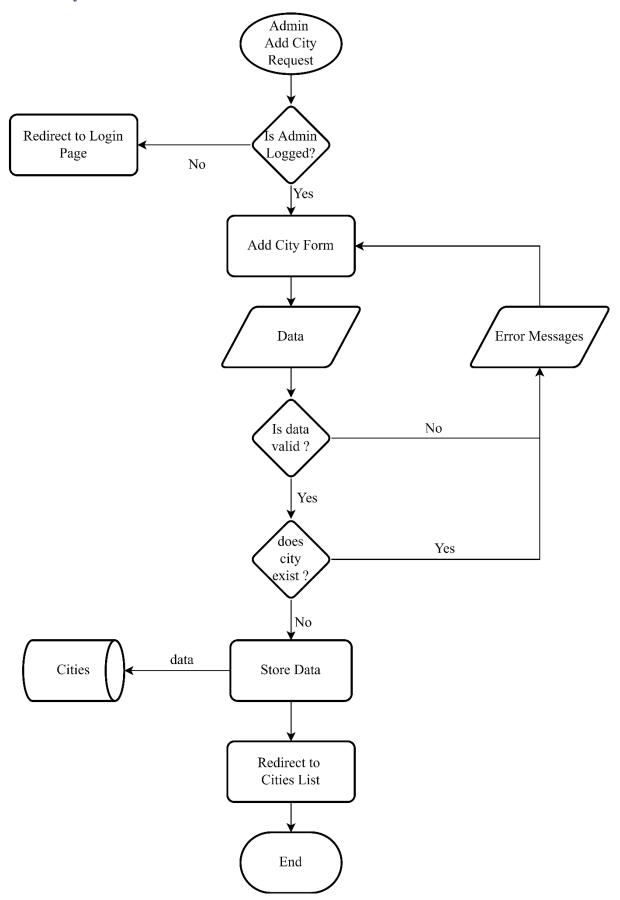
Notation	Symbol
Start	
Condition / Decision	
Process	
Data, Input or Output	
Database	
Terminate	
Flow Arrow	

6.4.1 **Admin/Root Flow-Charts**

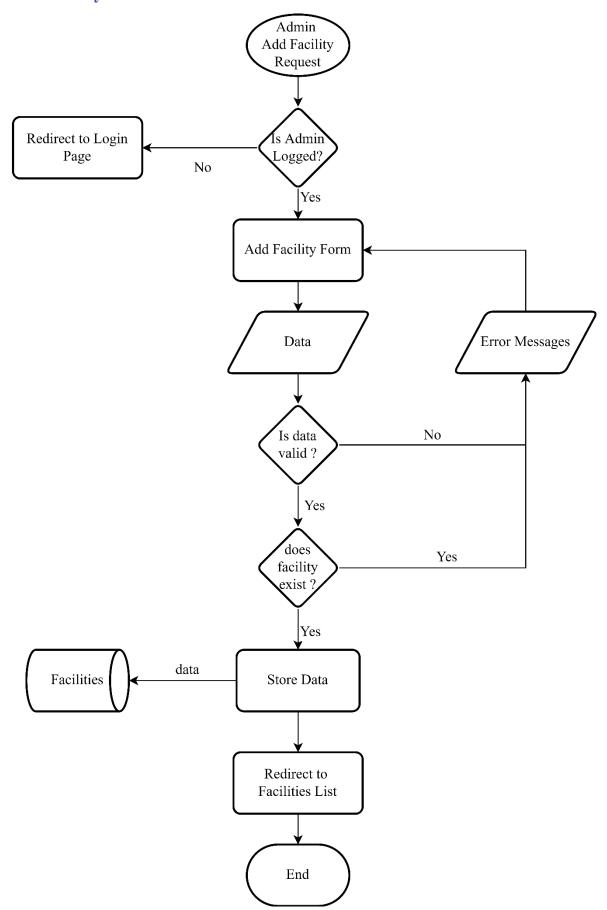
Add Category



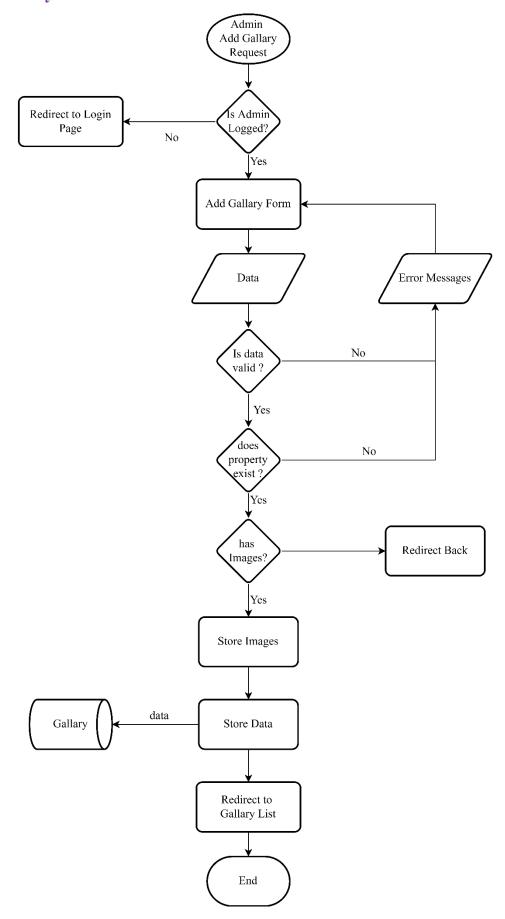
Add City



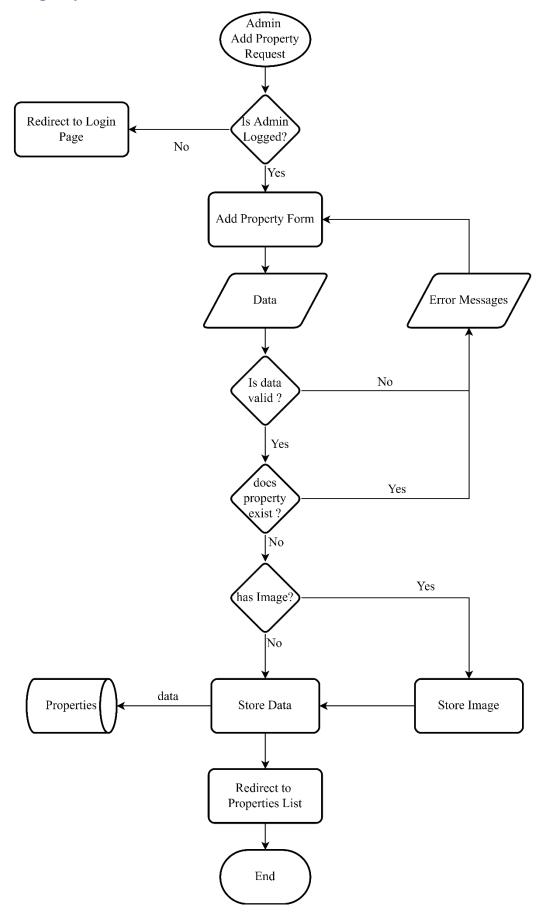
Add Facility



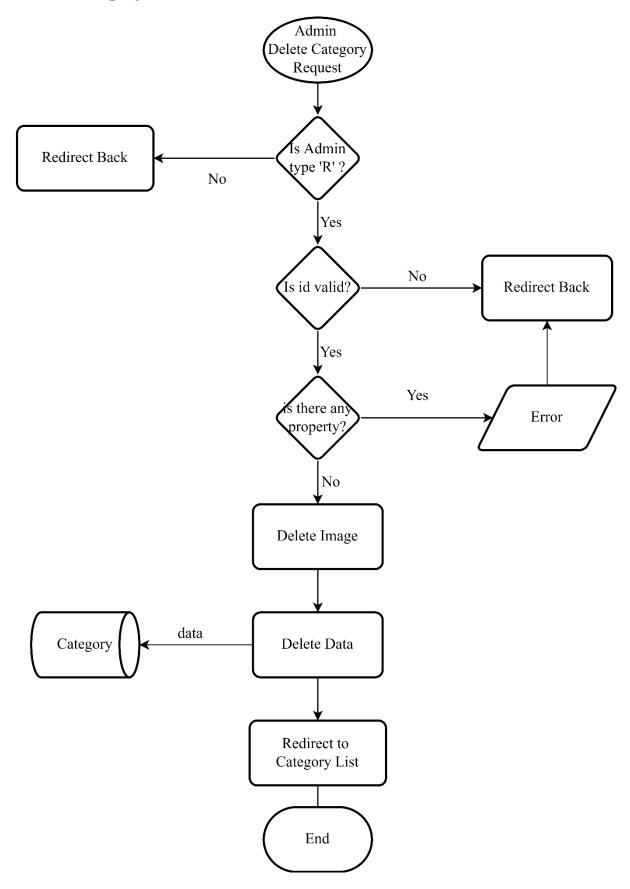
Add Gallery



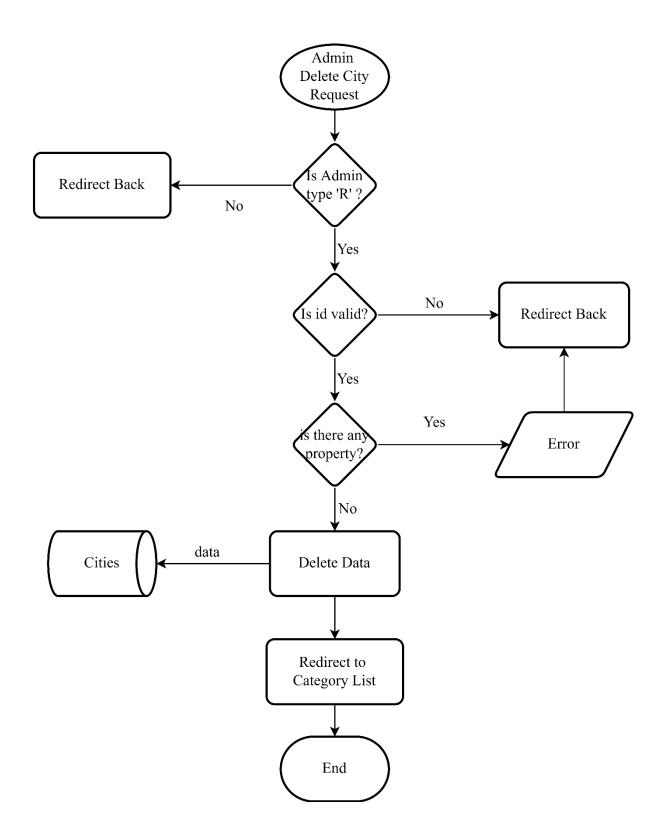
Add Property



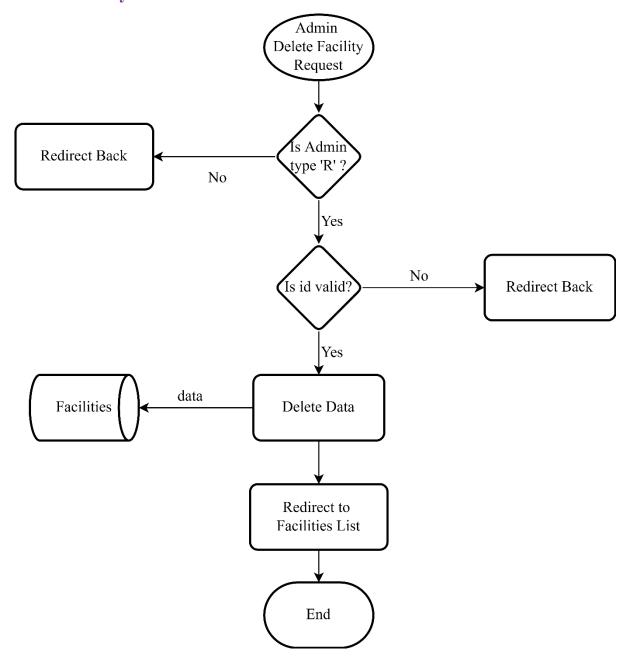
Delete Category



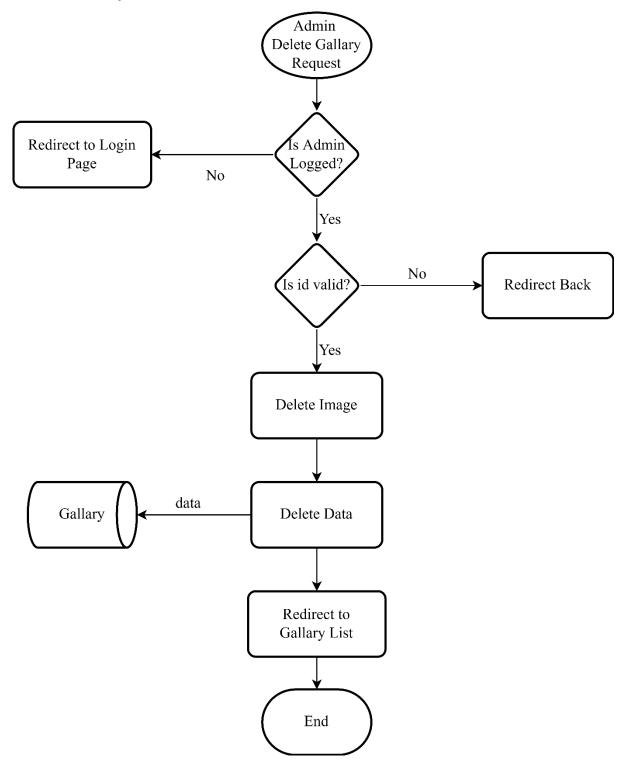
Delete City



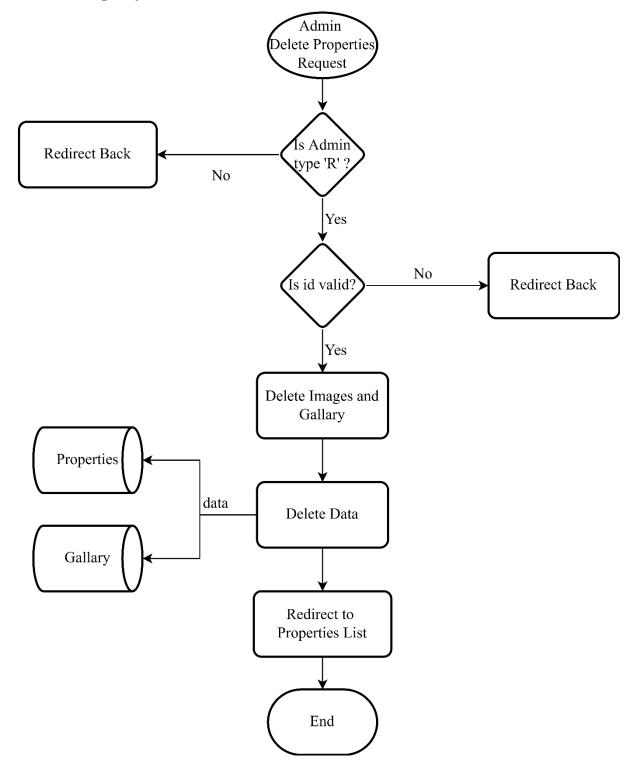
Delete Facility



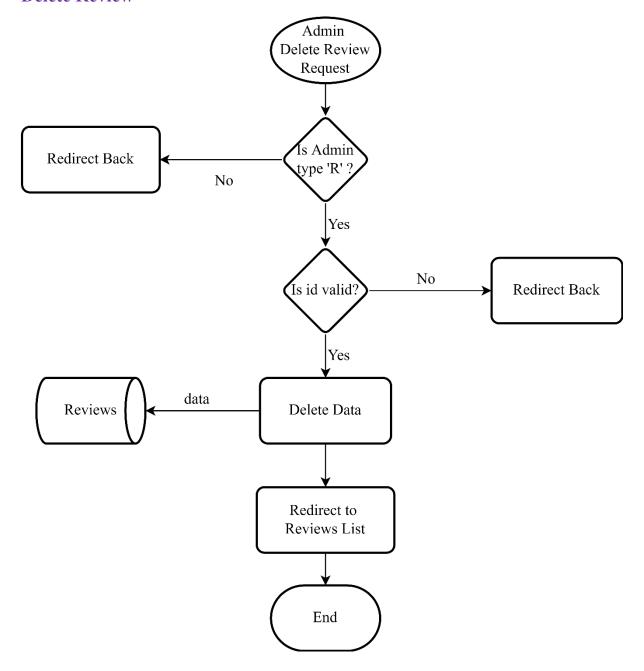
Delete Gallery



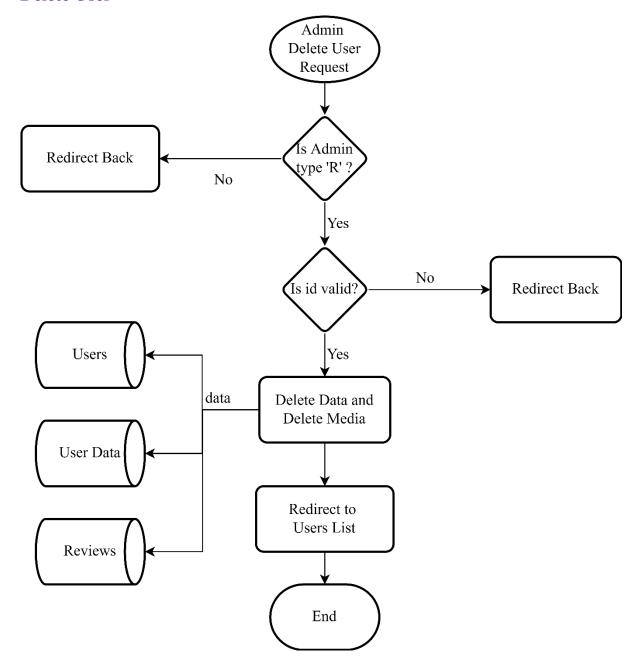
Delete Property



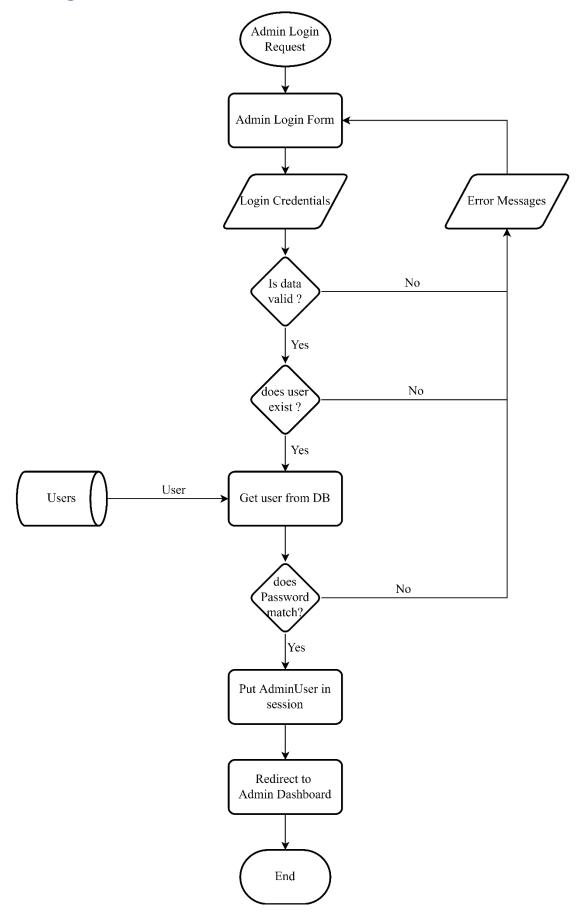
Delete Review



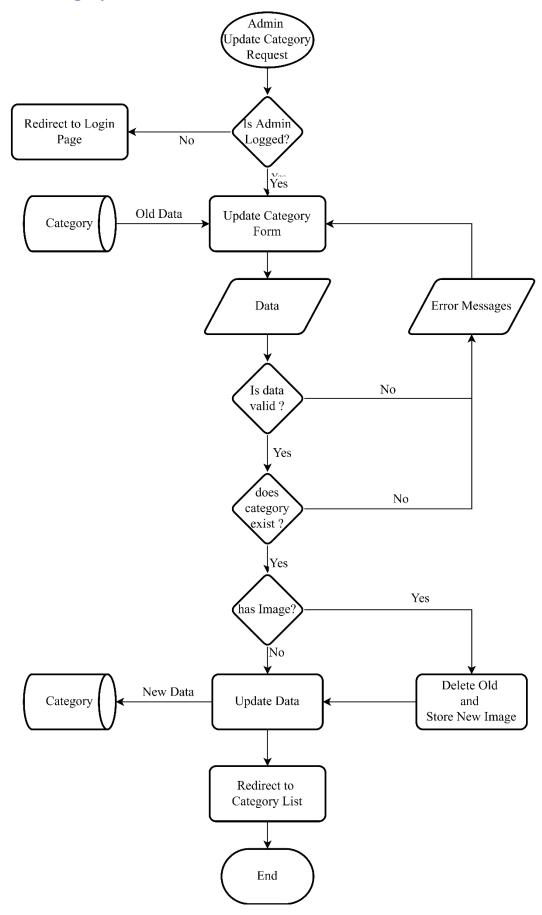
Delete User



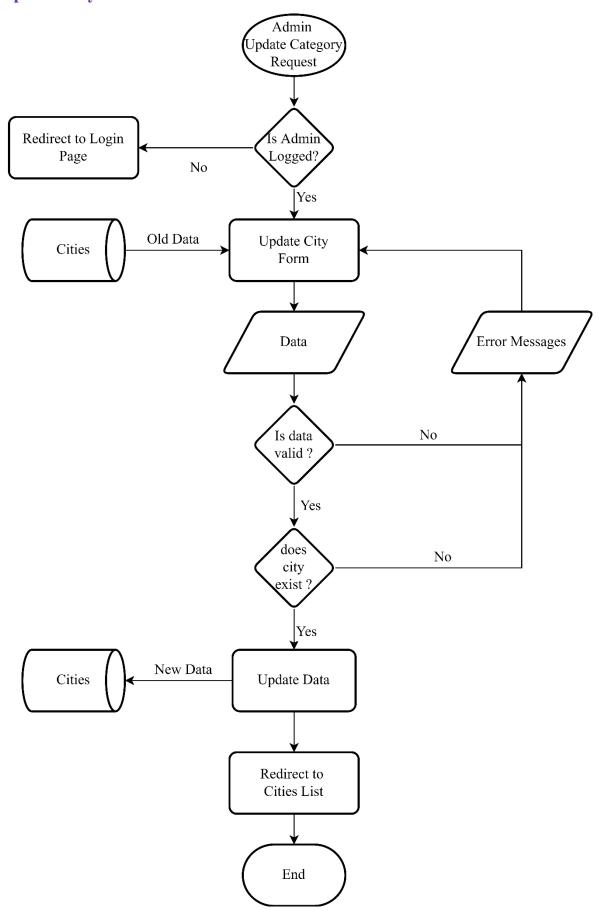
Admin login



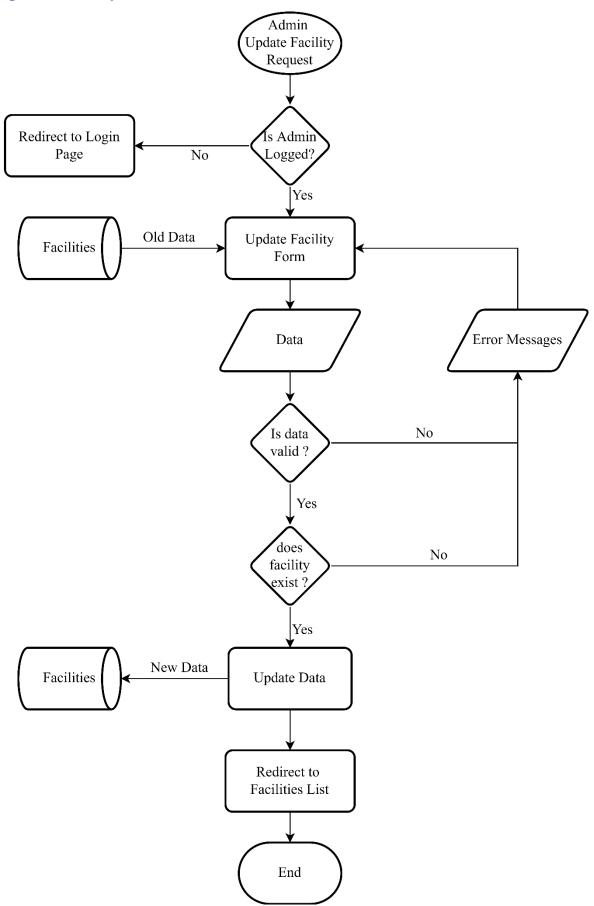
Update Category



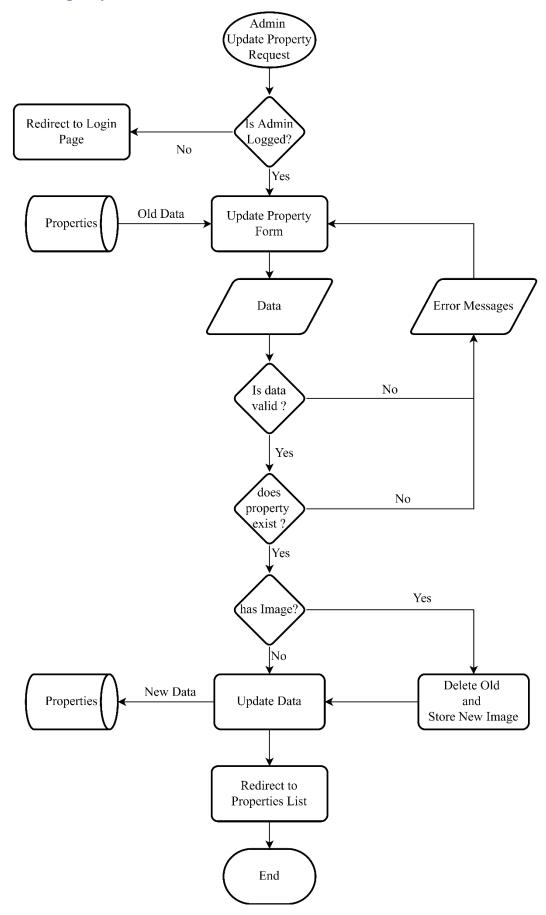
Update City



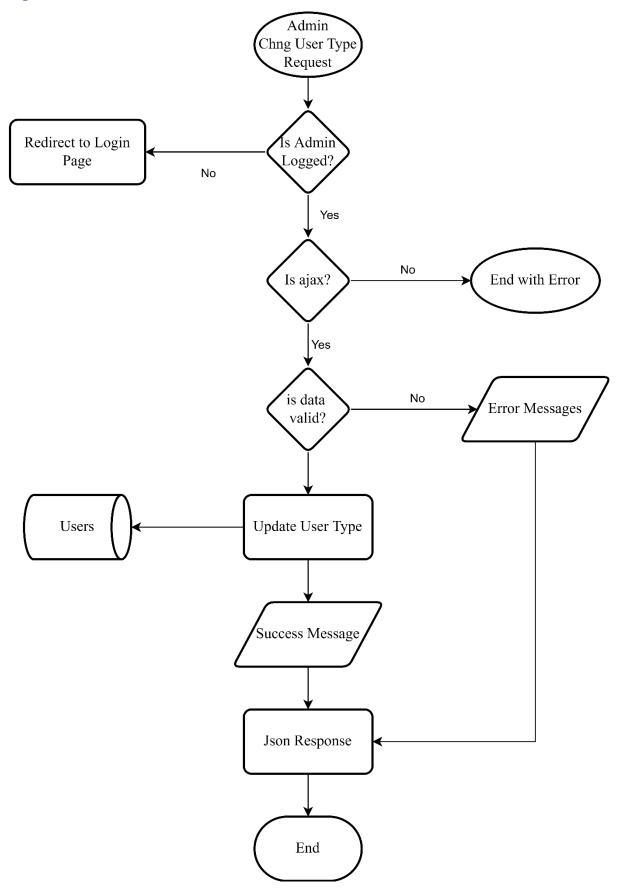
Update Facility



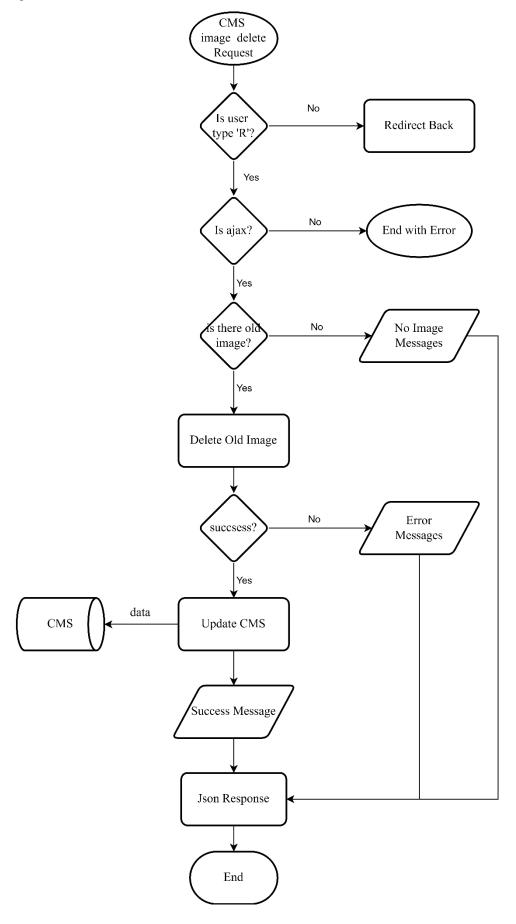
Update Property



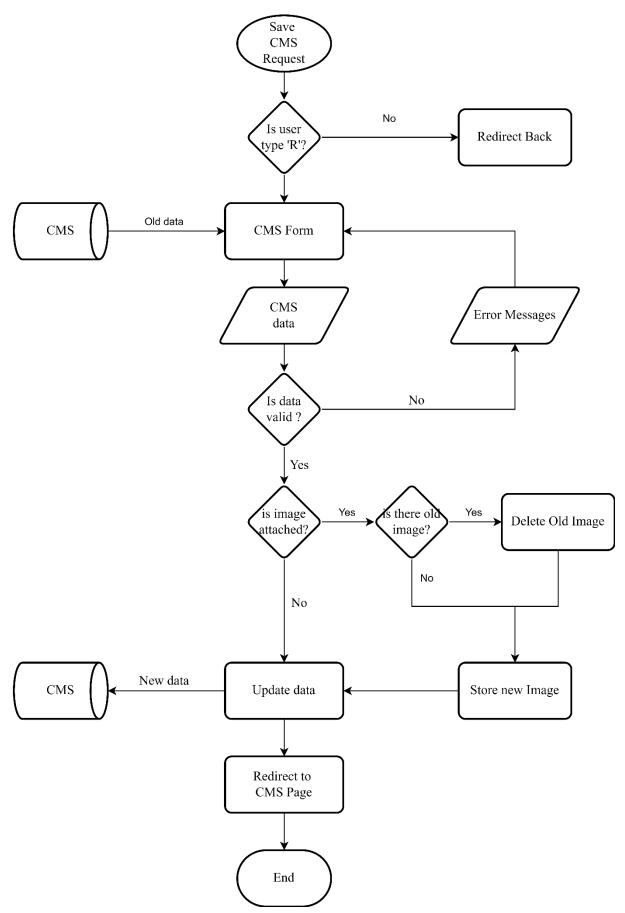
Update User



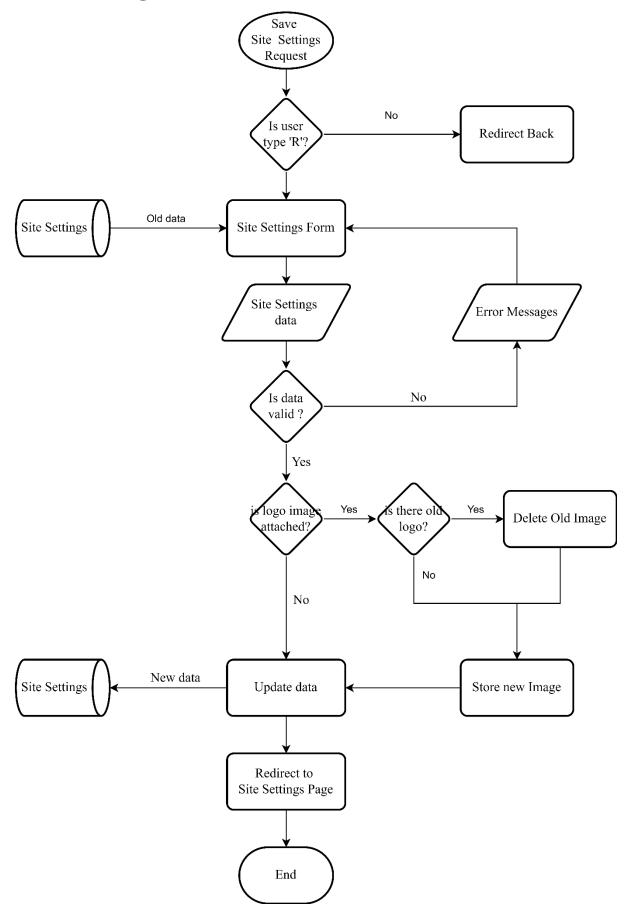
CMS Ajax Delete



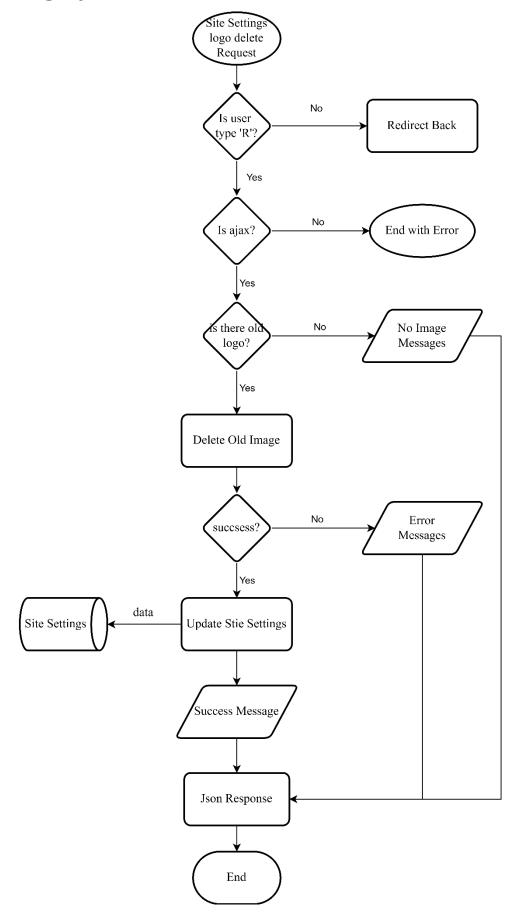
Save CMS



Save Site Settings

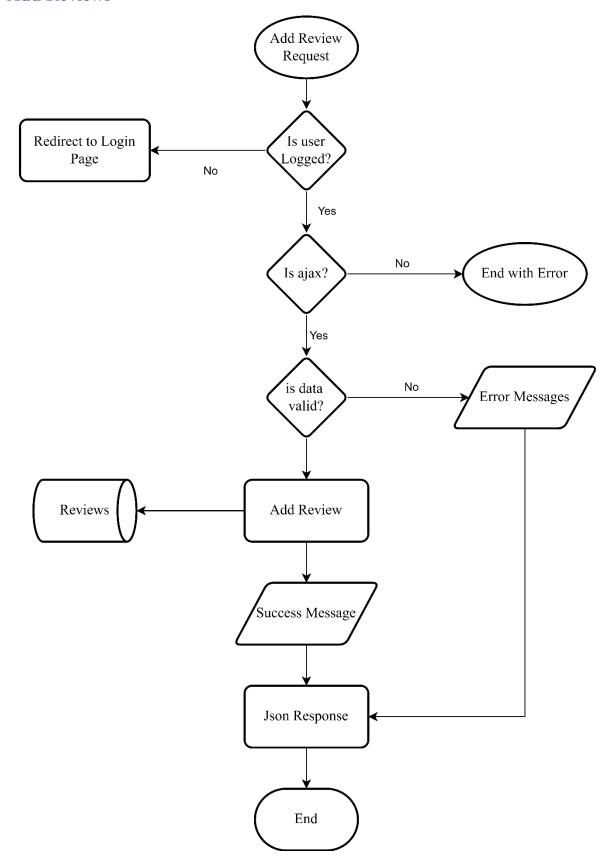


Site Settings Ajax Delete

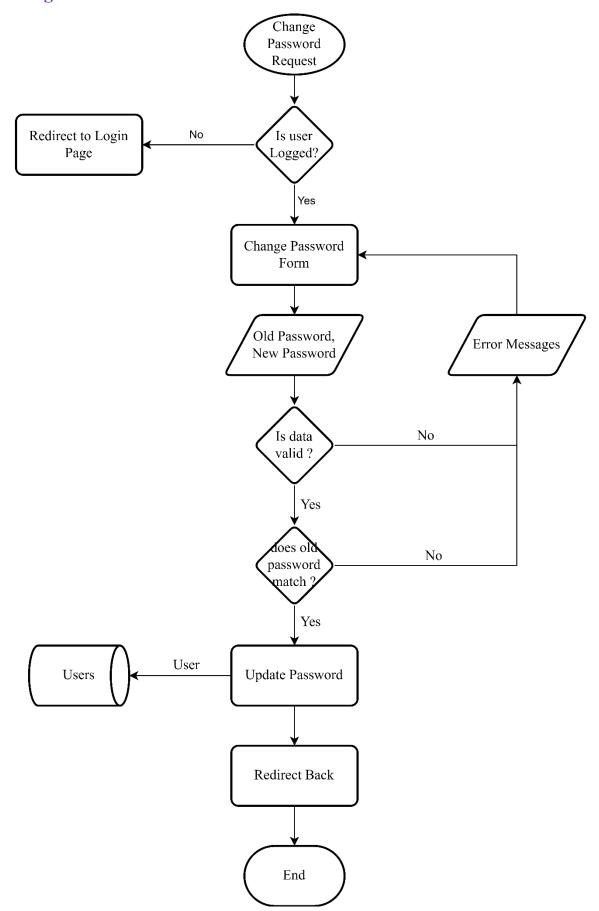


6.4.2 **User Flow-Charts**

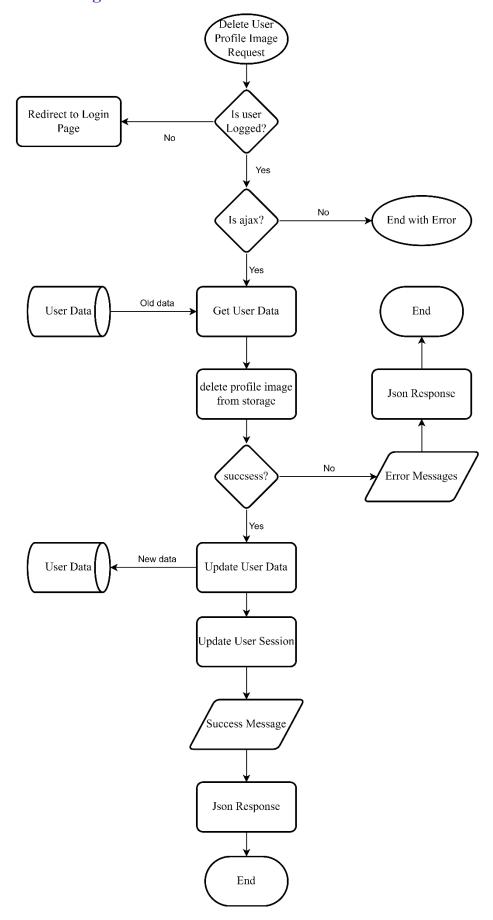
Add Reviews



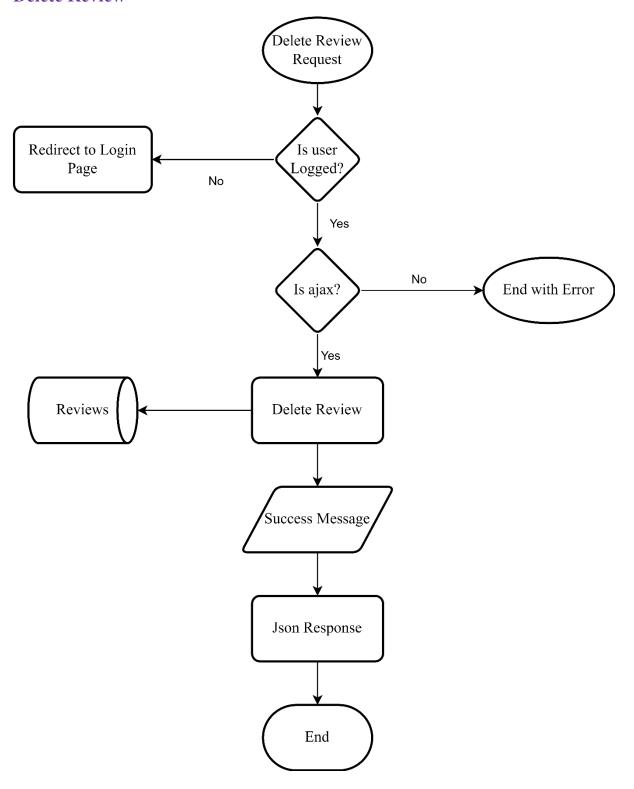
Change Password



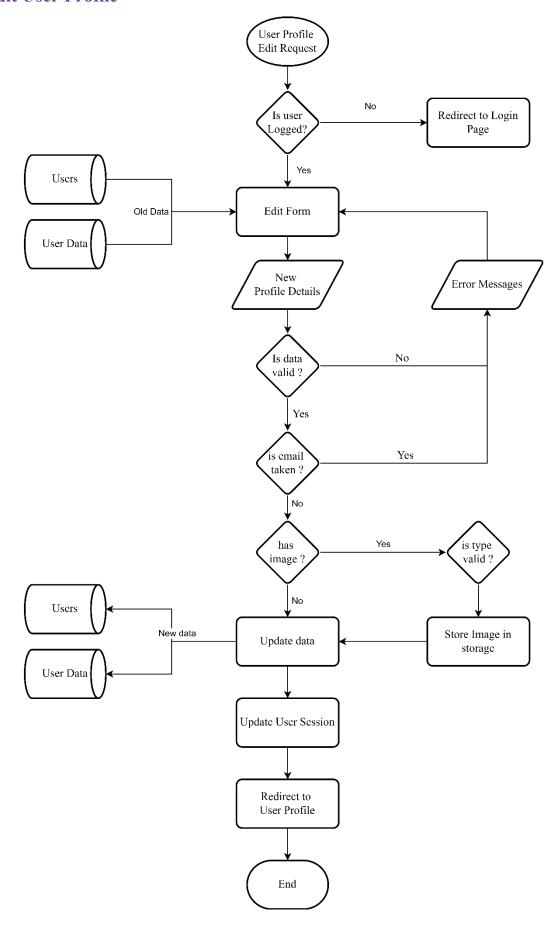
Delete Profile Image



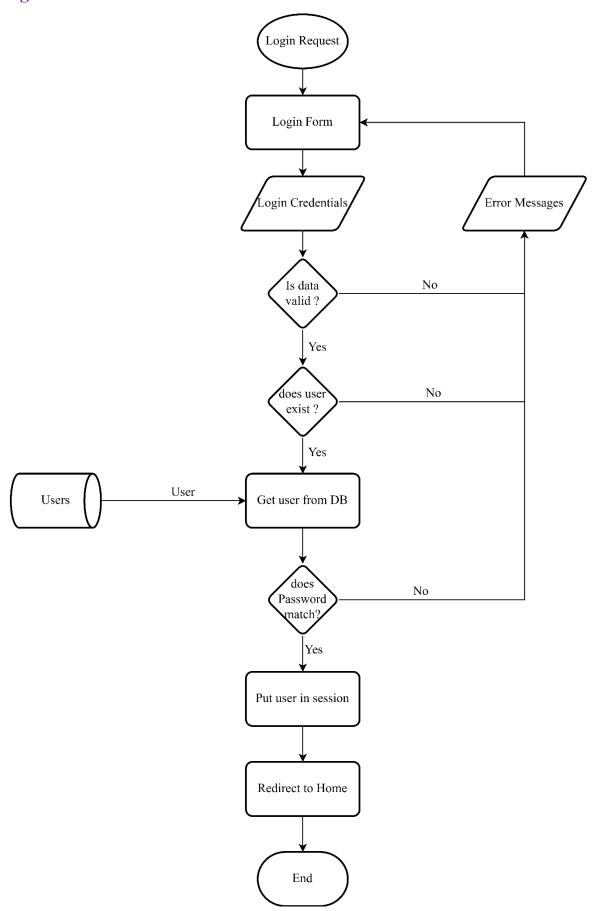
Delete Review



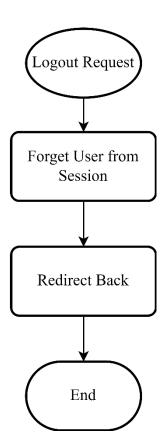
Edit User Profile



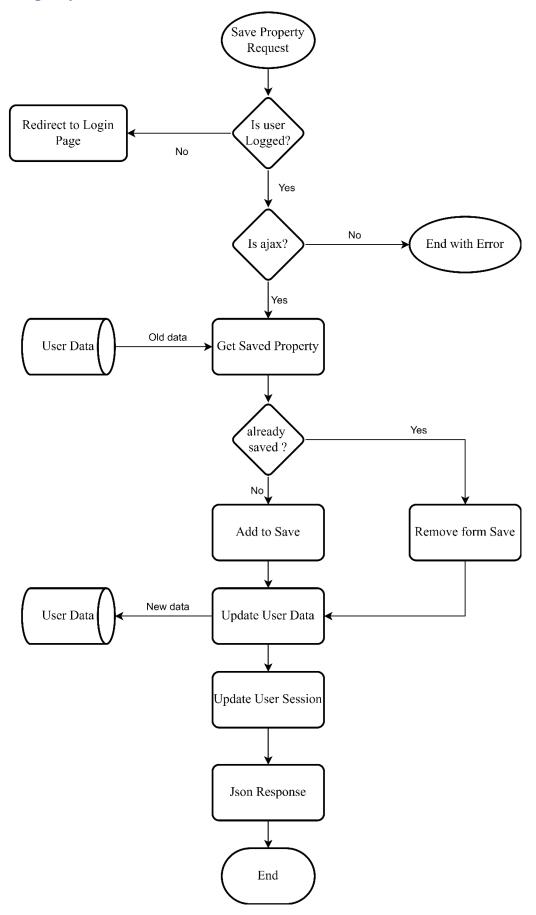
Login



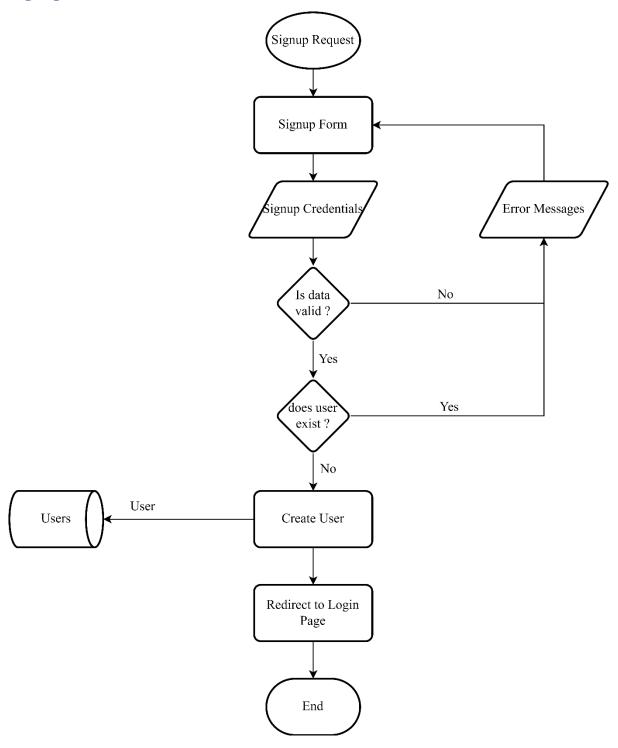
Logout



Save Property



Signup



7 System Design

Routes List 7.1

Routes list shows how many routes there are in this website and the purpose of these routes are informed by action and if routes are required to be authenticated then they pass through middleware.

UserController Routes 7.1.1

Method	URI	Action	Middleware
GET	/	Userhome	
GET	/404	Not_found	
GET	/about	Show_about	
GET	/faq	Show_faq	
GET	/login	Loginform	
POST	/login	Login	
GET	/logout	Logout	
GET	/property	Show	
GET	/property/ajaxFilter	ajaxFilter	AJAX
GET	/property/category/{cate}	Show_category	
GET	/property/city/{city}	Show_city	
GET	/property/propSearch	propSearch	
GET	/property/purpose/{purpose}	Show_purpose	
GET	/property/{pro}	Show_pro	
GET	/signup	SignupForm	

Method	URI	Action	Middleware
POST	/signup	Signup	
GET	/terms	Show_terms	
GET	/user/chng-password	Change_pass	Usercheck
POST	/user/chng-password	Save_pass	Usercheck
GET	/user/profile	UserProfile	Usercheck
GET	/user/profile/del_img	Del_img	AJAX Usercheck
GET	/user/profile/edit	EditProfile	Usercheck
POST	/user/profile/edit	EditedProfile	Usercheck
POST	/user/review	Add_review	AJAX Usercheck
GET	/user/review/delete/{id?}	Del_review	AJAX Usercheck
GET	/user/save/property/{pro}/{id}	Save_pro	AJAX Usercheck
GET	/user/saved	Show_saved	Usercheck
GET	{any}	Not_found	

AdminController Routes 7.1.2

Method	URI	Action	Middleware
GET	/admin/category	List_category	Authcheck
GET	/admin/category/add	Add_category	Authcheck
POST	/admin/category/add	Category_added	Authcheck
GET	/admin/category/{id}/del	del_category	Authcheck
GET	/admin/category/{id}/edit	edit_category	Authcheck
POST	/admin/category/{id}/edit	category_edited	Authcheck
GET	/admin/chng-password	chng_password	Authcheck
POST	/admin/chng-password	chng_password	Authcheck
GET	/admin/cities	list_cities	Authcheck
GET	/admin/cities/add	add_cities	Authcheck
POST	/admin/cities/add	cities_added	Authcheck
GET	/admin/cities/{id}/del	del_cities	Authcheck
GET	/admin/cities/{id}/edit	edit_cities	Authcheck
POST	/admin/cities/{id}/edit	cities_edited	Authcheck
GET	/admin/dashboard	AdminHome	Authcheck
GET	/admin/facilities	list_facilities	Authcheck
GET	/admin/facilities/add	add_facilities	Authcheck
POST	/admin/facilities/add	facilities_added	Authcheck
GET	/admin/facilities/{id}/del	del_facilities	Authcheck
GET	/admin/facilities/{id}/edit	edit_facilities	Authcheck
POST	/admin/facilities/{id}/edit	facilities_edited	Authcheck

Method	URI	Action	Middleware
GET	/admin/gallary	list_gallary	Authcheck
GET	/admin/login	AdminLoginPage	
POST	/admin/login	AdminLogin	
GET	/admin/logout	AdminLogout	Authcheck
GET	/admin/properties	list_properties	Authcheck
GET	/admin/properties/add	add_properties	Authcheck
POST	/admin/properties/add	properties_added	Authcheck
GET	/admin/properties/{id}/del	del_properties	Authcheck
GET	/admin/properties/{id}/edit	edit_properties	Authcheck
POST	/admin/properties/{id}/edit	properties_edited	Authcheck
GET	/admin/properties/{id}/gallary	get_gallary	Authcheck
POST	/admin/properties/{id}/gallary	set_gallary	Authcheck
GET	/admin/properties/{id}/gallary/{gid}	del_gallary	Authcheck
GET	/admin/properties/{id}/reviews	get_reviews	Authcheck
GET	/admin/reviews	list_reviews	Authcheck
GET	/admin/reviews/del/{rid}	del_reviews	Authcheck
GET	/admin/users	list_users	Authcheck
POST	/admin/users/type	type_users	AJAX Authcheck
GET	/admin/users/{id}/del	del_users	Authcheck

7.1.3 SiteController Routes

Method	URI	Action	Middleware
GET	/admin/cms	list_cms	Authcheck
POST	/admin/cms	save_cms	Authcheck
GET	/admin/cms/ajaxDelete	cmsajaxDelete	AJAX Authcheck
GET	/admin/sitesettings	list_settings	Authcheck
POST	/admin/sitesettings	save_settings	Authcheck
GET	/admin/sitesettings/ajaxDelete	ajaxDelete	AJAX Authcheck

Directory Structure 7.2

Below is the directory structure where some common Laravel framework parts are not showed because they are repetitive and consumes more space and also they don't explain this project much on themselves. So directories which help explain this project are shown.

```
.editorconfig
  .env
  .env.example
  .gitattributes
  .gitignore
  .htaccess--
  .styleci.yml
 artisan
 composer.json
 composer.lock
 index.php--
 package.json
 phpunit.xml
 README.md
 real estate site.sql--
 server.php
 tree.txt
 webpack.mix.js
+---app
 +---Console
      Kernel.php
  +---Exceptions
      Handler.php
 +---Http
      Kernel.php
    +---Controllers
         AdminController.php
         Controller.php
         SiteController.php
         UserController.php
    \---Middleware
         AuthCheck.php
         Authenticate.php
         EncryptCookies.php
         Prevent Requests During Maintenance.php\\
```

```
RedirectIfAuthenticated.php
         TrimStrings.php
         TrustHosts.php
        TrustProxies.php
         UserCheck.php
         VerifyCsrfToken.php
  +---Models
      Category.php
      City.php
      cms.php
      Facilities.php
      gallary.php
      Property.php
      Reviews.php
      SiteSettings.php
      User.php
      UserData.php
  +---Providers
      AppServiceProvider.php
      AuthServiceProvider.php
      BroadcastServiceProvider.php
      EventServiceProvider.php
      RouteServiceProvider.php
  \---View
    \---Components
         Input.php
         logInput.php
+---bootstrap
   app.php
  \---cache
       .gitignore
      packages.php
      services.php
+---config
    app.php
    auth.php
    broadcasting.php
    cache.php
    cors.php
    database.php
    dz.php
    filesystems.php
    hashing.php
    logging.php
```

```
mail.php
    queue.php
    sanctum.php
    services.php
    session.php
    view.php
+---database
    .gitignore
 +---factories
      UserFactory.php
  +---migrations
      2014 10 12 000000 create users table.php
      2014 10 12 100000 create password resets table.php
      2019 08 19 000000 create failed jobs table.php
      2019 12 14 000001 create personal access tokens table.php
      2021 12 31 123225 create categories table.php
      2022 01 02 091034 create cities table.php
      2022 01 07 144759 create facilities table.php
      2022 01 09 063114 create properties table.php
      2022 01 11 150349 create gallaries table.php
      2022 01 21 040603 create site settings table.php
      2022 01 25 050443 add desc fe image property.php
      2022 01 30 044047 upd facilities.php
      2022 01 30 075444 upd properties.php
      2022 01 30 092847 upd properties2.php
      2022 02 06 062102 create user data table.php
      2022 02 18 141645 upd user data.php
      2022 02 25 134358 create reviews table.php
      2022 03 11 113517 create cms table.php
      2022 03 13 032458 update property.php
 \---seeders
      DatabaseSeeder.php
+---public
 | .htaccess
    favicon.ico
| | index.php
    robots.txt
    stockUser.png
    web.config
 +---css
      carousel.css
      dashboard.css
      footers.css
      headers.css
```

```
adminjs.js
  \---storage
      .gitignore
+---resources
 +---css
      app.css
 +---js
      app.js
      bootstrap.js
  +---lang
    \---en
         auth.php
         pagination.php
         passwords.php
         validation.php
  \---views
    | welcome.blade.php
    +---AdminPanel
      +---AdminUser
           AdminLogin.blade.php
      +---category
           form.blade.php
           list.blade.php
      +---chng password
           form.blade.php
      +---cities
           form.blade.php
           list.blade.php
      +---cms
           formlist.blade.php
      +---dashboard
           dashboard.blade.php
      +---facilities
           form.blade.php
           list.blade.php
```

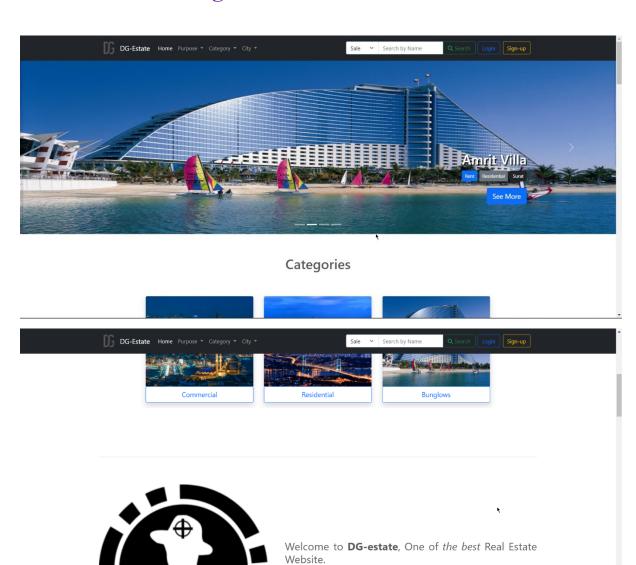
```
+---gallary
       list.blade.php
  +---layouts
       end.blade.php
       main.blade.php
       navbar.blade.php
       sidebar.blade.php
       start.blade.php
  +---properties
       form.blade.php
       list.blade.php
  +---reviews
       list.blade.php
  +---SiteSettings
       formlist.blade.php
  \---users
       list.blade.php
+---components
    input.blade.php
    log-input.blade.php
+---errors
    404.blade.php
+---frontend
    about.blade.php
    faq.blade.php
    home.blade.php
    property.blade.php
    show.blade.php
    showinitem.blade.php
    terms.blade.php
+---layouts
    app.blade.php
    carousel.blade.php
    close.blade.php
    footer.blade.php
    header.blade.php
    navbar.blade.php
    oldp.blade.php
\---User
    chngPassword.blade.php
```

```
editProfile.blade.php
         Profile.blade.php
         savedPro.blade.php
         UserLogIn.blade.php
         UserSignUp.blade.php
+---routes
    api.php
    channels.php
    console.php
    web.php
+---storage
  +---app
    gitignore .
    \---public
       gitignore .
      +---cms
      +---gallary
      +---images
      +---property
      +---siteSettings
      \---userdata
  +---framework
      .gitignore
+---vendor
```

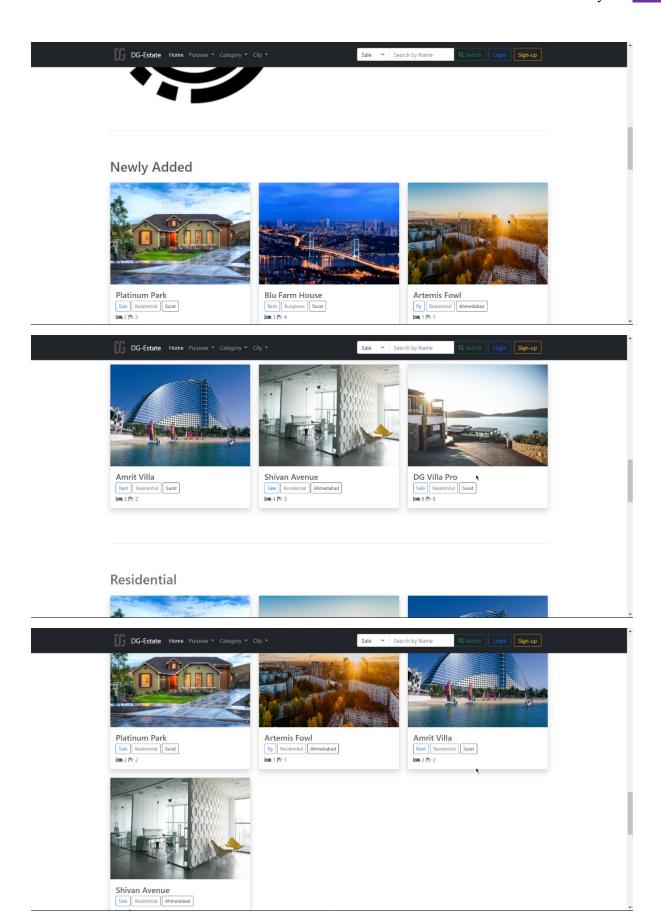
8 Frontend Layout

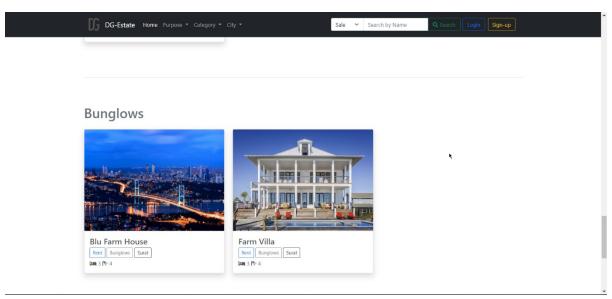
8.1 User

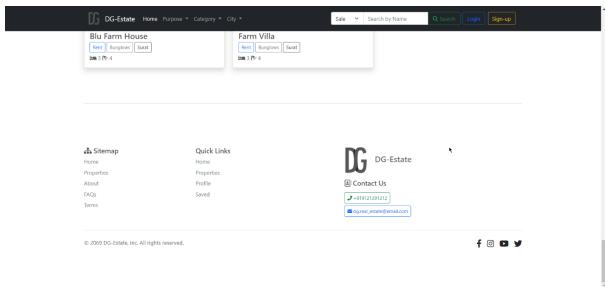
Home Page 8.1.1



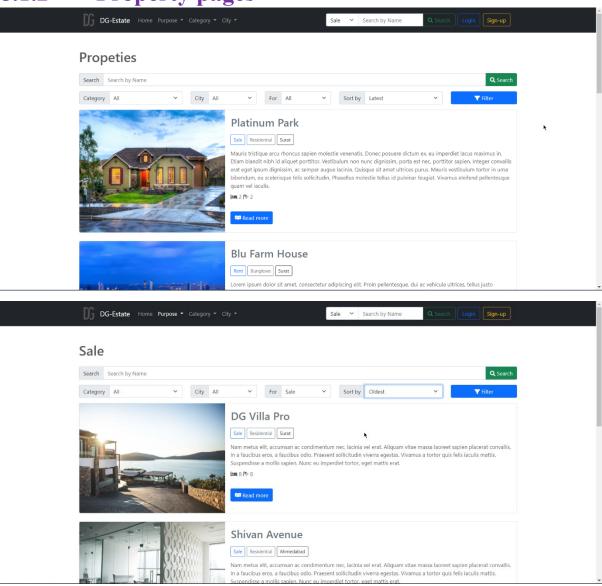
"Once Great, Always Great."

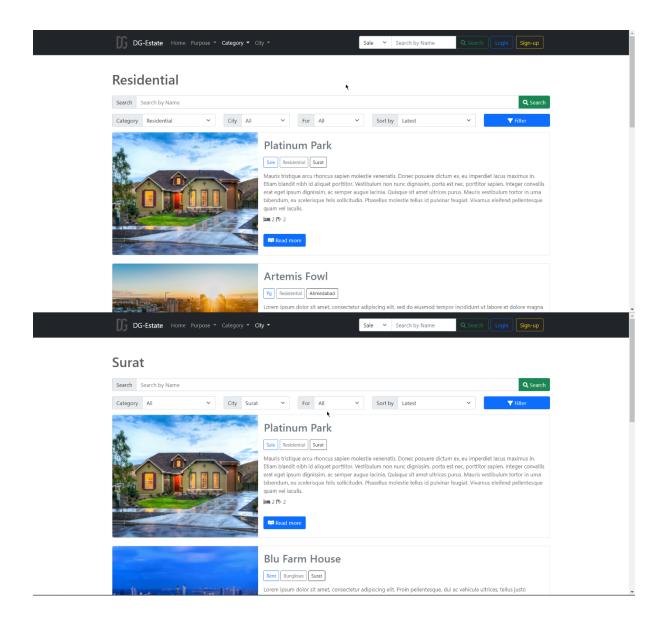


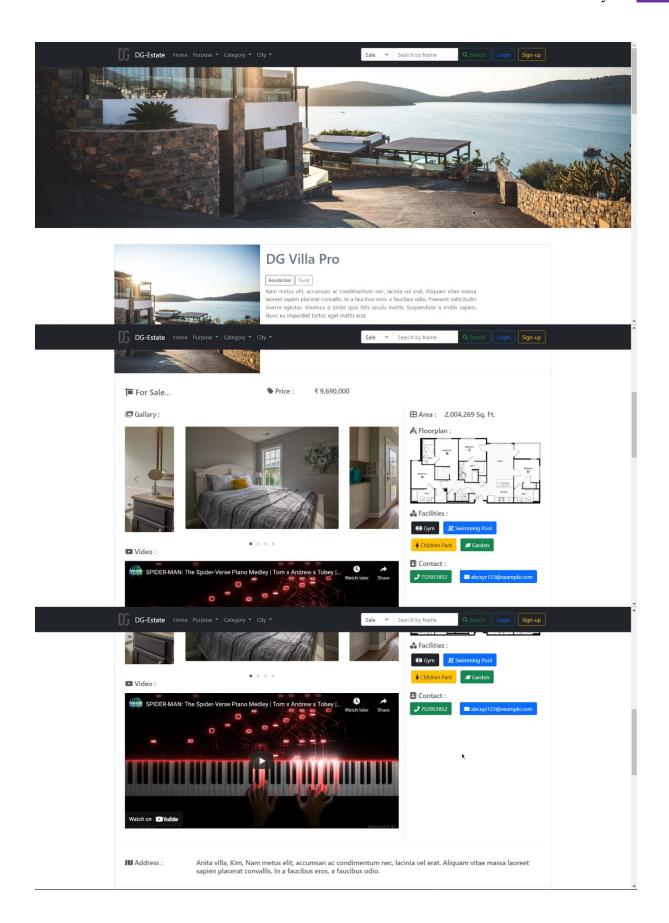


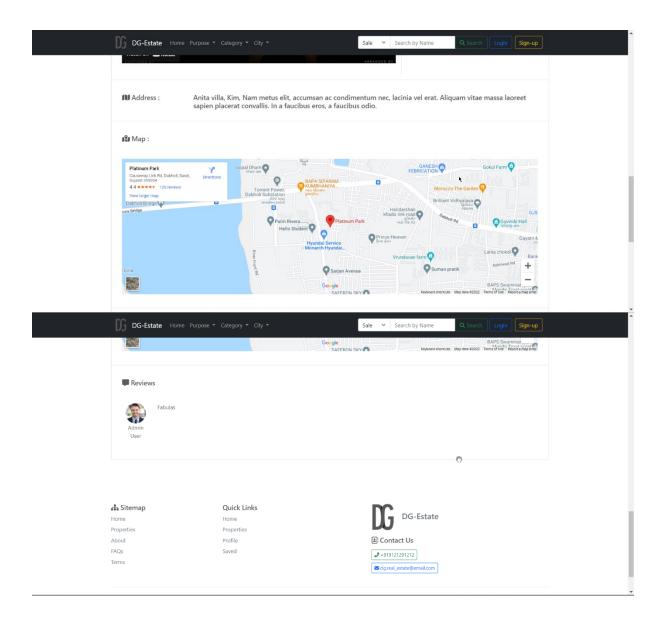


8.1.2 **Property pages**









Auth pages 8.1.3

Welcome back to DG-**Estate**

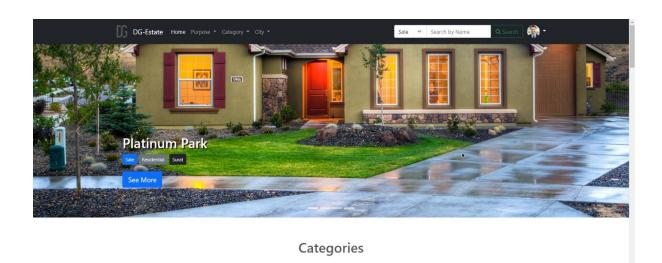
This is just bunch of random text you don't need to read it. Stop it already I told you don't read it. Fine do whaterver you want read this too. It took me F***ing ** Months to make this Project.



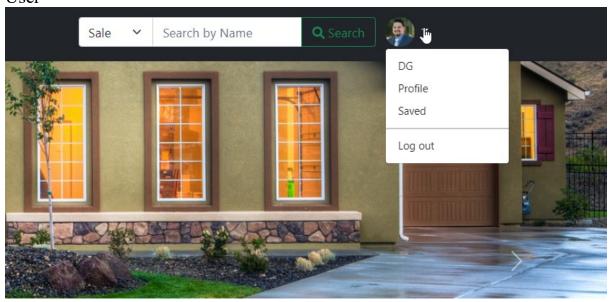
Welcome to **DG-Estate**

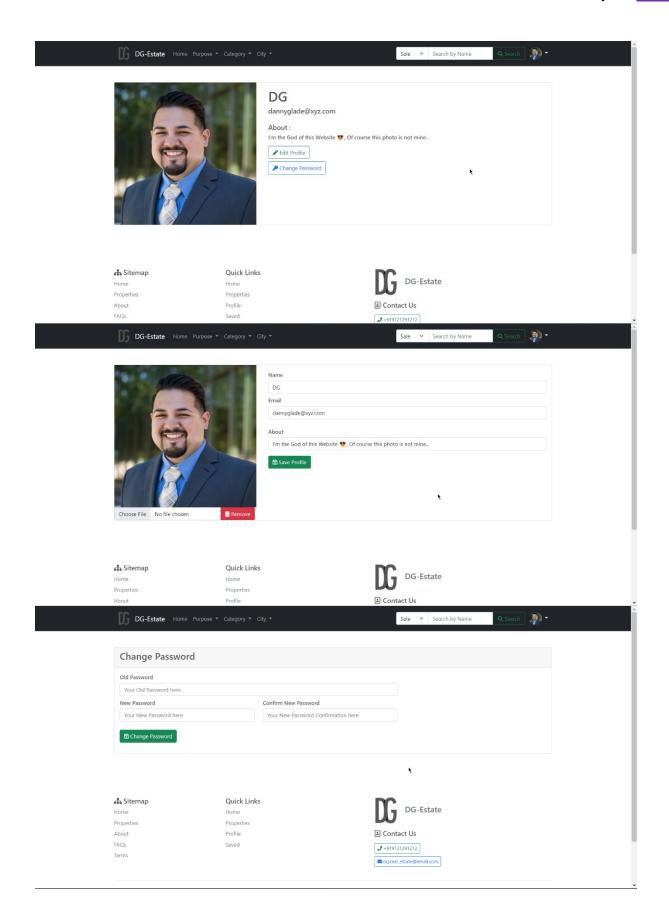
This is just bunch of random text you don't need to read it. Stop it already I told you don't read it. Fine do whaterver you want read this too. It took me F***ing ** Months to make this Project.

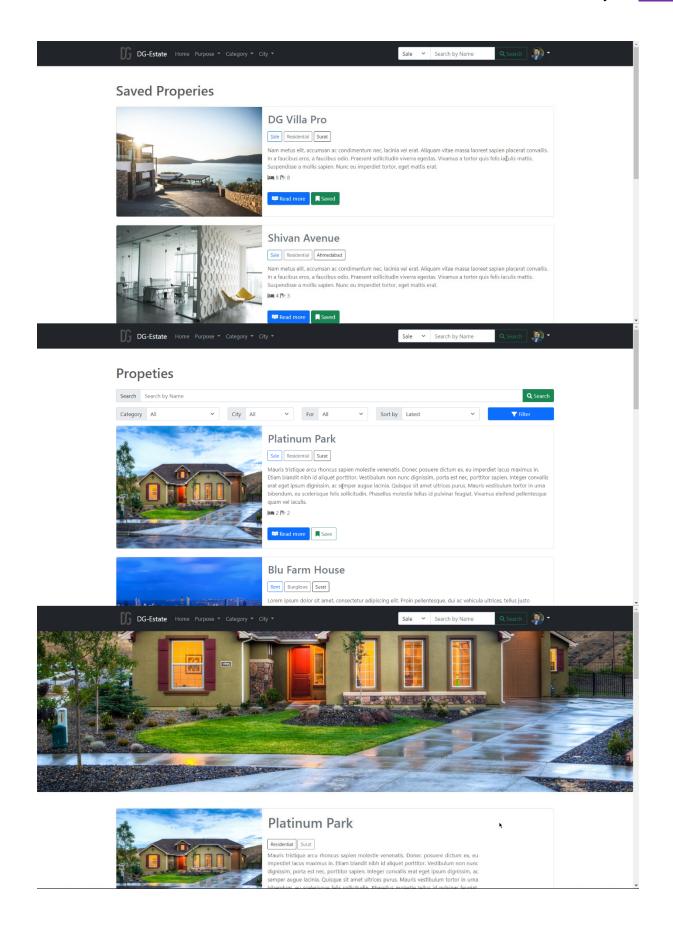
User Name
Email address
Password
Confirm Password
Remember me
Sign Up
y clicking Sign up, you agree to the terms of use. Iready have an account? <u>Log In</u>

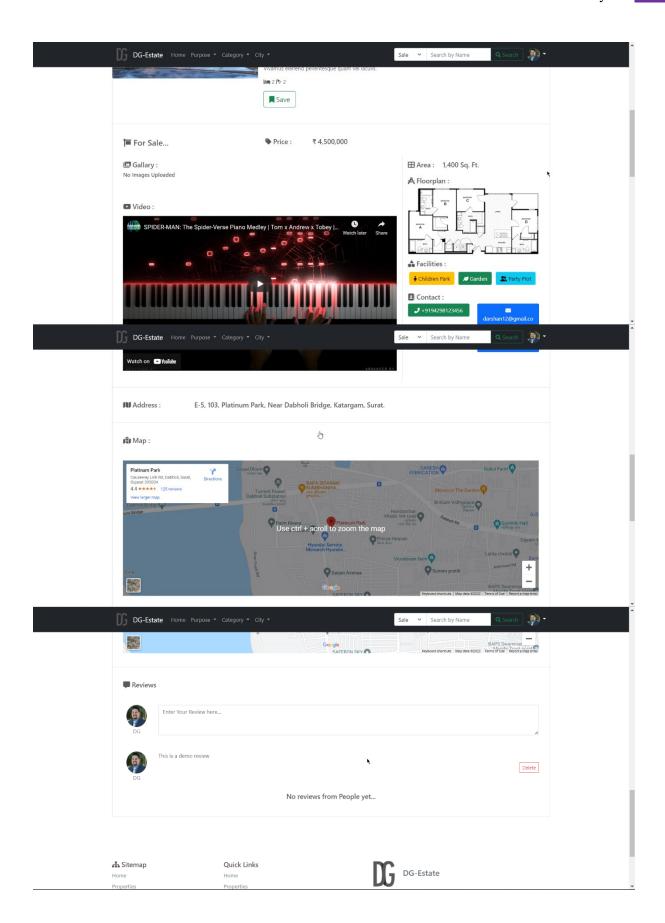


User

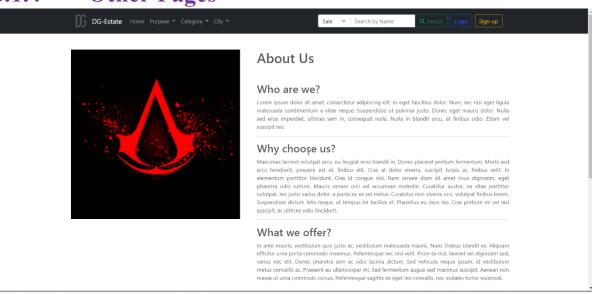


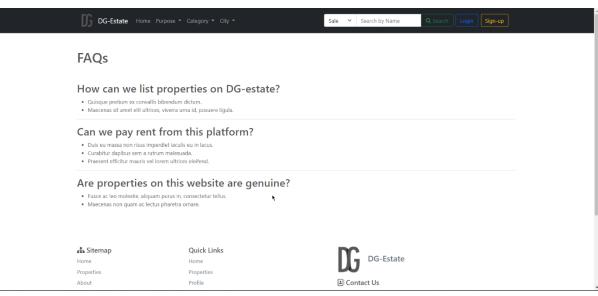


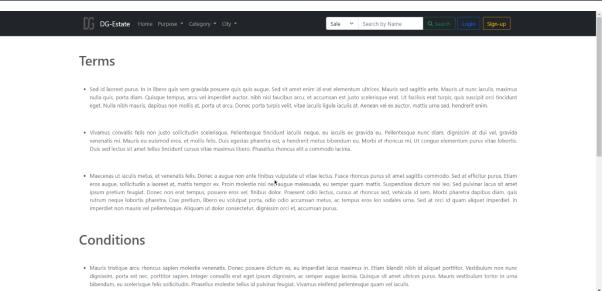




8.1.4 **Other Pages**

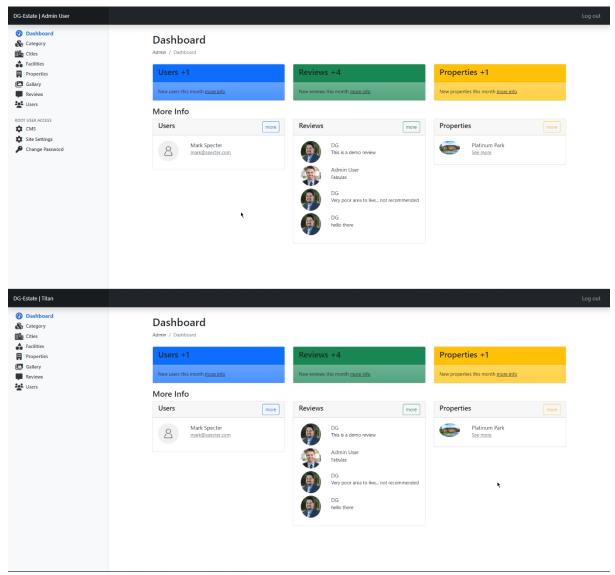




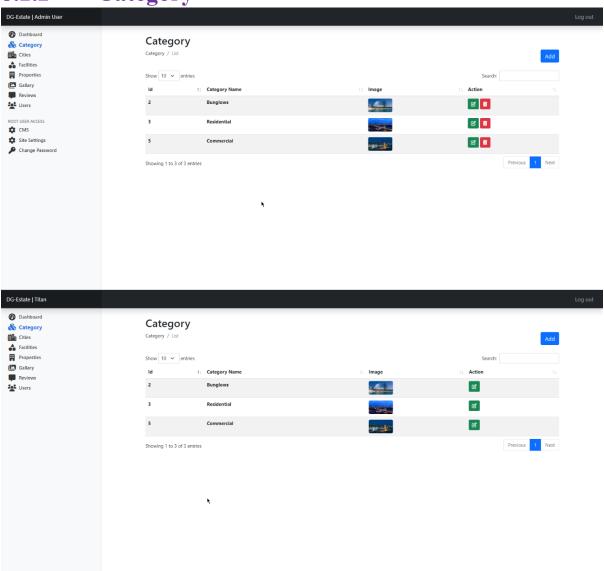


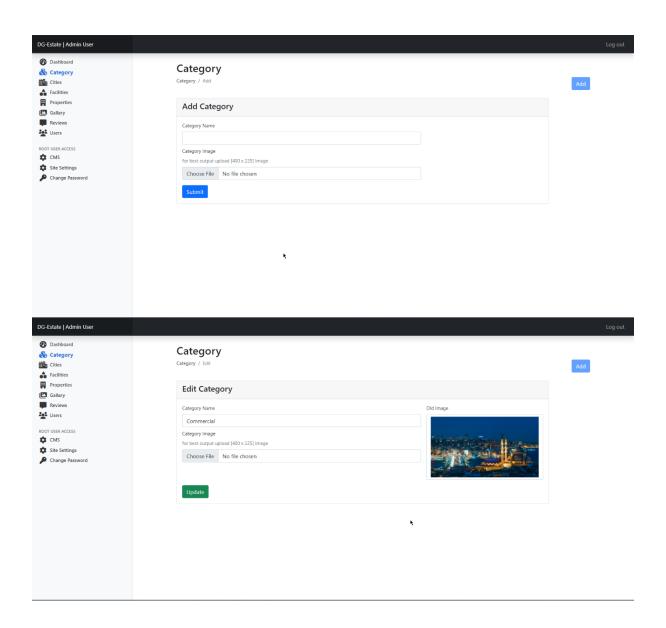
8.2 Admin/Root Pages

8.2.1 Dashboard

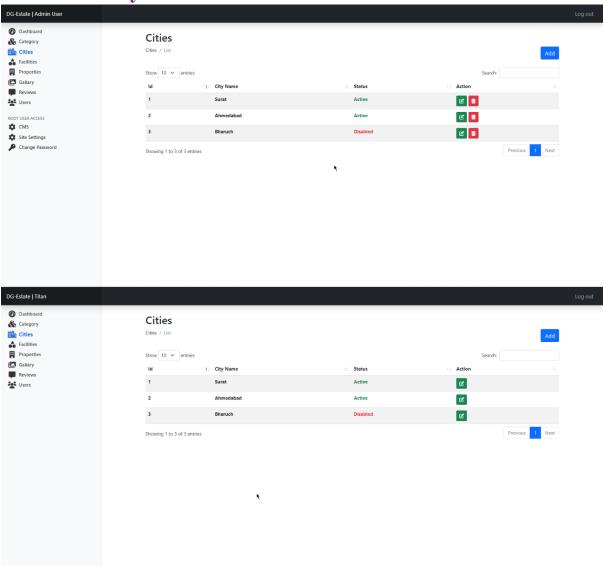


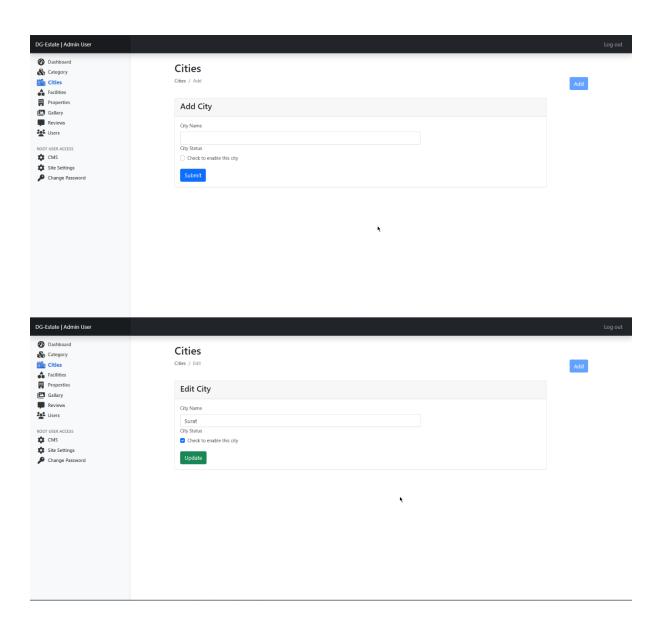
8.2.2 Category



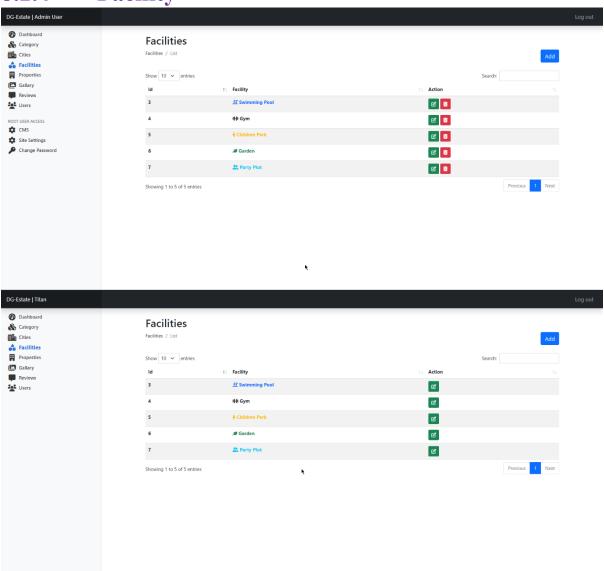


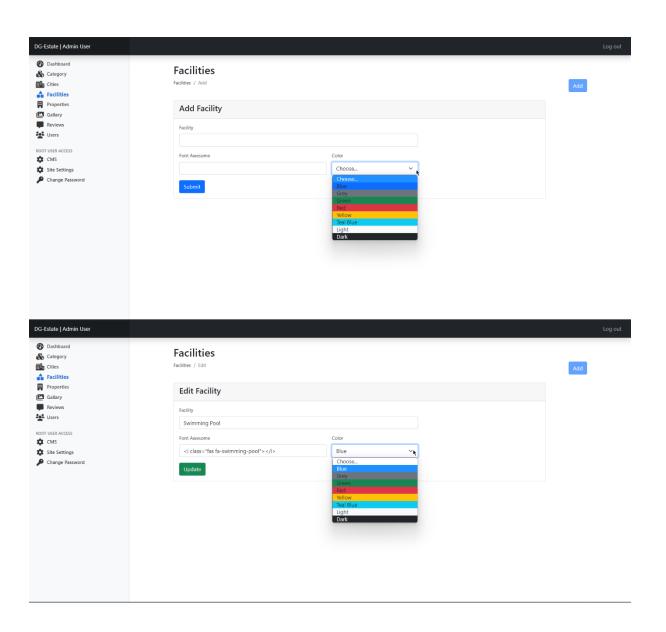
City 8.2.3



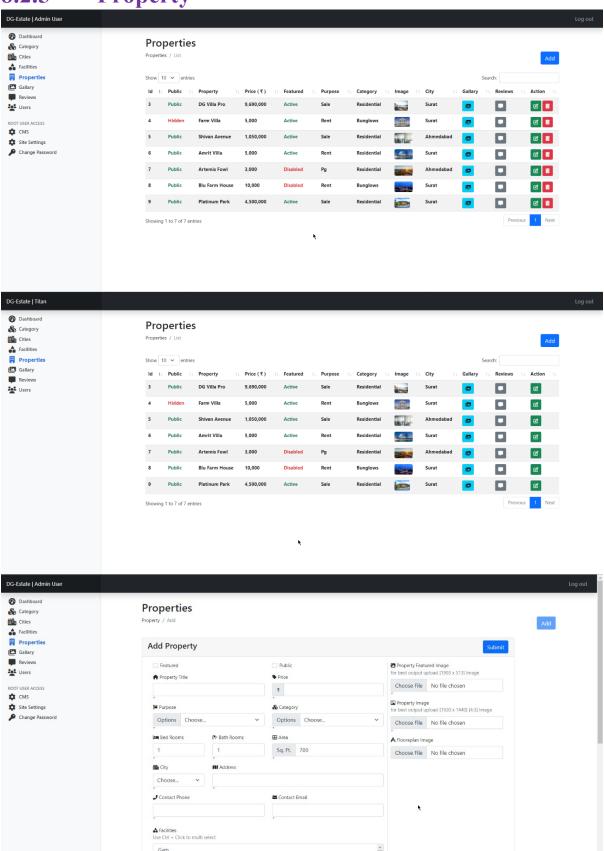


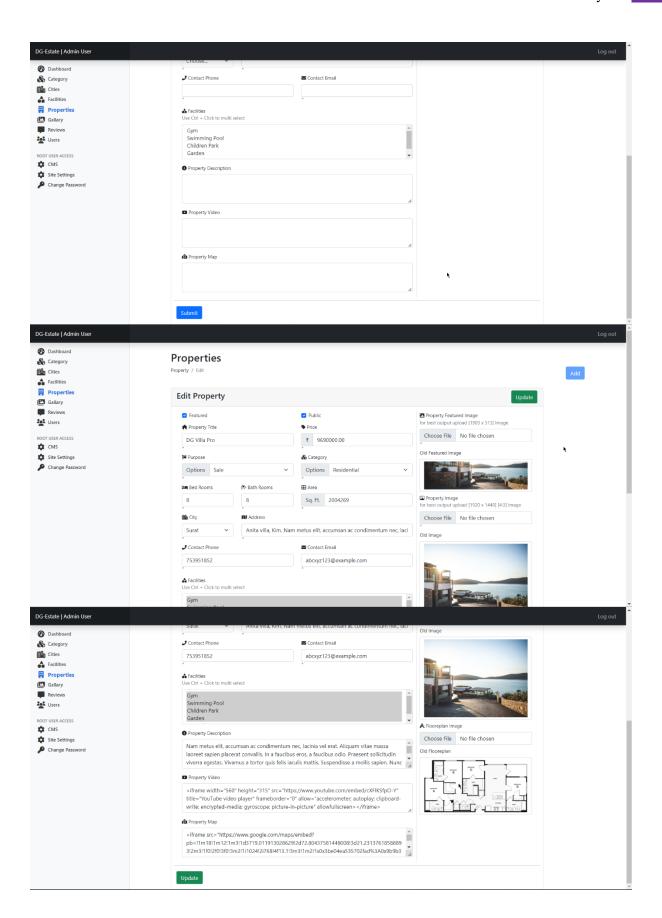
Facility 8.2.4



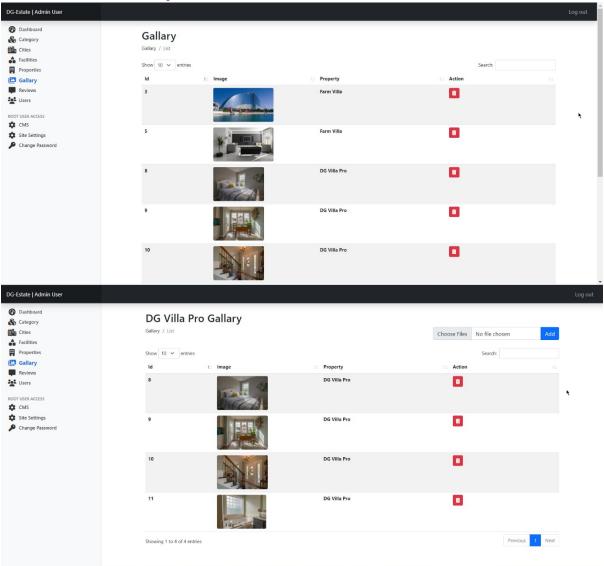


8.2.5 Property

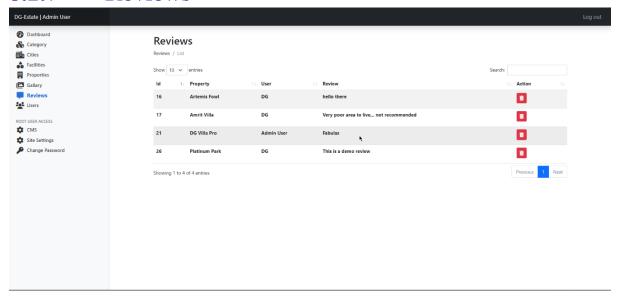




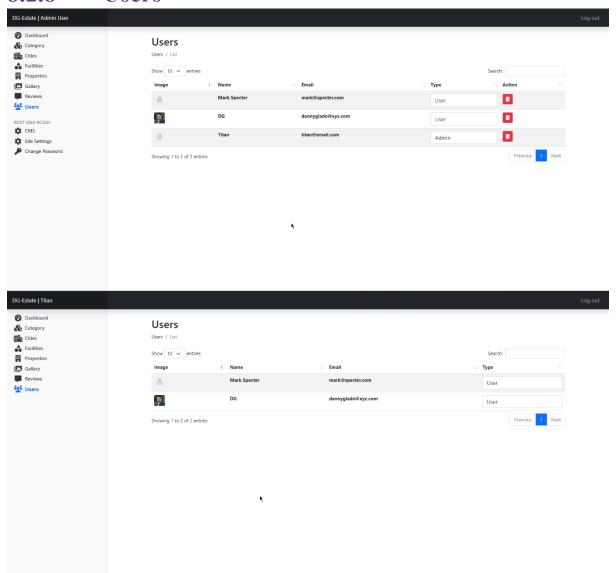
Gallary 8.2.6



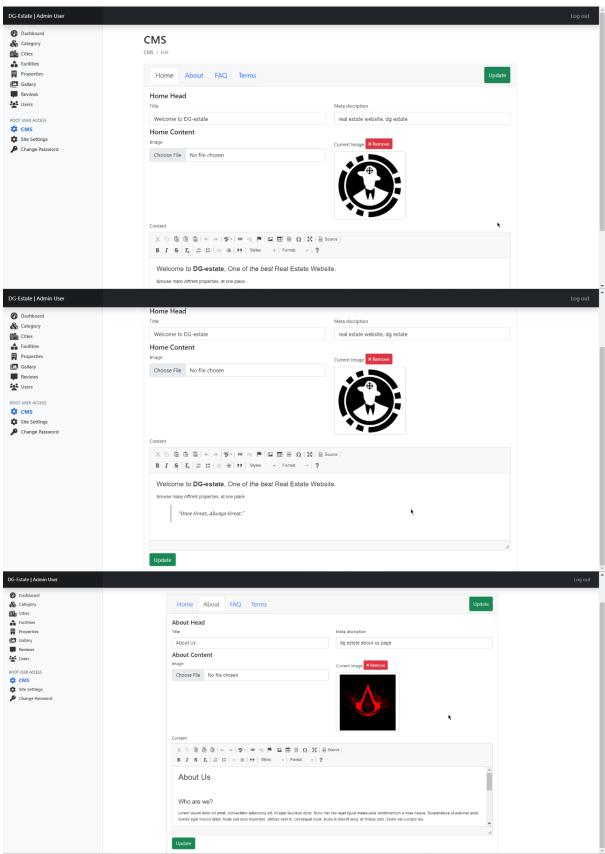
8.2.7 Reviews

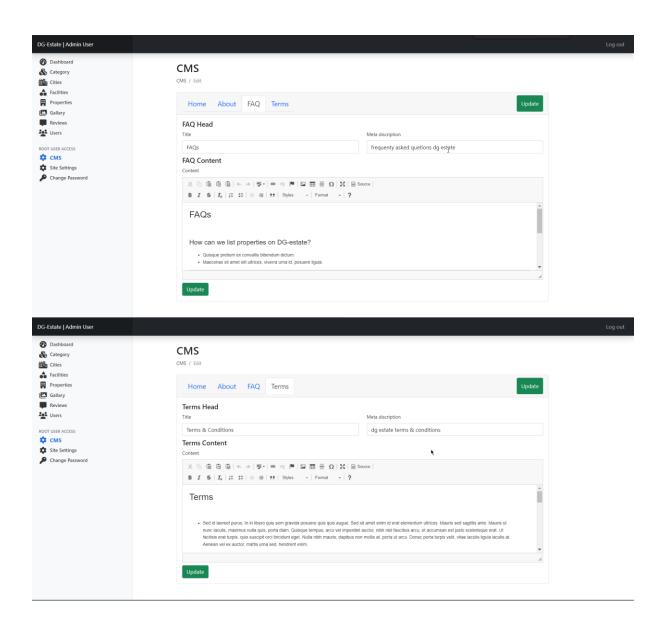


Users 8.2.8

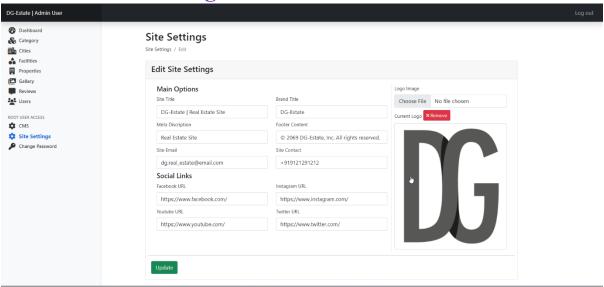


8.2.9 **CMS**

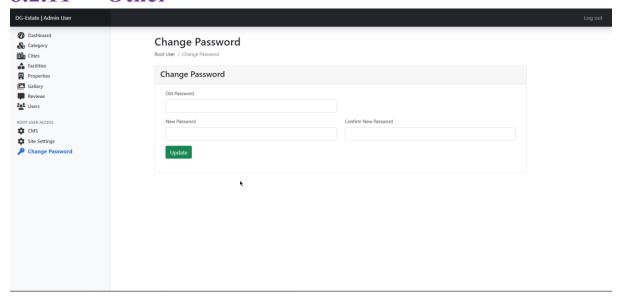




8.2.10 **Site Settings**



Other 8.2.11



9 Bug Tracking

Tracking Bugs 9.1

User/Admin/Root Login Module 9.1.1

Test Case No.	Input	Expected O/P	Actual O/P	Result
1	Email = 'admin@admin.com' Pass = '123456'	Login success	Login success	Pass
2	Email = 'abc@xyz.com'	Pass required	Pass required	Pass
3	Pass = '159654'	Email required	Email required	Pass
4	Email = 'admin@ad.com' Pass = '456123'	Email invalid	Email invalid	Pass
5	Email = 'admin@admin.com' Pass = '456123'	Invalid credentials	Invalid credentials	Pass

9.1.2 **Category Module**

Test Case No.	Input	Expected O/P	Actual O/P	Result
1	Name = 'Farm House' Image = 'img_1.jpg'	Category created	Category created	Pass
2	Name = 'Farm House' Image = 'img_1.jpg'	Category exists	Category exists	Pass
3	Image = 'img-1.jpg'	Name required	Name required	Pass
4	Name = 'Rent' Pass = 'vid_1.mp4'	Mime invalid	Mime invalid	Pass
5		Name required Image required	Name required Image required	Pass

City Module 9.1.3

Test Case No.	Input	Expected O/P	Actual O/P	Result
1	Name = 'Bharuch' Status = true	City created	City created	Pass
2	Name = 'Bharuch' Image = true	City exists	City exists	Pass
3	Status = false	Name required	Name required	Pass
4	Name = 'Jam Nagar' Status = false	City created	City created	Pass
5		Name required	Name required	Pass

Facility Module 9.1.4

Test Case No.	Input	Expected O/P	Actual O/P	Result
1	Faci = 'Dog park' Fa = ' <i class="fa-park"></i> color = primary	Facility created	Facility created	Pass
2	Faci = 'Kids park' color = info	Facility created	Facility created	Pass
3	Color = danger	Faci required	Faci required	Pass
4	Faci = 'Dog park'	Facility exists Color required	Facility exists Color required	Pass
5		Faci required Color required	Faci required Color required	Pass

9.1.5 Property Module

Test Case No.	Input	Expected O/P	Actual O/P	Result
1	Featured = true Public = true Title = 'shiva heights' Price = '30000' Purpose = 'rent' Category = 'apartments' Bed rooms = 2 Bath rooms = 2 Area = 5000 City = 'surat' Address = 'road,city' Phone = '1212919112' Email = 'abc@xyz.com' Facility = 'gym , park' Description = 'lorem' Video = 'link' Map = 'link' Fe image = '123.jpg' Image = '456.jpg; Floorplan = '789.jpg'	Property created	Property created	Pass
2		Title required Price required Purpose required Category required Bed rooms required Bath rooms required Area required City required Address required Phone required Email required Fe image required Image required	Title required Price required Purpose required Category required Bed rooms required Bath rooms required Area required City required Address required Phone required Email required Fe image required Image required	Pass
3	Title = 'shiva heights' Price = '30000' Purpose = 'rent' Category = 'apartments' Bed rooms = 2	Property created	Property created	Pass

Bath rooms = 2		
Area = 5000		
City = 'surat'		
Address = 'road,city'		
Phone = '1212919112'		
Email = 'abc@xyz.com'		
Fe image = '123.jpg'		
Image = '456.jpg;		

9.2 Test Case

Test Case Selection 9.2.1

• The Presented system "DG-estate" is tested using white-box testing which is based on the internal structure of the system, may also called as testing to code, path-oriented testing, or logical-driven testing. A common goal of white-box testing to have a test case to exercise every path through a program. This may become exhaustive

9.2.2 White Box Testing Case

• Because exhaustive white-box testing is infeasible, test or code coverage metrics are used to select test cases, which measure the fraction of code exercised by test cases. Test cases are selected to achieve target test coverage levels.

9.2.3 **Test Coverage Metrics**

Statement Coverage

The fraction of statements executed at least once is running a collection of test cases.

Branch Coverage

The fraction of total branch directions that have been taken at least once in running a collection of test cases.

Path Coverage

• The fraction of paths taken at least once in running a collection of test case, where a "path" is defined in some way to limit the totals of feasible collection.

Unit Testing 9.3

The presented system is tested using unit testing. Unit testing is test of code written by a single programmer. A unit is a portion of a system implemented by a single programmer. Unit testing is exercising a unit in isolation from the rest of the system. The system then is tested using integrating Testing.

9.4 **Integration Testing**

Top Down

• Combine, test and debug top-levelled routines that become the integration test that harms for lower-level units.

Bottom Up

• Combine, test low level routines into progressively larger modules and subsystems.

Sandwich

• Mainly top-down with bottom-up integration and testing applied to certain widely used components.

10 Limitations and Future Enhancement

10.1 Limitations

- If admin is just logged in admin can delete any property by just remembering it's id and making right URL.
- Delete has less secure validation.
- Root user can't track who added or updated Property or any other item.
- There is no other way to change password if user forgets the password.
- Root can simply delete a user without any kind of warning to the user.
- User can add any kind of email format to create account because there is no way to verify email.
- Users can not edit their old reviews.
- Property listers and Root can't reply to a review if a user seeks help through review.

10.2 Future Enhancements

- We can scale this website to an admin listed website to a platform where common users can also list their house for rent or sale.
- Views system in property, properties with more views can be considered in most viewed section on front page.
- Add map with just coordinates instead of google embed maps.
- Upgrading frontend in an SPA (Single Page Application) can improve user experience.
- More control in admin panel like able to change frontend layout.

11 References

These are the websites/ articles / videos / blogs which were used as reference in making of this project.

Websites

- https://laravel.com/docs/8.x/
- https://stackoverflow.com/
- https://getbootstrap.com/docs/5.1/getting-started/introduction/
- https://releases.jquery.com/
- https://datatables.net/manual/
- https://fancyapps.com/docs/ui/installation
- https://ckeditor.com/docs/ckeditor4/latest/guide/index.html
- https://youtube.com/
- https://www.w3schools.in/laravel-tutorial/
- https://www.tutorialspoint.com/laravel/index.htm

Videos

- https://www.youtube.com/watch?v=ImtZ5yENzgE
- https://www.youtube.com/watch?v=MFh0Fd7BsjE