

INTRODUCTION

1.1 Purpose of this Document

The goal of this paper is to give a precise and comprehensive explanation of the system's architecture. It seeks to provide sufficient knowledge to direct software development, guaranteeing a common understanding of what must be produced and how it ought to be put together.

1.2 Identification

For the database design Mysql will be used which would also help in creating the required queries. For frontend prototyping, we've used HTML, CSS and Javascript, and for backend we have used PHP.

1.3 Document Scope

This design document serves as a technical blueprint for real estate management system as it highlights the seamless interaction between the customers and the administrators. The paper is a comprehensive reference that provides developers with an architectural overview of the system to aid in the implementation process. It is intended to be a useful tool for system designers and builders, ensuring that all parties are in agreement.

1.4 Intended audience

- **Real Estate Agencies and Agents:** To keep track of their listings, manage clients, handle commissions, and maintain records.
- **Property Owners and Landlords:** For managing their properties, tracking tenant details, handling maintenance requests, and managing lease agreements.
- **Property Managers:** For overseeing multiple properties, handling tenant relations, and ensuring maintenance tasks are completed.
- **Real Estate Investors:** To manage their property portfolios, track income and expenses, and evaluate the performance of their investments.
- **Real Estate Developers:** To track the development and sale of new properties.

- **Government and Municipal Agencies:** To manage public housing units, collect property data, and ensure regulatory compliance.
- **Financial Institutions:** Like banks and mortgage lenders, to track property loans, property values, and risk assessments.
- **Legal Professionals:** To manage and access property-related legal documents and track ongoing property litigation.
- **Property Marketing and Advertising Firms:** For campaign management and tracking of property advertisements.
- **Potential Property Buyers:** To search for properties, compare features, schedule viewings, and access financing options.
- **Real Estate Appraisers and Valuation Experts:** To access property details and compare them with market trends to determine property values.

Property Insurers: To evaluate risks associated with particular properties and to determine appropriate coverage levels.

1.6 Languages and Tools

- Language
 - HTML
 - CSS
 - Javascript
 - PHP
- Tools
 - Visual Studio Code
 - Phpmyadmin for database design

General Overview and Design Consideration

2.1 Current Problem:

Before the emergence of real estate management system websites, the real estate industry faced significant challenges. Manual processes, including paperwork and in-person interactions, made property management time-consuming and error-prone. Information about available properties was limited, requiring reliance on traditional

methods like newspaper listings. Transactions were inefficient and prone to delays, with a lack of centralized systems leading to fragmented data and a lack of transparency. Market inefficiencies were prevalent due to difficulties in analyzing trends and making informed decisions.

2.2 Our Solution Implemented:

To address the existing challenges, we propose the implementation of a real estate management system. This solution eliminates the paper works and face to face interactions along with the limited information and accessibility of the property data. The solution provides centralized platform for property listings, making it easy for agents and property owners to showcase their offerings. It reduces the likelihood of errors, delays, and miscommunications. Increased accessibility expands the reach of property listings to a broader audience. Automation of tasks and the reduction of manual paperwork lead to significant time and cost savings for both real estate professionals and clients. It also often offers scalability to accommodate the growing needs of real estate businesses as they expand. The decision making is also improved due to the increased accessibility.

DESIGN CONSIDERATION

3.1 Goals and Guidelines

3.1.1 Architecture:

The proposed real estate management system must fulfill all specified functional requirements from users and be developed with due consideration for non-functional requirements. It should be designed to adapt to future changes, including support for additional features, functionalities, and use cases.

3.1.2 Ease of Use:

To guarantee a satisfying user experience, give priority to an intuitive interface. The programme should provide quick and simple access to all of its functions because it serves a diverse range of users.

3.1.3 Development Environment:

Continue developing applications consistently. Build the programme with the newest technology versions while maintaining backward compatibility for best performance, to embrace technological changes.

3.1.4 Extensibility:

Create an application that is easily expandable so that new features may be added without difficulty. To guarantee continued adaptability and support for upcoming improvements, backward compatibility must be taken into serious consideration.

3.2 Operational Environment

3.3 Development Methods & Contingencies

3.3.1 Scalability:

Make sure the design of the real estate management system allows horizontal scalability, which enables the addition or deletion of servers to handle growing load. With the help of this scalability feature, the system can accommodate an increase in users and transactions without experiencing performance issues.

3.3.2 Availability:

By using redundant infrastructure, you can keep your environment highly available. This minimizes downtime and guarantees ongoing operation by guaranteeing that the real

estate management system is available even in the case of server failures or a whole data centre outage.

3.3.3 Extensibility:

Create a flexible architecture that enables the extension of the programme, the inclusion of new features, and the seamless replacement of modules. Because of its flexibility, the real estate management system may change to accommodate new needs without affecting current features or data contracts.

3.3.4 Security:

Put security first by hiding the underlying code and adding several security layers. To protect user data, transactions, and sensitive information, strong security mechanisms should be in place and the design should minimize the exposure of code components.

3.3.5 Functionality:

When the real estate management system follows established protocols, it should include features that satisfy both explicit and implicit user demands. An extensive range of functions related to property management, client contacts, and administrative duties should be offered by the programme.

3.3.6 Separation of Responsibility:

Put into practice a modular system architecture to guarantee a distinct division of labour. Whether on the front end or back end, each code module should exclusively manage the particular tasks for which it was designed.

3.4 Development Environment

Software	Description
HTML, CSS	Client side
Javascript	Client side and Server side
PHP	Server side and Backend database connectivity
Mysql	Database

System Architecture And Architecture Design

architecture:-

https://drive.google.com/file/d/1bCtpXGRhk9YcsP6xP_KvAuCw-dqb6zPh/view?usp=sharing

4.1 Hardware Architecture

4.1.1 System Descriptions

	SYSTEM	NOTE
Database	Mysql	MySQL is an open-source relational DBMS developed by Oracle, renowned for its scalability and reliability. Widely used in web development, it supports SQL for data operations and finds applications in various domains, including web applications and content management systems.
Programming Language	Javascript	JavaScript is a versatile and widely used programming language for web development. It allows developers to create dynamic, interactive web pages and is supported by all major browsers, making it essential for front-end and back-end development.
Frontend Framework	HTML, CSS	HTML (Hypertext Markup Language) is a markup language used for structuring content on the web, defining elements like headings, paragraphs, and links. CSS (Cascading Style Sheets) is a style sheet language that controls the presentation and layout of HTML documents, enabling the styling of elements with properties such as colors, fonts, and spacing.
Backend Server	PHP	PHP (Hypertext Preprocessor) is a server-side scripting language commonly used for web development, enabling the creation of dynamic web pages by embedding code within HTML. It is particularly well-suited for building interactive and data-driven websites.

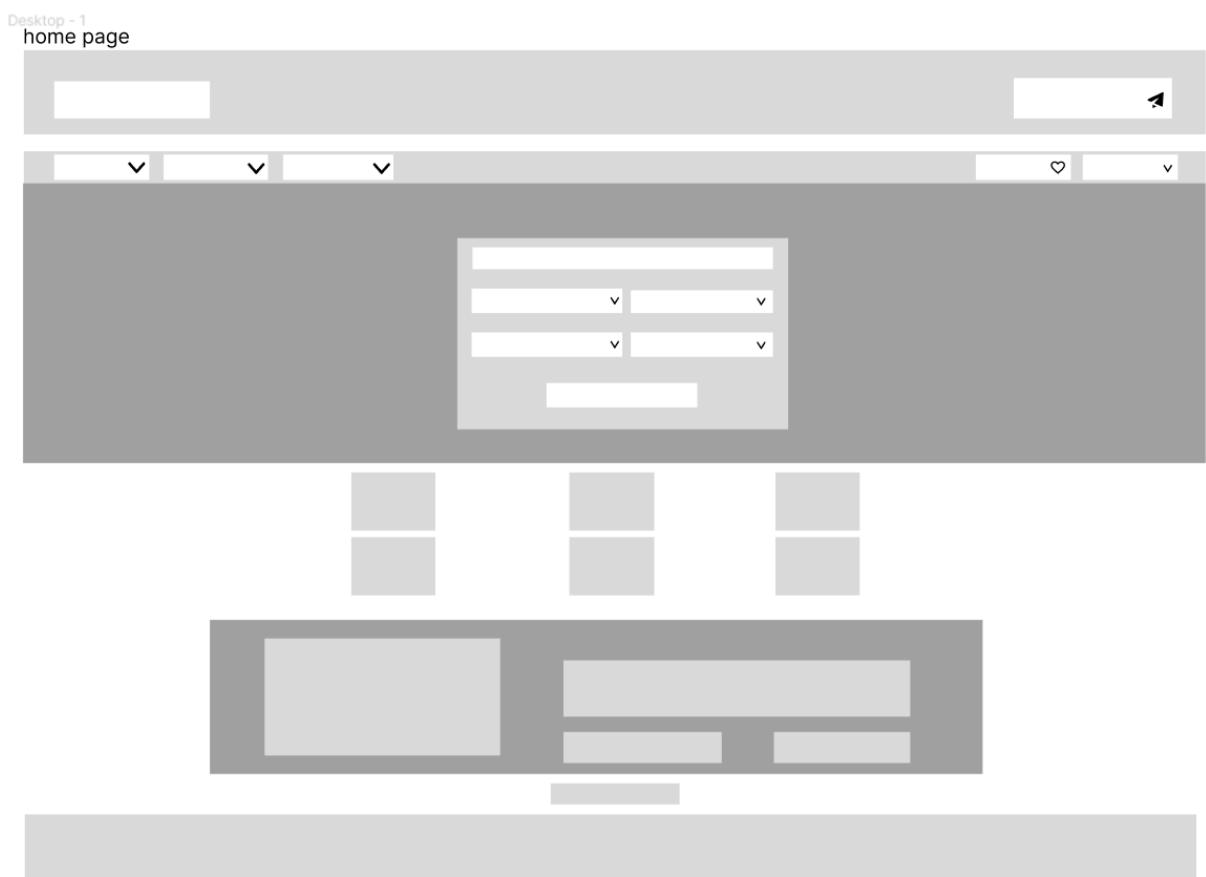
ER diagram:-

https://lucid.app/lucidchart/f5c2c0ce-41f8-49d2-820e-251cf7e2051/edit?invitationId=inv_a96fa9b0-d7b0-4b95-ba84-16ade5858bc8&page=0_0#

User interface:-

User side:

1) Home page:-



Find Your Perfect Home

enter location *

enter city name

property type * offer type *

flat sale

maximum budget * maximum budget *

5k 5k

Search Property

The search interface is overlaid on a scenic background of snow-capped mountains and a lake under a starry sky.

Our Services

Buy House
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

Rent House
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

Sell House
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

Flats And Buildings
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

Shops And Malls
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

24/7 Service
Lorem ipsum dolor sit amet
consectetur, adipisicing elit.
Doloremque, incidunt.

MyHome

post property 

my listings ▾ options ▾ help ▾

saved  account ▾

Latest Listings

 save



₹ 5000
house123456
delhi

 flat  sale
 3 BHK  ready to move
 furnished  3000sqft

[View Property](#) [Send Enquiry](#)

 save

MyHome

post property 

my listings ▾ options ▾ help ▾

saved  account ▾



 admin
2023-09-27

[View Property](#) [Send Enquiry](#)

[View All](#)

 123456789
 1112223333
 dev.b3@ahduni.edu.in
 india - 4040404

[home](#)
[about](#)
[contact](#)
[all listings](#)
[saved properties](#)

 facebook 
 twitter 
 linkedin 
 instagram 

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2) View property:

Desktop - 2
view property



MyHome

post property

my listings ▾ options ▾ help ▾

saved account ▾

Property Details

house1234

📍 delhi

 MyHome

post property 

my listings ▾ options ▾ help ▾ saved  account ▾

house1234
📍 delhi
₹ 5000 admin111 1234 flat sale 2023-12-07

details

rooms:	2 BHK	carpet area:	3000sqft
deposit amount:	₹ 500	age:	2 years
status:	ready to move	total floors:	2
bedroom:	2	room floor:	1
bathroom:	2	furnished:	furnished
balcony:	2	loan:	available

amenities

✓ lifts	✗ parking area
✓ security guards	✗ gym
✓ play ground	✗ shopping mall
✓ gardens	✗ hospital
✗ water supply	✗ schools
✗ power backup	✗ market area

 MyHome

post property 

my listings ▾ options ▾ help ▾ saved  account ▾

✗ power backup ✗ market area

description

extremely spacious

 save Send Enquiry

 123456789  home  facebook 
 1112223333  about 
 dev.b3@ahduni.edu.in  contact 
 india - 4040404  all listings 
saved properties

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3) Create account:

create account

Desktop view:

Mobile view:

MyHome

post property

my listings ▾ options ▾ help ▾

saved account ▾

Create An Account!

enter your name

enter your email

enter your number

enter your password

confirm your password

already have an account? [login now](#)

[Register Now](#)

4) Search filter:

SearchFilter

A placeholder representation of a search filter interface. It features a header with a back arrow and a forward arrow. Below the header is a toolbar with three dropdowns and a set of icons (heart, magnifying glass, etc.). The main area contains four pairs of dropdown menus, each consisting of a white input field and a black dropdown menu with a downward arrow.

The screenshot shows the 'MyHome' search interface. At the top, there's a navigation bar with a house icon, 'MyHome', a 'post property' button, and user account links for 'saved' and 'account'. Below the navigation is a search bar with dropdowns for 'offer type' (set to 'sale'), 'property type' (set to 'flat'), 'maximum budget' (set to '5k'), and 'furnished' status (set to 'unfurnished'). A large red 'Search Property' button is at the bottom of the search panel. Below the search panel, the text 'Latest Listings' is visible.

my listings ▾ options ▾ help ▾ saved account ▾

post property

Filter Your Search

enter location	offer type
enter city name	sale

property type	how many BHK
flat	1 BHK

maximum budget	maximum budget
5k	5k

status	furnished
ready to move	unfurnished

Search Property

Latest Listings

5) All listings:

all listings

Desktop - 5



MyHome

post property

my listings options help

saved account

All Listings

save

₹ 5000
house123456
delhi

flat sale
3 BHK ready to move
furnished 3000sqft

[View Property](#) [Send Enquiry](#)

D dev bhalodia
2023-12-07

save

6) About us:



MyHome post property

my listings options help saved account

The illustration shows a hand holding a red multi-story apartment building. A speech bubble next to the building contains five red stars. In the background, there are stylized white buildings and clouds.

Why Choose Us?

Lorem ipsum dolor sit amet consectetur adipisicing elit. Harum dolorem provident voluptatum distinctio laborum veritatis vitae suscipit praesentium fugiat unde?

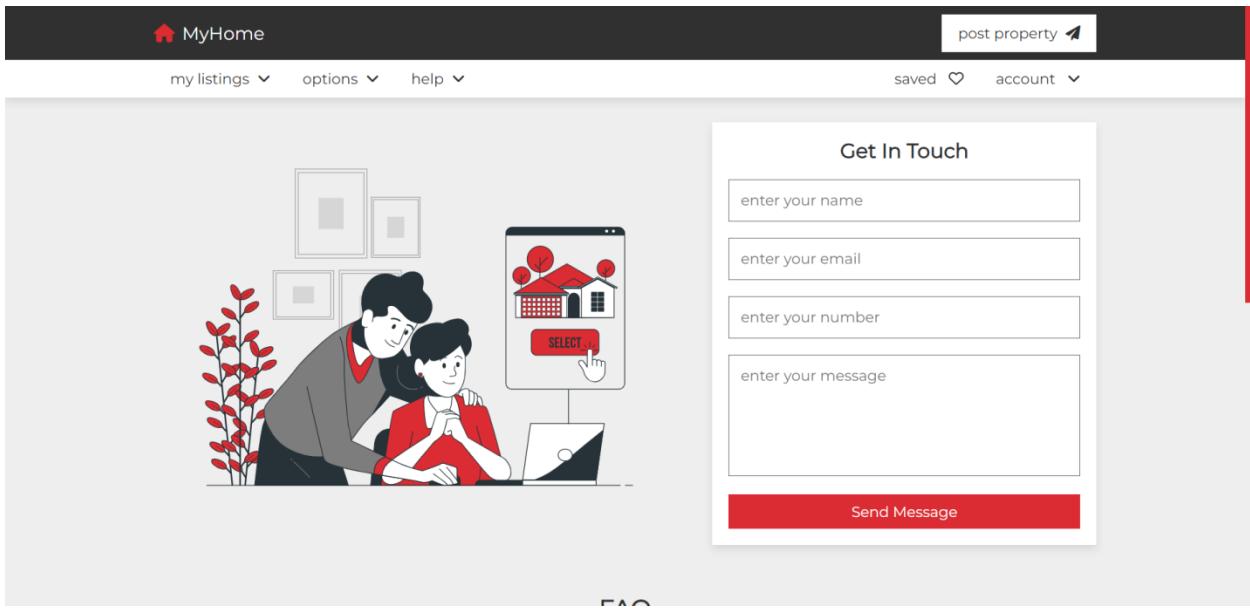
[Contact Us](#)

The screenshot shows a section titled "Client's Reviews" on the MyHome website. It displays six review cards, each containing a user profile picture, the name "john deo", and a 5-star rating icon. Below the name and rating, there is placeholder text: "Lorem ipsum dolor, sit amet consectetur adipisicing elit. Adipisci voluptates delectus distinctio quam sequi error eum suscipit tempore inventore ex!". The reviews are arranged in two rows of three.

7) Contact us:

Desktop - 7
contact us





This screenshot shows the MyHome dashboard with a 'FAQ' section. The layout is similar to the first one, with a top navigation bar and a central area. The central area features a 'FAQ' heading above six expandable question cards. The questions are: 'how to cancel booking?', 'when will I get the possession?', 'where can I pay the rent?', 'how to contact with the buyers?', 'why my listing not showing up?', and 'how to promote my listing?'. Each card contains placeholder text: 'Lorem ipsum dolor sit amet consectetur adipisicing elit. Repellendus veritatis ducimus aut accusantium sunt error esse laborum cumque ipsum ab.' Below the FAQ section is a footer with contact information (phones, email, address) and links to various sections like 'home', 'about', 'contact', 'all listings', and 'saved properties'. On the far right, there are social media links for Facebook, Twitter, LinkedIn, and Instagram.

8) Dashboard:

Dashboard



MyHome

post property

my listings ▾ options ▾ help ▾

saved account ▾

Dashboard

Welcome!

admin111

[Update Profile](#)

Filter Search

search your dream property

[Search Now](#)

3

properties listed

[View All Listings](#)

3

requests received

[View All Requests](#)

4

requests sent

[View Saved Properties](#)

4

properties saved

[View Saved Properties](#)

123456789

1112223333

[home](#)

[about](#)

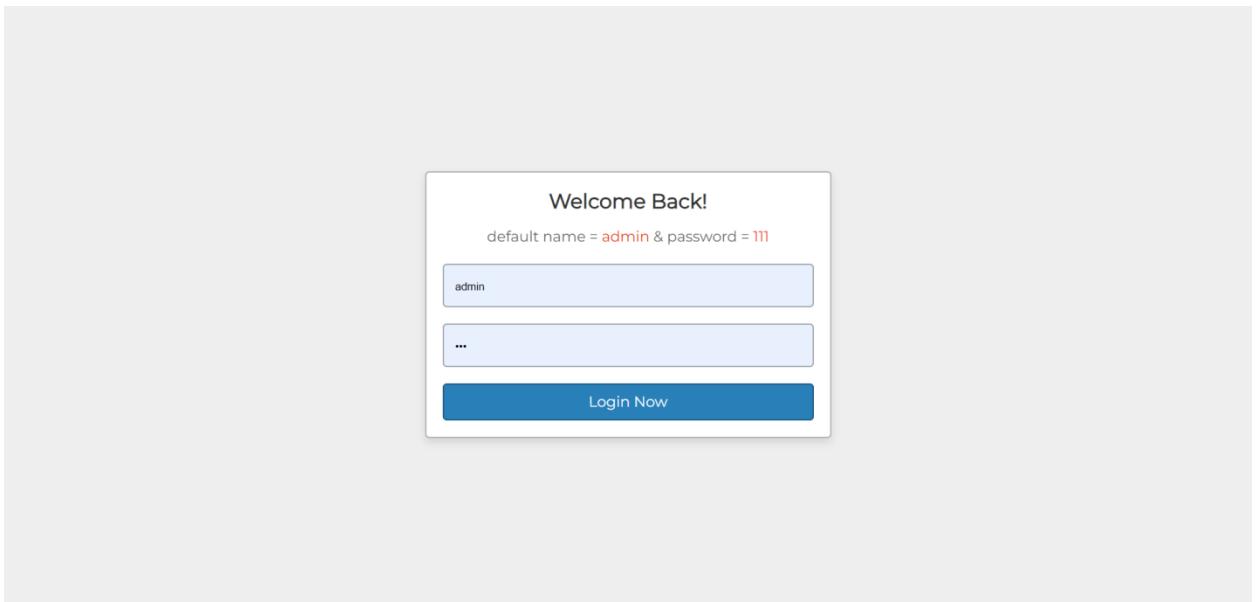
[facebook](#)

[twitter](#)

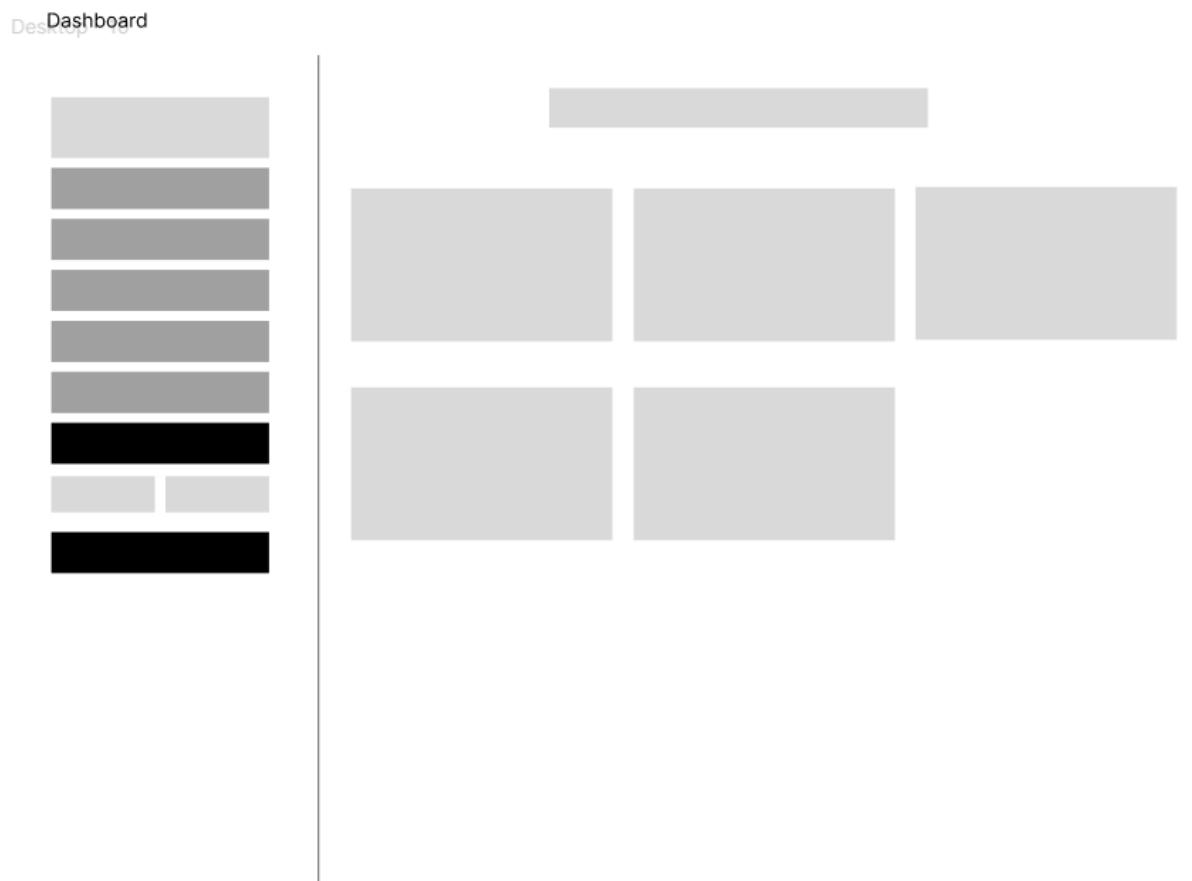
Admin side:

1) Login:



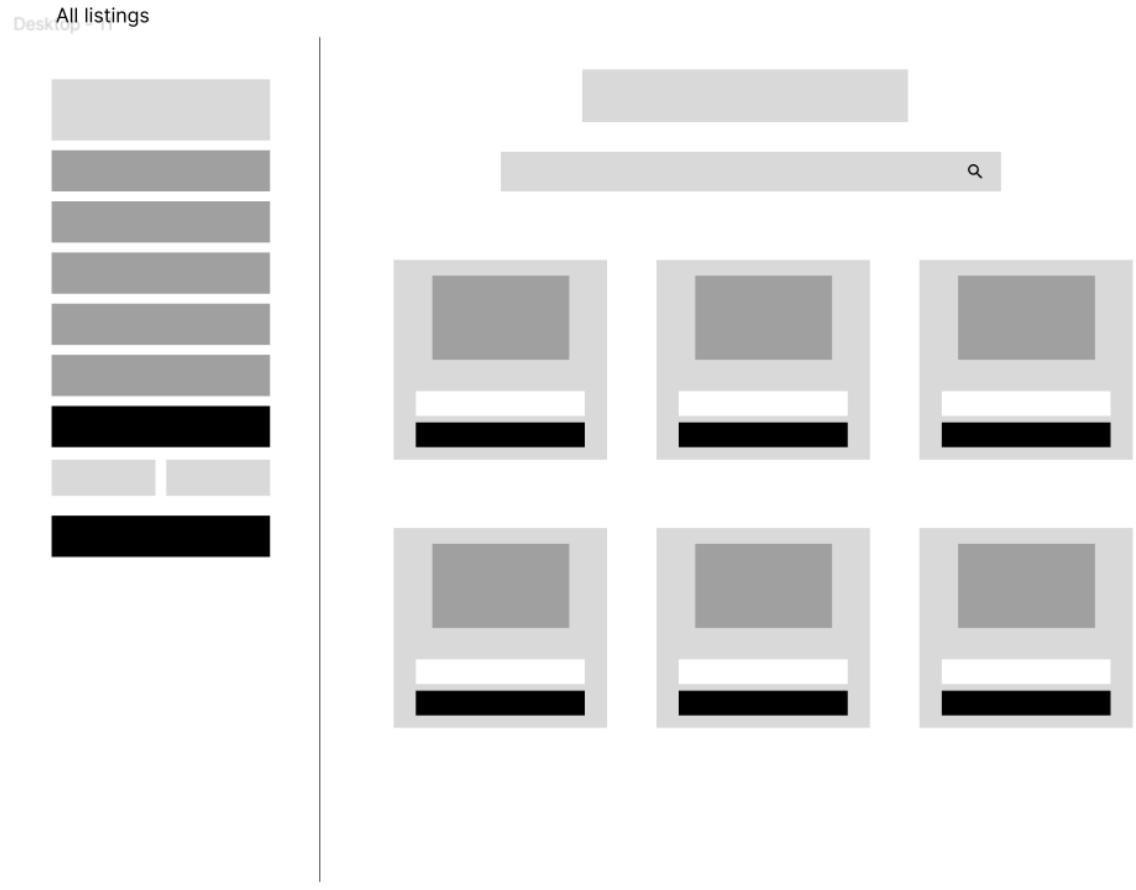


2) Dashboard:



The image shows a split-screen interface. On the left is the 'AdminPanel' sidebar with a dark header and light gray background. It contains a list of navigation items with icons: home (house), listings (list), users (person), admins (person with gear), and messages (chat bubble). Below this is a blue button for 'Update Account'. At the bottom are two orange buttons: 'Login' and 'Register' side-by-side, followed by a larger red 'Logout' button with a right-pointing arrow. On the right is the 'Dashboard' section with a light gray header and white background. It features a grid of four cards. The top-left card says 'welcome!' with 'admin' and a blue 'Update Profile' button. The top-right card has the number '5' above 'property posted' and a blue 'View Listings' button. The bottom-left card has the number '2' above 'total admins' and a blue 'View Admins' button. The bottom-right card has the number '4' above 'new messages' and a blue 'View Messages' button.

3) All listings:-



This screenshot shows the 'AdminPanel' interface. On the left, there is a sidebar with navigation links: 'home' (selected), 'listings', 'users', 'admins', and 'messages'. Below these are buttons for 'Update Account', 'Login' (highlighted in orange), 'Register', and 'Logout'. The main content area is titled 'All Listings' and contains a search bar. Below the search bar are three property listing cards, each with a placeholder image, a price (₹ 5000), a unique identifier (house123456 or house1234567), a location (delhi), and 'View Property' and 'Delete Listing' buttons. At the bottom of the main content area, there are two small images: one of a room interior and one of a logo with the word 'BUY'.

4) Property details:

Des Property details



AdminPanel.

- [home](#)
 - [listings](#)
 - [users](#)
 - [admins](#)
 - [messages](#)
- [Update Account](#)
- [Login](#) [Register](#)
- [Logout](#)

Property Details



details

The screenshot shows the AdminPanel interface. On the left, there's a sidebar with links: home, listings, users, admins, and messages. Below these are buttons for Update Account, Login, Register, and Logout. The main content area is titled "details" and contains the following information:

details

rooms: 1BHK
deposit amount: ₹ 500
status: ready to move
bedroom: 1
bathroom: 1
balcony: 0

carpet area: 1000sqft
age: 4 years
total floors: 1
room floor: 4
furnished: furnished
loan: available

amenities

✓ lifts
✓ security guards
✗ play ground
✗ gardens
✗ water supply
✗ power backup

✗ parking area
✗ gym
✗ shopping mall
✗ hospital
✗ schools
✗ market area

description

beautiful house!!!!

Delete Property

5) Manage users:

The image shows a placeholder for a user management interface. It features a header with the text "Manage users" and a search bar with a magnifying glass icon. Below the header, there are several gray rectangular boxes of varying sizes, some containing smaller gray boxes, which likely represent user profiles or search results.

AdminPanel.

Users

User Details	
name : admin	number : 9090909089
email : admin@gmail.com	properties listed : 1
Delete User	
name : admin111	number : 777777
email : devbhalodia16@gmail.com	properties listed : 0
Delete User	
name : dev	number : 123456789
email : admin@org	properties listed : 0
Delete User	
name : dev bhalodia	number : 1234567890
email : admin111@gmail.com	properties listed : 1
Delete User	
name : dev bhalodia	number : 1234
email : admin11@gmail.com	properties listed : 0
Delete User	
name : admin111	number : 1234
Delete User	

6) Messages:

Messages
Desktop - 14

Message 1	Message 2	Message 3
Message 4	Message 5	Message 6
Message 7	Message 8	Message 9
Message 10	Message 11	Message 12
Message 13	Message 14	

AdminPanel.

- [!\[\]\(20137b0901404e96afbe12e82eed1e70_img.jpg\) home](#)
 - [!\[\]\(1f387dc7563b7c20b7f133e06d247528_img.jpg\) listings](#)
 - [!\[\]\(609e89d316e32710a27507cde67d31a5_img.jpg\) users](#)
 - [!\[\]\(c131063d1bf1663b8919ebd1394793b0_img.jpg\) admins](#)
 - [!\[\]\(d65c279958c54d5224eee04e1781b021_img.jpg\) messages](#)
- [**Update Account**](#)
- [**Login**](#) [**Register**](#)
- [**Logout**](#)

Messages

search messages... 

name : dev
email : dev.b3@ahduni.edu.in
number : 9090909090
message : hello there.
[Delete Message](#)

name : dev bhalodia
email : dev.b3@ahduni.edu.in
number : 9999912345
message : how can i get in touch with the house owner?
[Delete Message](#)

name : dev bhalodia
email : admin@gmail.com
number : 123456
message : its amazing
[Delete Message](#)

name : admin
email : dev.b3@ahduni.edu.in
number : 123456
message : you have listed great properties.
[Delete Message](#)