Real Estate Management

CS254 - Database Systems Lab

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29.03.2024

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Introduction

Introducing our user-friendly PHP property management system, designed to simplify sales and rentals. This platform stores vital information on properties, buyers, sellers, agents, and builders. With an easy-to-use interface and admin panel, users can register and search for properties by state effortlessly.Our system features a powerful search function, displaying detailed property information like name, location, price, features, images, and floor plans. It also connects potential buyers with sellers by showing contact details alongside property descriptions. With its simplicity and efficiency, our PHP system revolutionizes property management, making transactions smoother for everyone involved in the process.

Literature Survey:

1.REAL ESTATE MANAGEMENT SYSTEM (2023)

The project implements a real-time property management system leveraging IoT and cloud computing. It employs IoT sensors for continuous monitoring of environmental conditions and security status. Data from these sensors are transmitted to the cloud for storage and analysis, enabling instant access to actionable insights for property owners/managers. This approach aims to enhance efficiency and decision-making in property management through seamless integration of IoT and cloud technologies.

2.PROPERTY MANAGEMENT SYSTEM (2020)

The Property Management System represents a paradigm shift in property administration solutions, boasting an array of features including seamless property listing, efficient tenant management, and robust financial tracking. With its user-friendly interface and emphasis on operational efficiency and transparency, this system serves as a centralized platform for property owners, tenants, and administrators to navigate property-related tasks with utmost ease and efficacy.

3.REAL ESTATE MANAGEMENT INFORMATION SYSTEM (REMIS)

REMIS (Real Estate Management Information System) offers a standardized, automated platform for managing real estate assets for the U.S. Army Corps of Engineers. It facilitates property management tasks such as leasing, acquisition, and disposal, providing

comprehensive oversight and control. REMIS enhances efficiency and accountability by centralizing property data and streamlining administrative processes for property owners and executive agents.

4.REAL ESTATE MANAGEMENT SYSTEM (2021)

The project report meticulously delineates the development journey of an innovative Real Estate Management System, elucidating its intricate system architecture, design principles, and implementation strategies. Emphasizing its pivotal role in augmenting operational efficiency and transparency in property administration, the report serves as a formal documentation of the project's objectives, methodologies, and outcomes, offering invaluable insights for understanding the system's evolution and potential applications.

Objectives and Features:

Objectives:

- Develop a PHP-based property management system for sales and rentals, focusing on streamlining operations related to properties, buyers, sellers, agents, and builders.

- Provide an admin panel and user-friendly interface for efficient management and accessibility.

- Enable user registration and facilitate property searches by state, displaying detailed property information including name, location, price, features, images, and floor plans.

- Connect potential buyers with sellers by displaying contact details alongside property descriptions to streamline communication and transactions.

Features:

- Admin Panel:

  An administrator has full control over the system. He/she can manage all the users, states and cities, properties, and so on. Here, each and every section has its own respective details such as name, and other important details. Here, an admin can list out a number of registered users with their levels.

- Client Side:
  Clients can be an agent, buyer or an owner. His dashboard will be visible with the number of properties he/she has listed.

- Registration Page:
  This page has separate registration for clients, agents and users. This prompts them to give the required information and store it in the database.

- Property Details Submission Page:
  This enables a buyer to submit a property that has to be enlisted for selling.

- Search Properties:
  This enables clients and agents to search for the properties in a particular area/location.

- Seller Details:
  This page shows all the relevant details of the sellers who have listed the property

- Agent Section:
  This includes the details of the agent and the firm under which he is working.

Requirements and Specifications:

I. Front End

HTML, CSS, JavaScript and BootStrap

II. Back End

MySQL and PHP

III. Non-normalized ER & Schema Diagrams

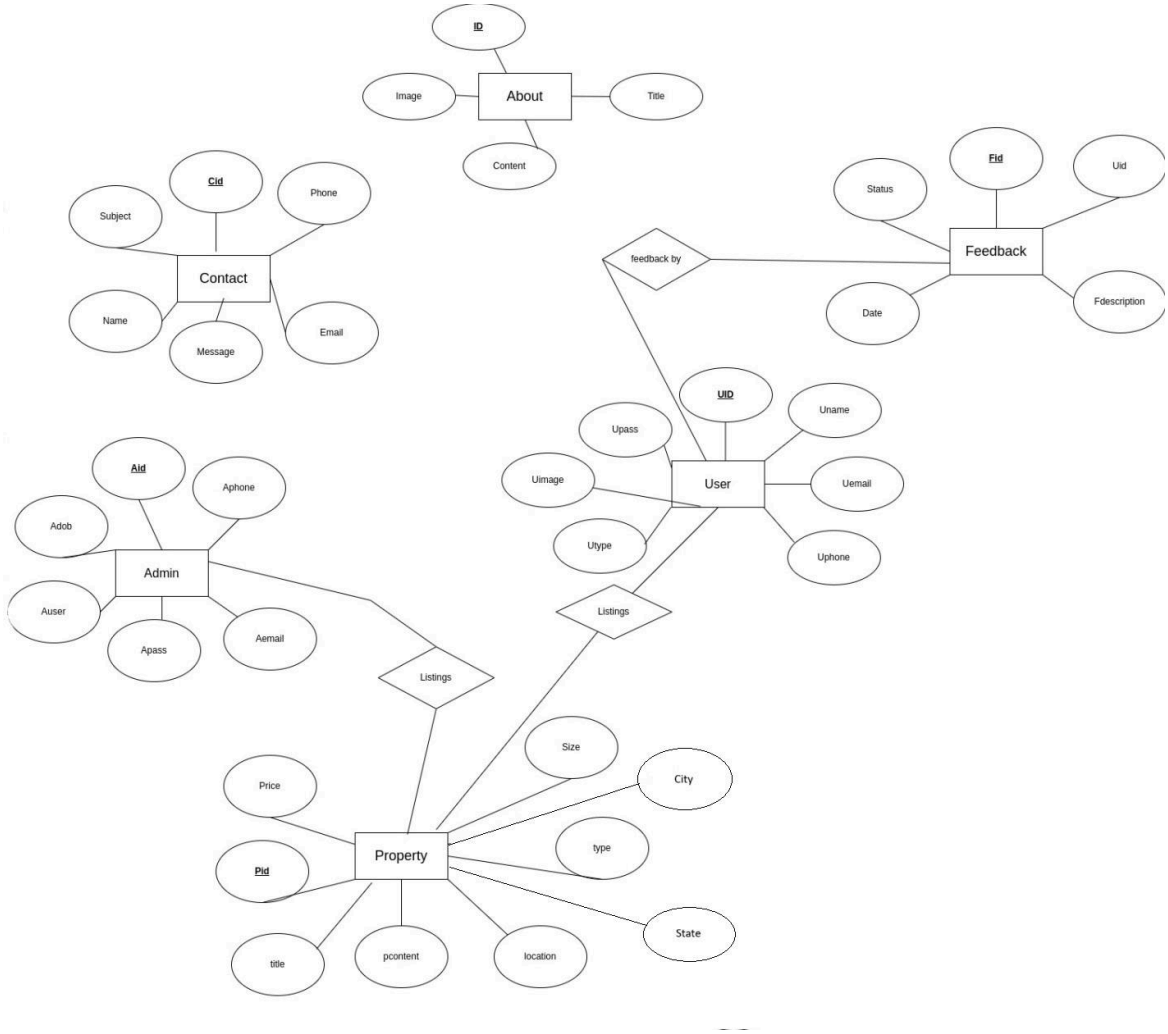


Fig 1. Un-normalized ER Diagram

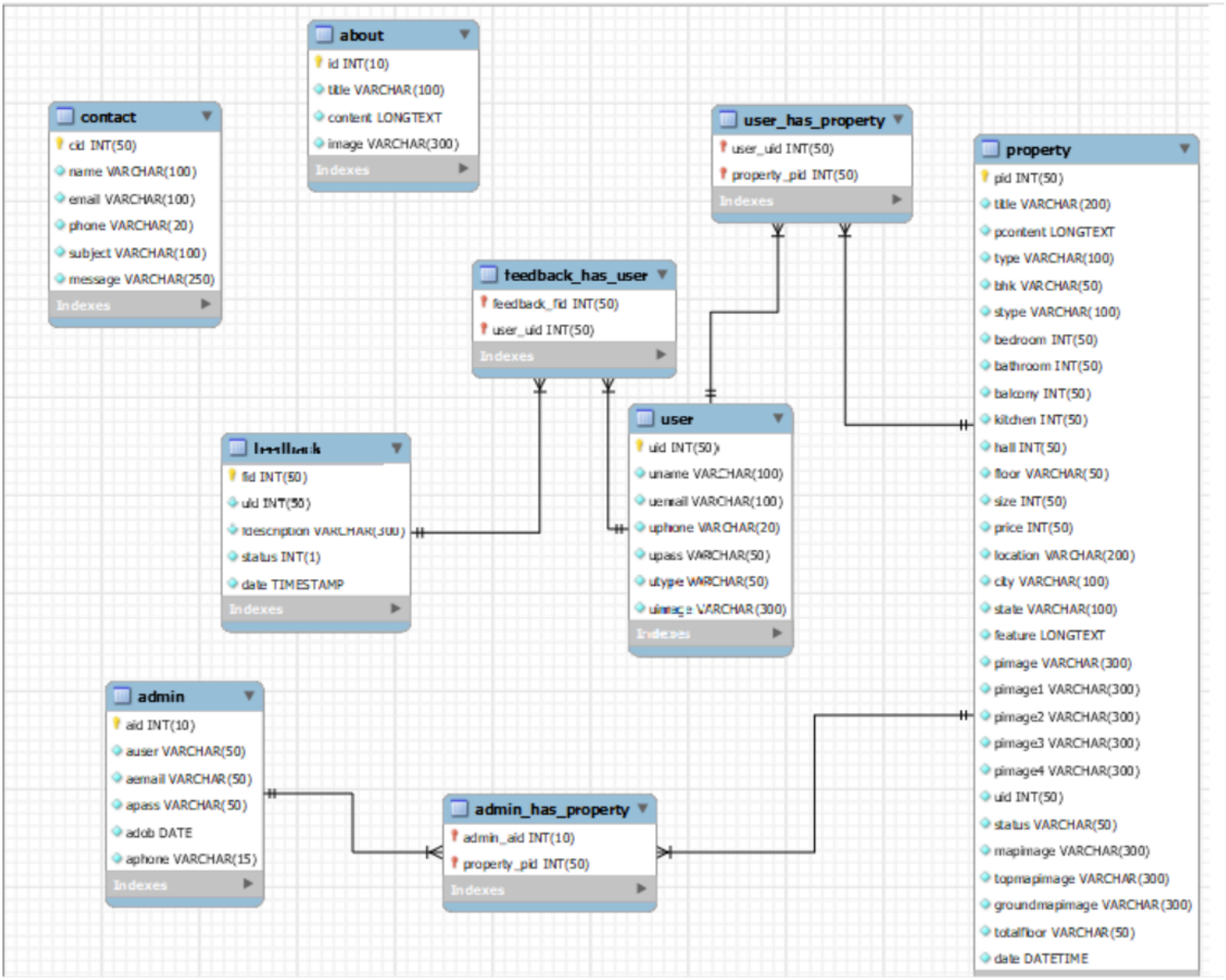


Fig 2. Non-normalized Schema Diagram

IV. Normalized ER & Schema Diagram

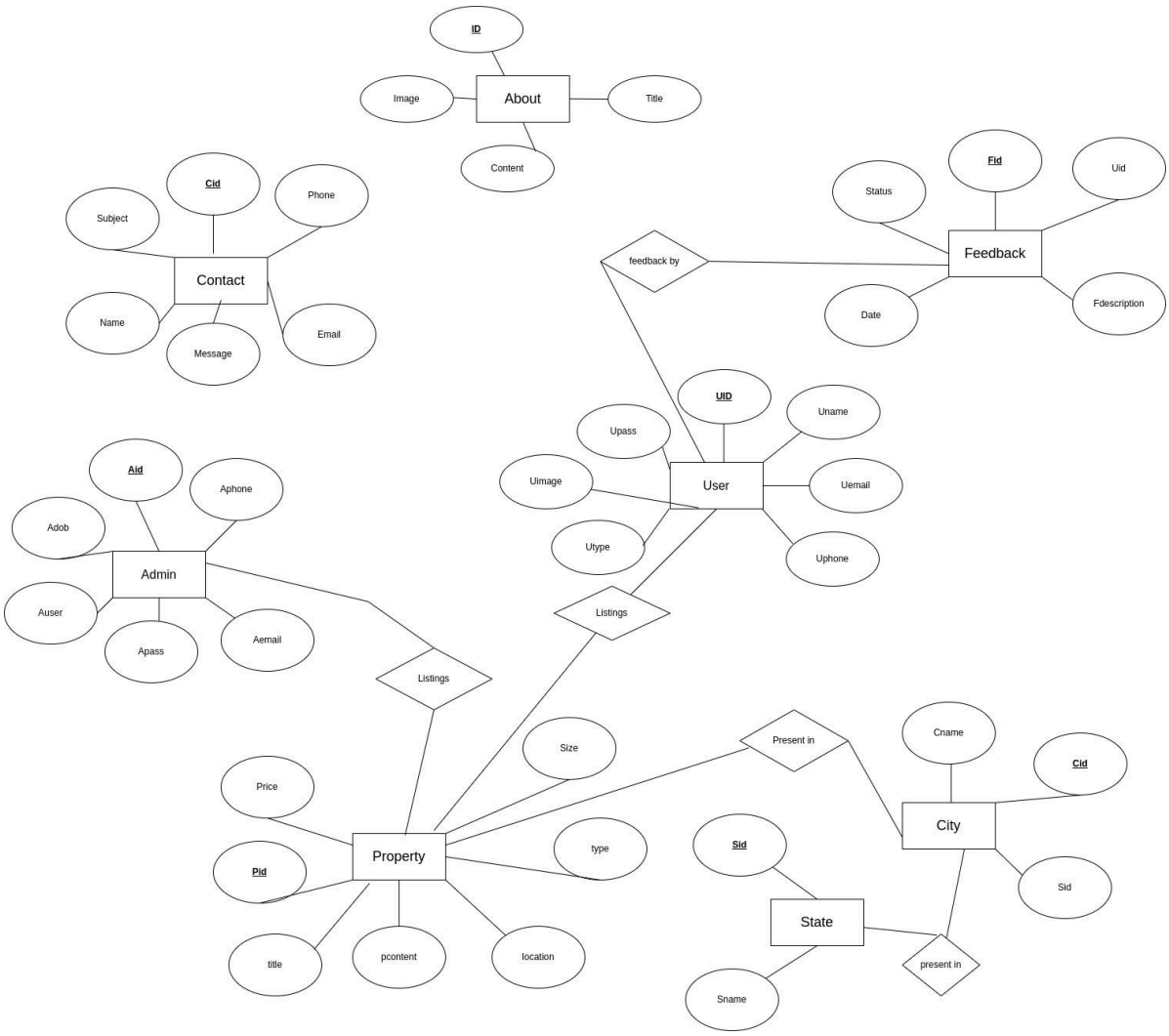


Fig 3. Normalized ER Diagram

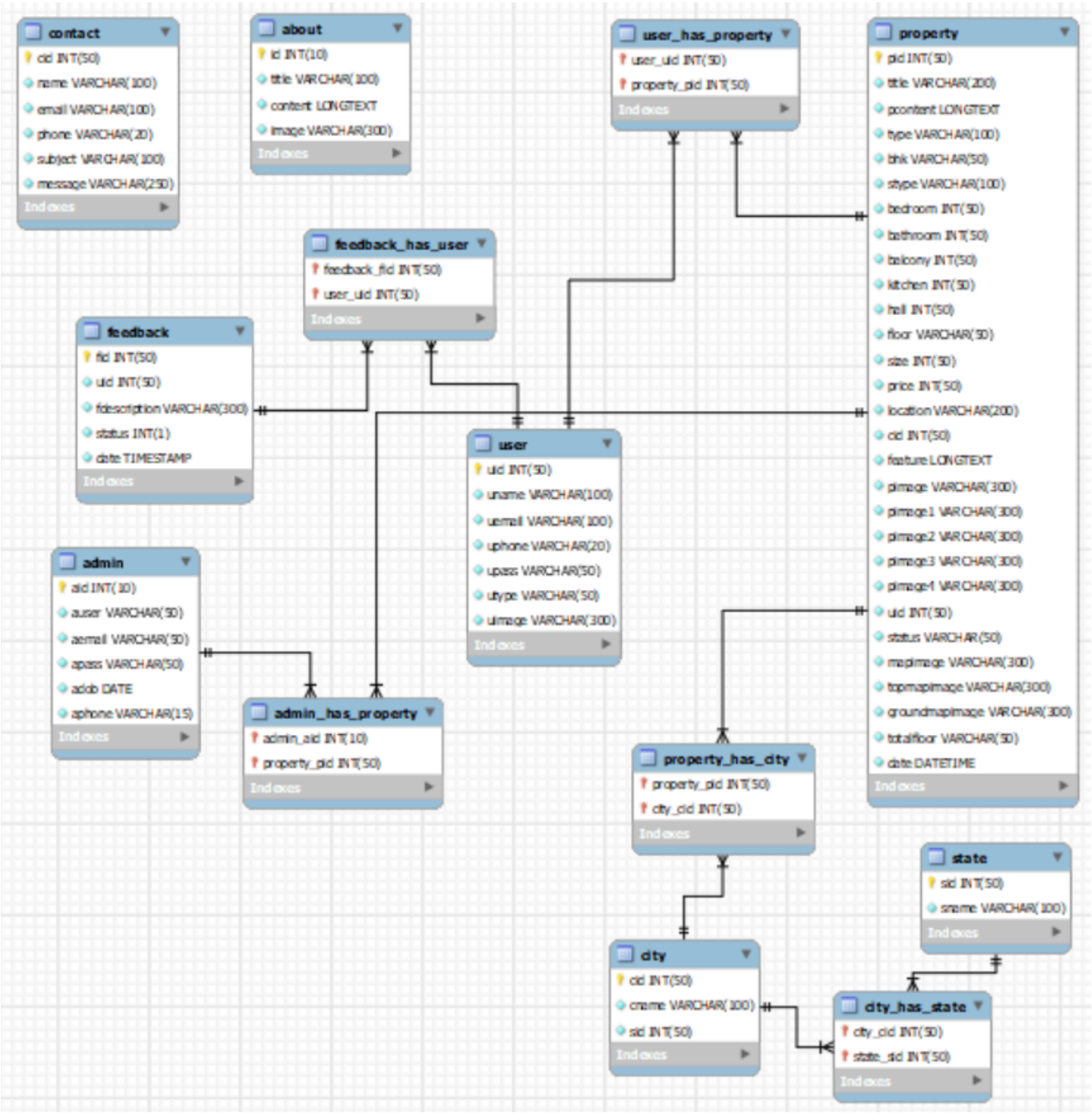


Fig 4. Normalized Schema Diagram

V. Tables

id	title	content	image
10	About Our Company	<div id="pgc-w5d0dcc3394ac1-0-0" class="panel-grid...	condos-pool.png

Fig 65. About Table

aid	auser	aemail	apass	adob	aphone
2	Vaibhav	vaibhav@gmail.com	vaibhav	1999-02-02	9689689698
6	final	final@gmail.com	final	2020-04-29	7979656578
7	test	test@gmail.com	test	2020-04-29	8997979765
8	check	check@gmail.com	check	2020-04-29	8979785688
9	admin	admin@gmail.com	admin	1999-12-06	9878786545

Fig 6. Admin Table

cid	cname	sid
9	navi mumbai	3
10	vapi	2
11	valsad	2

Fig 7. City Table

cid	name	email	phone	subject	message
2	demo	demo@gmail.com	9765989689	demo	demo
4	test	test@gmail.com	7976976979	test	test
5	final	final@gmail.com	7697967967	final	final
6	vaibhav	vaibhav@gmail.com	7898797696	demo	demo
7	Vaibhav	anurag@gmail.com	1234556799	Want to buye	Hello worlld
8	Vaibhav	Anurag	123456789	Want to buy	Lorem ipsum dolor sit amet,

Fig 8. Contact Table

fid	uid	fdescription	status	date
2	15	Makaan made my life easy. It helped me with the se...	1	2024-03-28
3	18	I am young professional, Makaan search helped me i...	1	2024-03-28
4	21	I was looking for a flat in Andheri and Makaan web...	1	2024-03-28
5	23	The constant touch through other true calls really...	1	2024-03-28
6	24	I moved to Mumbai from Delhi early this year and I...	0	2024-03-28

Fig 9. Feedback Table

pid	title	pcontent	type	bhk	stype	bedroom	bathroom	balcony	kitchen	hall	floor	size	price	location	city	state	feature	pimage	pimage1	pimage2	pimage3	pimage4	uid	status	mapimage	topmapimage	groundmapimage	totalfloor	date
11	final	Lorem ipsum dolor sit amet, consectetur adipisc...	office	2 BHK	sale	1	2	3	4	5	3rd Floor	4321	897898	sabji market main road	valsad	Mumbai	 <ul> ...	1.jpg	2.jpg	3.jpg	4.jpg	5.jpg	15	sold out					2024-03-03 00:28:14
13	Shubhang	Lorem ipsum dolor sit amet, consectetur adipiscing...	bunglow	2 BHK	rent	3	2	2	1	1	4th Floor	321	987898	main road chala near dominos pizza	navsari	Karnataka	 <ul> ...	111.jpg	222.jpg	333.jpg	444.jpg	555.jpg	16	available					2024-03-03 00:28:14
14	Vaibhav	Lorem ipsum dolor sit amet, consectetur adipiscing...	flat	3 BHK	rent	3	2	2	1	1	2nd Floor	3241	9878987	Near NITK	Surathkal	Karnataka	 <ul> ...	1.jpg	2.jpg	3.jpg	4.jpg	5.jpg	15	available					2024-03-03 00:40:04
15	New	Lorem ipsum dolor sit amet, consectetur adipisc...	apartment	2 BHK	rent	2	2	1	1	1	2nd Floor	1500	1556000	Main road vapi market	ranchi	jharkhand	 <ul> ...	01.jpg	02.jpg	03.jpg	04.jpg	05.jpg	15	available					2024-03-03 14:45:49
17	Tulsi Niwas	Lorem ipsum dolor sit amet, consectetur adipiscing...	flat	2 BHK	rent	2	2	1	1	1	2nd Floor	1500	1550000	Akhdar	near gupta store	Madhya Pradesh	 <!--feature area start--> <div c...	01.jpg	02.jpg	03.jpg	04.jpg	05.jpg	21	available					2024-03-03 17:47:40
19	testing	testing testing testing testing testing testing...	flat	2 BHK	sale	2	2	1	1	1	3rd Floor	1250	1500000	testing	valsad	gujarat	 <!--feature area start--> <div c...	11.jpg	22.jpg	33.jpg	44.jpg	55.jpg	15	available	house-floor-plan.png				2024-03-03 20:12:30
20	Niramala Apartment	Lorem ipsum dolor sit amet, consectetur adipisc...	office	1,2 BHK	rent	99	88	77	66	55	5th Floor	1111	9999500	boiser road near dmart	virar	karnataka	 <!--feature area start--> <div c...	01.jpg	02.jpg	03.jpg	04.jpg	05.jpg	15	available	floor.jpg	basement.jpg	ground.jpg	12 Floor	2024-03-03 20:30:30
22	Shanti Apartment	Lorem ipsum dolor sit amet, consectetur adipisc...	bungalow	3 BHK	sale	3	2	1	1	1	2nd Floor	1950	4550467	main market near swami school	bhilad	rajasthan	 <!--feature area start--> <div c...	1.jpg	2.jpg	3.jpg	4.jpg	5.jpg	16	sold out	floor1.png	basement1.jpg	ground1.jpg	2 Floor	2024-03-04 01:38:36
23	gnfx	mhfc	appartment	2 BHK	rent	2	2	2	2	1	1st Floor	5000	23452	Ayodhyapuri, Kokar, Near shri shiv duraga mandir	RANCHI	JHARKHAND	 <!--feature area start--> <div c...	download.jpg	download.jpg	download.jpg	download.jpg	download.jpg	29	available	download.jpg	download.jpg	download.jpg	1 Floor	2024-03-28 18:45:41
24	Sai Palace		appartment	3 BHK	rent	2	2	1	1	1	5th Floor	2500	20000	Whitefield	Bengaluru	Karnataka	 <!--feature area start--> <div c...	r-architecture-2gDwIlim3Uw-unsplash.jpg	nastuh-abootalebi-Jdc3nI6xD2k-unsplash.jpg	jason-briscoe-AQI-J19kcWE-unsplash.jpg	kara-eads-L7EwHkq1B2s-unsplash.jpg	r-architecture-2gDwIlim3Uw-unsplash.jpg	21	available	download.png	download.png	download (1).jpg	2 Floor	2024-03-28 23:46:32

Fig 10. Property Table

sid	sname
2	gujarat
3	goa
4	maharashtra
7	bihar
9	chhattisgarh
10	uttar pardesh
15	rajasthan

Fig 11. State Table

uid	uname	uemail	uphone	upass	utype	uimage
15	Rishabh	rishabh@gmail.com	9878678678	rishabh	agent	2.jpg
16	demo	demo@gmail.com	7976976979	demo	user	1.jpg
21	Vaibhav	vaibhav@gmail.com	7976956956	vaibhav	creator	1.jpg
22	Vaibhav	vaibhav1@gmail.com	8997897869	vaibhav	agent	1.jpg
23	Shubhang	shubhang@gmail.com	9869596597	shubhang	builder	1.jpg
24	some	some@gmail.com	9689698697	some	builder	3.jpg
25	test	test12@gmail.com	9798678969	test	builder	avatar-3.jpg
28	Vaibhav	anurag@gmail.com	1234567890	12345	user	DC solution (1).
29	shu	shu@shu	1234	1234	user	arp_sniffer.py

Fig 12. User Table

How Nomarlisation Process was done

To explain normalization up to the Second Normal Form (2NF), let's use a simplified example related to

our property management. Normalization is a process in database design to organize data to reduce redundancy and improve data integrity.

#Starting Point: Unnormalized Table

we have an unnormalized table that stores property details, including property ID, property type (e.g., apartment, villa), admin handling the property, and the admin's contact information.

PropertyID	PropertyType	adminName	adminContact
1	Apartment	John Doe	123-456-7890
2	Villa	Jane Doe	098-765-4321
3	Apartment	John Doe	123-456-7890

This table has several issues:

- Redundancy admin information is repeated, which is unnecessary and could lead to inconsistencies.

- Update Anomalies: If an admin's contact information changes, it needs to be updated in multiple places.

- Insertion Anomalies: If a new admin joins without being assigned a property yet, we cannot add them to this table without null entries for property fields.

- Deletion Anomalies: Deleting all properties handled by an admin would also remove the admin's details from the database.

First Normal Form (1NF)

To achieve 1NF, we need to ensure the table has a primary key, and all values are atomic (indivisible).

1. Primary Key: We already have `PropertyID` as a unique identifier for each property.

2. Atomic Values: Our table's values are atomic.

The original table is already in 1NF as each field contains only atomic values, and there is a primary key (`PropertyID`).

Second Normal Form (2NF)

For a table to be in 2NF, it must first be in 1NF, and it must not have any partial dependency. Partial dependency means that a non-primary key column is dependent on part of a composite primary key.

Since our table only has a single-column primary key, we need to focus on removing any functional dependency where a non-key column is dependent on another non-key column. In our example, `adminName` and `adminContact` are dependent on each other but not on `PropertyID` directly.

To achieve 2NF, we split the table into two tables to eliminate redundancy and partial dependency:

Table 1: Property Details

PropertyID	PropertyType	adminID
1	Apartment	A1
2	Villa	A2
3	Apartment	A1

Table 2: Admin Table

adminID	adminName	adminContact
A1	John Doe	123-456-7890
A2	Jane Doe	098-765-4321

- Property Details table connects properties to admins through `adminID`.

- Contact table stores admins' information, eliminating redundancy and making updates or deletions more straightforward, without affecting property data.

By splitting the table, we've:

- Reduced redundancy by normalizing the admin information into a separate table.

- Eliminated partial dependencies, as all attributes in each table are now fully functionally dependent on the primary key of their respective table.

This structure now satisfies the requirements of 2NF.

Implementation:

Frontend

1. HTML (HyperText Markup Language):

- Function: Defines the structure and content of a webpage.
- Imagine: The skeleton of your webpage, outlining the content sections.
- Key Points:
    - Easy to learn with basic tags for headings, paragraphs, images, etc.
    - Provides the foundation for a webpage's content organization.
    - Not for styling or interactivity (needs CSS and JavaScript for that).

- Benefits:
    - Easy to Learn: HTML has a relatively simple syntax with well-defined tags, making it a good starting point for web development.
    - Cross-Platform Compatibility: HTML code is generally interpreted by all web browsers, ensuring your webpage displays consistently across different devices.
    - Semantic Meaning: Modern HTML uses semantic tags to define the meaning of content (e.g., <h1> for main heading, <p> for paragraph). This helps with search engine optimization (SEO) and accessibility.

2. CSS (Cascading Style Sheets):

- Function: Controls the visual presentation (styling) of a web page built with HTML.
- Imagine: The clothing and makeup for your webpage's skeleton (HTML).
- Key Points:
    Defines styles for fonts, colors, layouts, backgrounds, and more.
    Makes your web page visually appealing and consistent.
    Offers flexibility to create unique website designs.
- Benefits:
    - Separation of Concerns: Separating HTML (structure) from CSS (styling) makes code more maintainable and reusable.

- Flexibility and Customization: CSS offers a wide range of styles to create unique and visually appealing web experiences.
- Responsive Design: CSS allows you to create responsive layouts that adapt to different screen sizes (important for mobile-friendly websites).

3. JavaScript:

- Function: Adds interactivity and dynamic behavior to your webpage.
- Imagine: The brain and nervous system of your webpage, bringing it to life.
- Key Points:

  Enables user interaction with buttons, forms, animations, etc.
  Makes your webpage more engaging and user-friendly.
  A powerful language for complex web applications.

- Benefits:
  - Enhanced User Experience: JavaScript makes webpages more engaging and interactive, keeping users interested.
  - Dynamic Content: Webpages can update content without reloading the entire page, providing a smoother user experience.
  - Complex Functionality: JavaScript is powerful enough to create complex web applications and single-page applications (SPAs).

➔ Together for Frontend Development:

- These three work together to create the user interface (UI) of a website.
- Typical Workflow:
  1. HTML: Structure the content with headings, paragraphs, images, etc.
  2. CSS: Style the web page with fonts, colors, layouts, etc. based on the HTML structure.
  3. JavaScript: Add interactivity and dynamic behavior to enhance the user experience.

Backend

1. PHP (Hypertext Preprocessor):

- Function: A server-side scripting language used to create dynamic and interactive web pages.
- Imagine: The engine room of your website, processing user requests and generating content.
- Key Points:
    - Runs on the web server and generates HTML content before sending it to the user's browser.
    - Can access and manipulate data from databases like MySQL.
    - Used for tasks like user authentication, form processing, session management, and building complex web applications.

2. MySQL:

- Function: A popular open-source relational database management system (RDBMS).
- Imagine: A structured storage facility for your website's data, like user information, products, or blog posts.
- Key Points:
    - Stores data in tables with rows and columns, allowing for efficient organization and retrieval.
    - Uses SQL (Structured Query Language) to interact with the database (insert, update, delete, and query data).
    - Integrates with PHP to create dynamic web applications that can access and manage data effectively.

Working Together:

PHP and MySQL form a powerful combination for building dynamic websites and web applications:

1. *User interacts with the webpage.*
2. *The user's request is sent to the web server.*
3. *PHP script on the server processes the request.*
4. *PHP script may connect to the MySQL database (if needed).*

- It can retrieve data from specific tables based on user input or application logic.
- It can also update or insert data into the database.

5. *PHP script generates HTML content that is dynamically built based on the data or processing.*
6. *The generated HTML content is sent back to the user's browser.*
7. *The user's browser displays the dynamic webpage.*

Benefits of using PHP and MySQL:

- Dynamic and Interactive Websites: PHP and MySQL enable you to create webpages that change based on user input, database data, or other factors.
- Scalability: They can handle small websites or large-scale web applications with efficient data management.
- Open-Source and Cost-Effective: Both PHP and MySQL are open-source technologies, making them free to use and accessible to many developers.

Code snippets

1.mysql

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| assign             |
| developers         |
| endsem             |
| information_schema |
| mysql              |
| performance_schema |
| project            |
| sys                |
+--------------------+
8 rows in set (0.00 sec)

mysql> use projects
ERROR 1049 (42000): Unknown database 'projects'
mysql> use project;
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql>
mysql> --
mysql> -- Database: `developers`
mysql> --
),
mysql> CREATE DATABASE IF NOT EXISTS `developers` DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_general_ci;
Query OK, 1 row affected, 1 warning (0.01 sec)

mysql> USE `developers`;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql>
mysql> -- ----------------------------------------------------------
mysql>
mysql> --
mysql> -- Table structure for table `about`
mysql> --
mysql>
mysql> DROP TABLE IF EXISTS `about`;
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE `about` (
    ->   `id` int(10) NOT NULL,
    ->   `title` varchar(100) NOT NULL,
    ->   `content` longtext NOT NULL,
    ->   `image` varchar(300) NOT NULL
    -> ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
Query OK, 0 rows affected, 1 warning (0.02 sec)

mysql>
```

```
mysql> --
mysql> -- Dumping data for table `state`
mysql> --
mysql>
mysql> INSERT INTO `state` (`sid`, `sname`) VALUES
    -> (2, 'gujarat'),
    -> (3, 'goa'),
    -> (4, 'maharashtra'),
    -> (7, 'bihar'),
    -> (9, 'chhattisgarh'),
    -> (10, 'uttar pardesh'),
    -> (15, 'rajasthan');
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql>
mysql> -- ----------------------------------------------------
mysql>
mysql> --
mysql> -- Table structure for table `user`
mysql> --
mysql>
mysql> DROP TABLE IF EXISTS `user`;
Query OK, 0 rows affected (0.01 sec)

mysql> CREATE TABLE `user` (
    ->   `uid` int(50) NOT NULL,
    ->   `uname` varchar(100) NOT NULL,
    ->   `uemail` varchar(100) NOT NULL,
    ->   `uphone` varchar(20) NOT NULL,
    ->   `upass` varchar(50) NOT NULL,
    ->   `utype` varchar(50) NOT NULL,
    ->   `uimage` varchar(300) NOT NULL
    -> ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql>
mysql> --
mysql> -- Dumping data for table `user`
mysql> --
mysql>
mysql> INSERT INTO `user` (`uid`, `uname`, `uemail`, `uphone`, `upass`, `utype`, `uimage`) VALUES
    -> (14, 'admin', 'admin@gmail.com', '9876543210', 'admin', 'user', '3.jpg'),
    -> (15, 'rishabh', 'rishabh@gmail.com', '9878678678', 'rishabh', 'agent', '2.jpg'),
    -> (16, 'demo', 'demo@gmail.com', '7976976979', 'demo', 'user', '1.jpg'),
    -> (21, 'vaibhav', 'vaibhav@gmail.com', '7976956956', 'vaibhav', 'agent', '2.jpg'),
    -> (22, 'vaibhav', 'vaibhav1@gmail.com', '8997897869', 'vaibhav', 'agent', '1.jpg'),
    -> (23, 'testing', 'testing@gmail.com', '9869596597', 'testing', 'builder', '1.jpg'),
```

```
mysql>
mysql> --
mysql> -- Indexes for table `contact`
mysql> --
mysql> ALTER TABLE `contact`
    ->   ADD PRIMARY KEY (`cid`);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> --
mysql> -- Indexes for table `feedback`
mysql> --
mysql> ALTER TABLE `feedback`
    ->   ADD PRIMARY KEY (`fid`);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> --
mysql> -- Indexes for table `property`
mysql> --
mysql> ALTER TABLE `property`
    ->   ADD PRIMARY KEY (`pid`);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> --
mysql> -- Indexes for table `state`
mysql> --
mysql> ALTER TABLE `state`
    ->   ADD PRIMARY KEY (`sid`);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> --
mysql> -- Indexes for table `user`
mysql> --
mysql> ALTER TABLE `user`
    ->   ADD PRIMARY KEY (`uid`);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for dumped tables
mysql> --
mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `about`
mysql> --
```

```
mysql> --
mysql> ALTER TABLE `city`
    ->   MODIFY `cid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=13;
Query OK, 3 rows affected, 1 warning (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 1

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `contact`
mysql> --
mysql> ALTER TABLE `contact`
    ->   MODIFY `cid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=7;
Query OK, 4 rows affected, 1 warning (0.04 sec)
Records: 4  Duplicates: 0  Warnings: 1

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `feedback`
mysql> --
mysql> ALTER TABLE `feedback`
    ->   MODIFY `fid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=9;
Query OK, 5 rows affected, 1 warning (0.04 sec)
Records: 5  Duplicates: 0  Warnings: 1

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `property`
mysql> --
mysql> ALTER TABLE `property`
    ->   MODIFY `pid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=23;
Query OK, 0 rows affected, 1 warning (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `state`
mysql> --
mysql> ALTER TABLE `state`
    ->   MODIFY `sid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=16;
Query OK, 7 rows affected, 1 warning (0.05 sec)
Records: 7  Duplicates: 0  Warnings: 1

mysql>
mysql> --
mysql> -- AUTO_INCREMENT for table `user`
mysql> --
mysql> ALTER TABLE `user`
    ->   MODIFY `uid` int(50) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=28;
Query OK, 8 rows affected, 1 warning (0.05 sec)
Records: 8  Duplicates: 0  Warnings: 1

mysql> COMMIT;
Query OK, 0 rows affected (0.00 sec)

mysql>
```

2. PHP

```
.box_bg_style 11 {
}
/*==================================================================
4. Color Setting css
==================================================================*/
.on-panel {
    height: 45px;
    left: -45px;
    position: absolute;
    top: 0;
    width: 45px;
    cursor: pointer;
}
.color-panel {
    position: fixed;
    right: -225px;
    top: 140px;
    z-index: 999;
    -webkit-transition: all 500ms ease-in-out;
    -ms-transition: all 500ms ease-in-out;
    -o-transition: all 500ms ease-in-out;
    -moz-transition: all 500ms ease-in-out;
    transition: all 500ms ease-in-out
}
.color-panel.open {
    right: 0
}
.on-panel {
    height: 45px;
    left: -45px;
    position: absolute;
    top: 0;
    width: 45px;
    cursor: pointer
}
.on-panel img {
    padding: 10px
}
.panel-box, .switcher_layout, .box_bg_style {
    padding: 14px 10px 14px 20px;
```

```
<?php
ini_set('session.cache_limiter','public');
session_cache_limiter(false);
session_start();
include("config.php");

?>
<!DOCTYPE html>
<html lang="en">

<head>
<!-- Required meta tags -->
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

<!-- Meta Tags -->
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<link rel="shortcut icon" href="images/favicon.ico">

<!--    Fonts
    ========================================================-->
<link href="https://fonts.googleapis.com/css?family=Muli:400,400i,500,600,700&amp;display=swap" rel="stylesheet">
<link href="https://fonts.googleapis.com/css?family=Comfortaa:400,700" rel="stylesheet">

<!--    Css Link
    ========================================================-->
<link rel="stylesheet" type="text/css" href="css/bootstrap.min.css">
<link rel="stylesheet" type="text/css" href="css/bootstrap-slider.css">
<link rel="stylesheet" type="text/css" href="css/jquery-ui.css">
<link rel="stylesheet" type="text/css" href="css/layerslider.css">
<link rel="stylesheet" type="text/css" href="css/color.css" id="color-change">
<link rel="stylesheet" type="text/css" href="css/owl.carousel.min.css">
<link rel="stylesheet" type="text/css" href="css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="fonts/flaticon/flaticon.css">
<link rel="stylesheet" type="text/css" href="css/style.css">

<!--    Title
    ========================================================-->
```

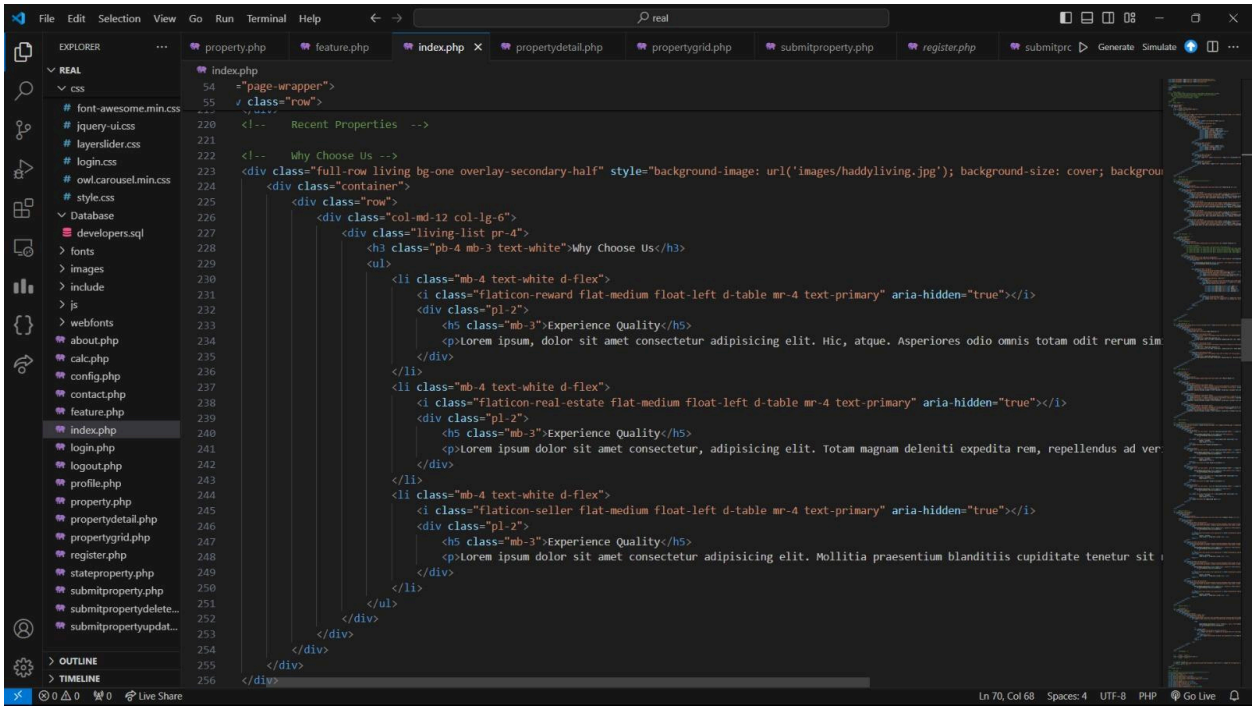
```
<!--    Page Loader  -->

<div id="page-wrapper">
    <div class="row">
        <!--    Header start  -->
        <?php include("include/header.php");?>
        <!--    Header end  -->

        <!--    Banner Start   -->
        <div class="overlay-black w-100 slider-banner1 position-relative" style="background-image: url('images/banner/04.jpg'); background-size: cov
            <div class="container h-100">
                <div class="row h-100 align-items-center">
                    <div class="col-lg-12">
                        <div class="text-white">
                            <h1 class="mb-4"><span class="text-primary">Find</span><br>
                                Your dream house</h1>
                            <form method="post" action="propertygrid.php">
                                <div class="row">
                                    <div class="col-md-6 col-lg-2">
                                        <div class="form-group">
                                            <select class="form-control" name="type">
                                                <option value="">Select Type</option>
                                                <option value="appartment">Apartment</option>
                                                <option value="flat">Flat</option>
                                                <option value="bunglow">Bungalow</option>
                                                <option value="house">House</option>
                                                <option value="villa">Villa</option>
                                                <option value="office">Office</option>
                                            </select>
                                        </div>
                                    </div>
                                    <div class="col-md-6 col-lg-2">
                                        <div class="form-group">
                                            <select class="form-control" name="stype">
                                                <option value="">Select Status</option>
                                                <option value="rent">Rent</option>
                                                <option value="sale">Sale</option>
                                            </select>
                                        </div>
```

```
<div id="page-wrapper">
    <div class="row">
        <!--    Banner End  -->

        <!--    Text Block One
        ==========================================================-->
        <div class="full-row bg-gray">
            <div class="container">
                <div class="row">
                    <div class="col-lg-12">
                        <h2 class="text-secondary double-down-line text-center mb-5">What We Do</h2></div>
                    </div>
                    <div class="text-box-one">
                        <div class="row">
                            <div class="col-lg-3 col-md-6">
                                <div class="p-4 text-center hover-bg-white hover-shadow rounded mb-4 transation-3s">
                                    <i class="flaticon-rent text-primary flat-medium" aria-hidden="true"></i>
                                    <h5 class="text-secondary hover-text-primary py-3 m-0"><a href="#">Selling Service</a></h5>
                                    <p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Atque, minus.</p>
                                </div>
                            </div>
                            <div class="col-lg-3 col-md-6">
                                <div class="p-4 text-center hover-bg-white hover-shadow rounded mb-4 transation-3s">
                                    <i class="flaticon-for-rent text-primary flat-medium" aria-hidden="true"></i>
                                    <h5 class="text-secondary hover-text-primary py-3 m-0"><a href="#">Rental Service</a></h5>
                                    <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Adipisci, quibusdam?.</p>
                                </div>
                            </div>
                            <div class="col-lg-3 col-md-6">
                                <div class="p-4 text-center hover-bg-white hover-shadow rounded mb-4 transation-3s">
                                    <i class="flaticon-list text-primary flat-medium" aria-hidden="true"></i>
                                    <h5 class="text-secondary hover-text-primary py-3 m-0"><a href="#">Property Listing</a></h5>
                                    <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Numquam, possimus?</p>
                                </div>
                            </div>
                            <div class="col-lg-3 col-md-6">
                                <div class="p-4 text-center hover-bg-white hover-shadow rounded mb-4 transation-3s">
                                    <i class="flaticon-diagram text-primary flat-medium" aria-hidden="true"></i>
                                    <h5 class="text-secondary hover-text-primary py-3 m-0"><a href="#">Legal Investment</a></h5>
```


File Edit Selection View Go Run Terminal Help
real
EXPLORER
REAL
property.php
feature.php
index.php
propertydetail.php
propertygrid.php
submitproperty.php
register.php
Generate Simulate
index.php
="page-wrapper">
class="row">
<!-- Recent Properties -->
<!-- Why Choose Us -->
<div class="full-row living bg-one overlay-secondary-half" style="background-image: url('images/haddyliving.jpg'); background-size: cover; backgrou

<h3 class="pb-4 mb-3 text-white">Why Choose Us</h3>
<ul>
<li class="mb-4 text-white d-flex">

<h5 class="mb-3">Experience Quality</h5>
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Hic, atque. Asperiores odio omnis totam odit rerum sim

</li>
<li class="mb-4 text-white d-flex">

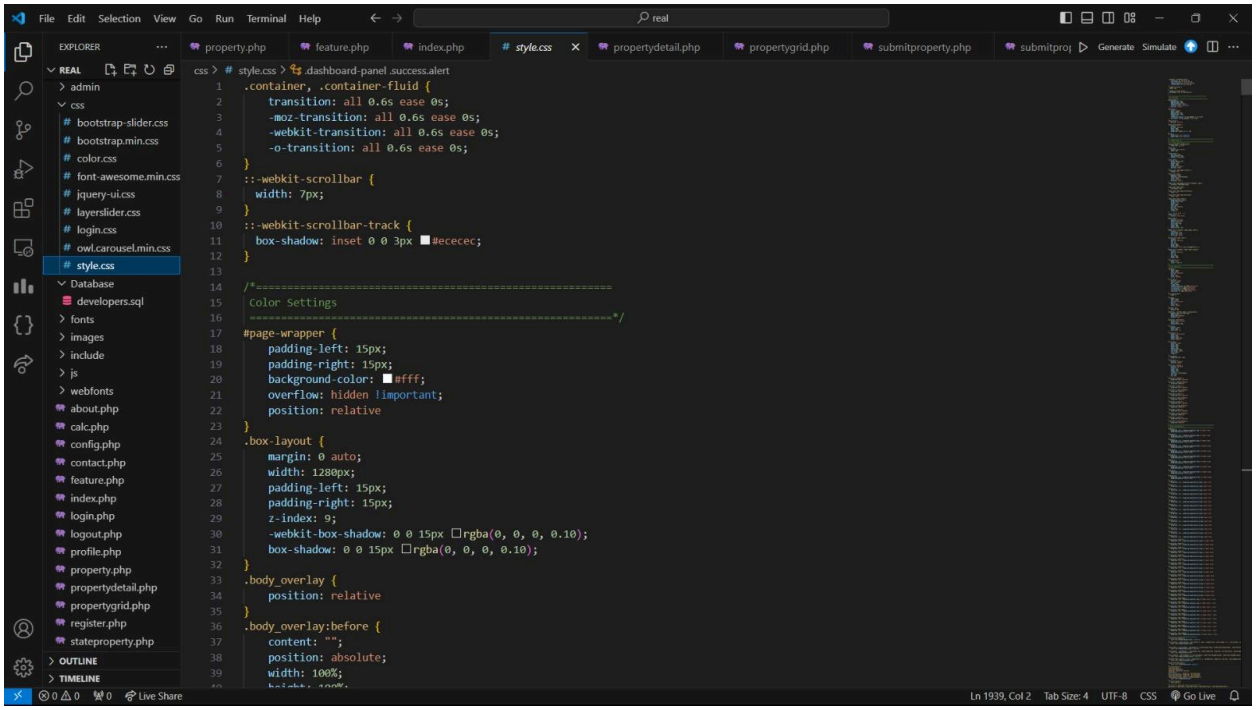
<h5 class="mb-3">Experience Quality</h5>
<p>Lorem ipsum dolor sit amet consectetur, adipisicing elit. Totam magnam deleniti expedita rem, repellendus ad ver

</li>
<li class="mb-4 text-white d-flex">

<h5 class="mb-3">Experience Quality</h5>
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Mollitia praesentium blanditiis cupiditate tenetur sit

</li>
</ul>

Ln 70, Col 68 Spaces: 4 UTF-8 PHP Go Live


File Edit Selection View Go Run Terminal Help
real
EXPLORER
REAL
property.php
feature.php
index.php
style.css
propertydetail.php
propertygrid.php
submitproperty.php
Generate Simulate
css > style.css > .dashboard-panel .success.alert
.container, .container-fluid {
transition: all 0.6s ease 0s;
-moz-transition: all 0.6s ease 0s;
-webkit-transition: all 0.6s ease 0s;
-o-transition: all 0.6s ease 0s;
}
::-webkit-scrollbar {
width: 7px;
}
::-webkit-scrollbar-track {
box-shadow: inset 0 0 3px #ececec;
}
/*==========
Color Settings
==========*/
#page-wrapper {
padding-left: 15px;
padding-right: 15px;
background-color: #fff;
overflow: hidden !important;
position: relative
}
.box-layout {
margin: 0 auto;
width: 1280px;
padding-left: 15px;
padding-right: 15px;
z-index: 9;
-webkit-box-shadow: 0 0 15px rgba(0, 0, 0, 0.10);
box-shadow: 0 0 15px rgba(0, 0, 0, 0.10);
}
.body_overlay {
position: relative
}
.body_overlay:before {
content: "";
position: absolute;
width: 100%;
Ln 1939, Col 2 Tab Size: 4 UTF-8 CSS Go Live

```
25. Sidebar panel css
==================================================================*/
/*----- Input Radio Switch ----*/
.switcher_layout, .box_bg_style {
    border-top: 1px solid
}
.select_bg {
    display: inline-block;
    width: 100%
}
.layout_title {
    font-size: 14px;
    margin-bottom: 10px;
    display: inline-block
}
.radio_check {
    border-radius: 22px;
    display: block;
    height: 44px;
    width: 100px;
    position: relative;
    overflow: hidden
}
.radio_check input[type="checkbox"] {
    display: none
}
.radio_check label {
    padding: 0 15px;
    transform: translateX(0px);
    width: 156px;
    cursor: pointer;
    max-width: inherit
}
.radio_check input[type="checkbox"]:checked + label {
    transform: translateX(-56px)
}
.radio_check label span {
    line-height: 44px
}
```

```
.radio_check label span:last-child {
    float: right
}
.radio_check label::before {
    background-color: #fff;
    border-radius: 50%;
    content: "";
    height: 40px;
    left: 58px;
    position: absolute;
    top: 2px;
    width: 40px;
    z-index: 1;
}
/*----- Box BG Image ----*/
[type="radio"] {
    display: inline-block;
}
label.radios {
    position: relative;
    padding-left: 25px;
    cursor: pointer;
    font-weight: 500;
    width: 30px;
    height: 30px;
    margin-bottom: -5px
}
[type="radio"]:checked + label.radios::after {
    content: '✓';
    line-height: 28px;
    border: 1px solid;
    text-align: center
}
.box_bg_style label::after {
    content: '';
    position: absolute;
    left: 0;
    top: 0px;
    width: 100%;
    height: 100%;
```

Conclusion:

● Summary of the project.

The "Makaan" project was an immersive learning experience that allowed us to apply our knowledge of PHP, MySQL, HTML, CSS, and JavaScript to develop a comprehensive Property Management System. By implementing features such as the Admin Panel, Registration Page, Property Details Submission Page, Search Properties functionality, Seller Details management, Feedback system, and an Agent Section, we created a user-friendly platform that caters to the needs of buyers, sellers, agents, and builders in the real estate industry.

● Achievement of project objectives.

The "Makaan" project successfully met its objectives by incorporating essential features such as the Admin Panel, Registration Page, Property Details Submission Page, Search Properties functionality, Seller Details management, Feedback mechanism, and an exclusive Agent Section. These features were implemented effectively, enhancing the overall user experience and functionality of the system.

By diligently following the project timeline, collaborating as a team, and leveraging the knowledge imparted by our tutors and lab assistants, we were able to achieve a comprehensive understanding of database management systems and web development practices. The "Makaan" project stands as a testament to our dedication, hard work, and commitment to excellence in the field of real estate technology.

● Lessons learned

Developing our Property Management System, Makaan, was a big learning experience. We learned a lot about managing databases, building websites, and making user interfaces.

One big lesson we learned was how important teamwork and communication are. Clear communication and working together made it easier to assign tasks and solve problems on time. We also want to thank the lab assistants for their help and support during the project. They guided us, gave us feedback, and were patient with us.

We reached our project goals by planning carefully, working hard, and using our resources well. By including all the features we planned, we showed we can turn what we learn in class into real-life solutions.

Looking back, we see the importance of always learning. In the future, we want to get even better at what we do and take on new challenges. Finishing Makaan isn't just about the time we spent—it's also the start of a new part of our journey as developers.

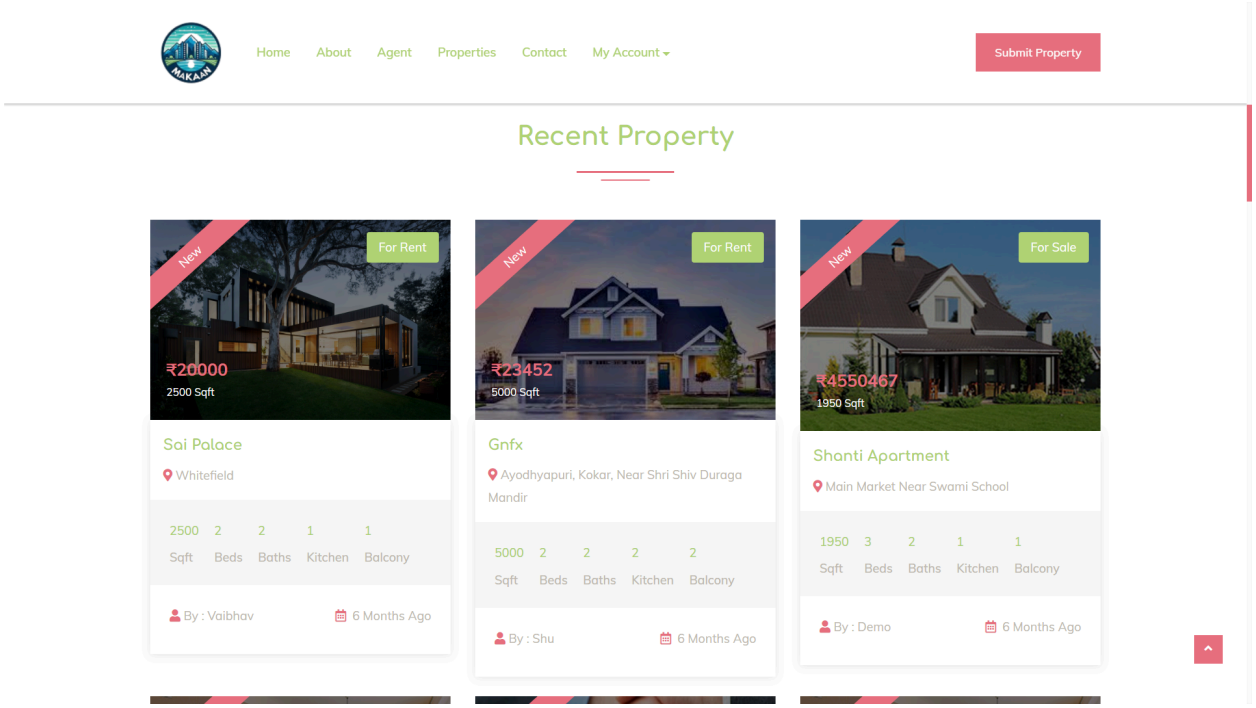
We want to say a big thank you to Chetan Sir for mentoring us and supporting us. With what we learned and achieved, we're ready to bring new ideas and solve problems in the tech world.

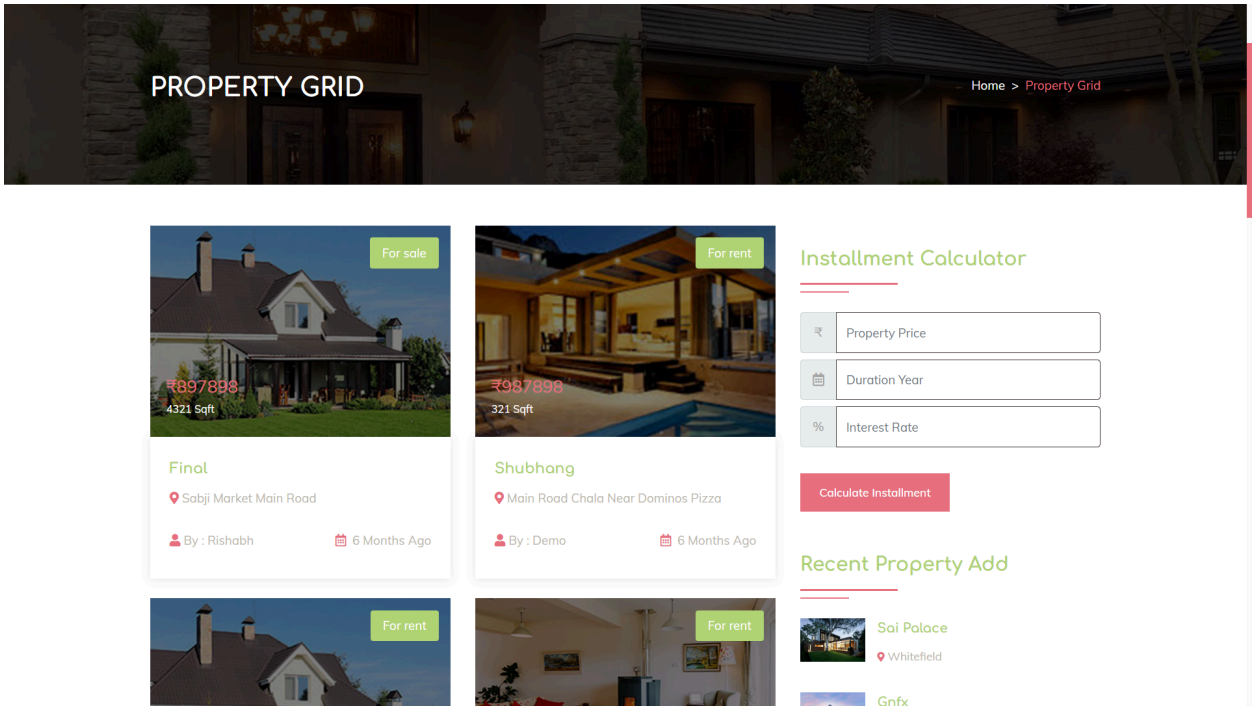
References:

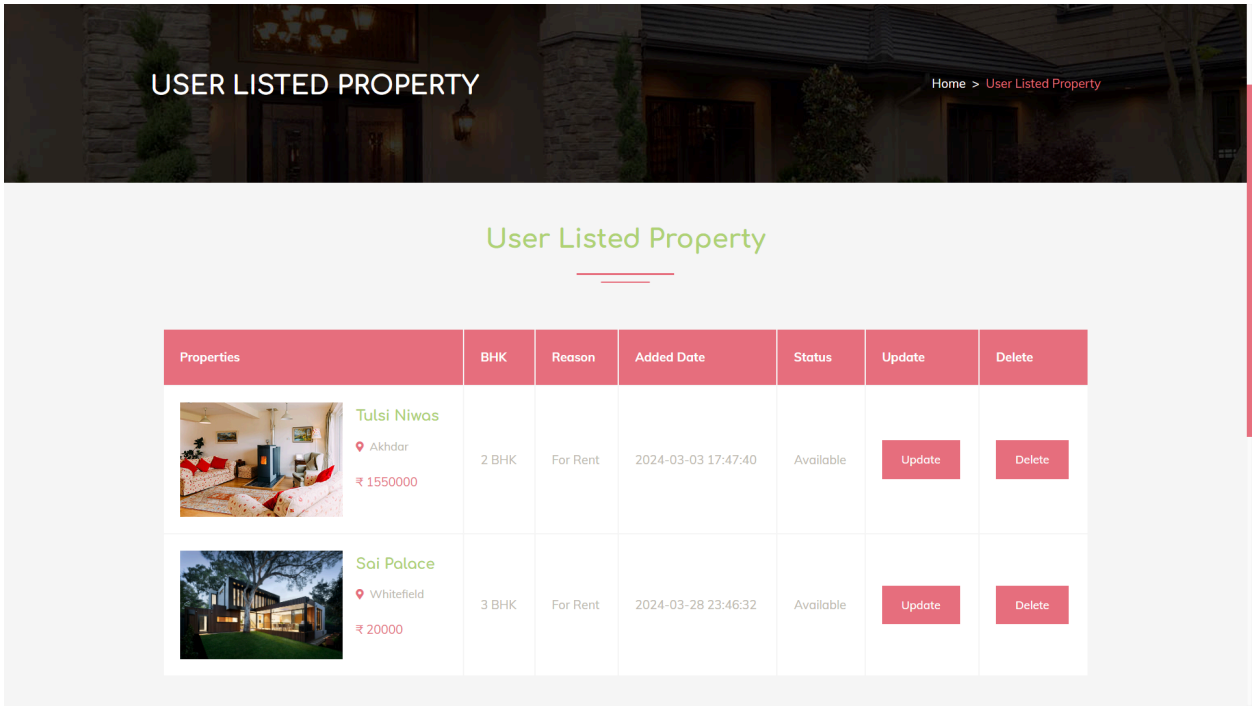
- [1] IRJMETS. "REAL ESTATE MANAGEMENT SYSTEM." https://www.irjmets.com/uploadedfiles/paper//issue_6_june_2023/42610/final/fin_irjmets1688149979.pdf
- [2] Shilpa S. Mane and Anjali P. Mane. "REAL ESTATE MANAGEMENT SYSTEM." Journal of Emerging Technologies and Innovative Research (JETIR) (2017). https://www.jetir.org/view?paper=JETIRDU06008
- [3] S. Salivahanan, P. Praveen Kumar, and M. Senthil Kumar. "A Secure Web Based Real Estate Management System." International Journal of Computer Science and Information Technology (IJCSIT) 2.1 (2010): 135-138.
- [4] M. Manikandan and S. S. Kumar. "Development of an Intelligent Real Estate Recommendation System." International Journal of Advanced Computer Science and Applications (IJACSA) 10.6 (2019): 85-92.
- [5] A. A. A. El-Seoud, M. I. Mohamed, and H. A. Hefny. "Design and Implementation of a Real Estate Management Information System with E-Services Integration." Procedia Computer Science 65 (2015): 729-737.

Appendix:

Screenshots of our functioning website:

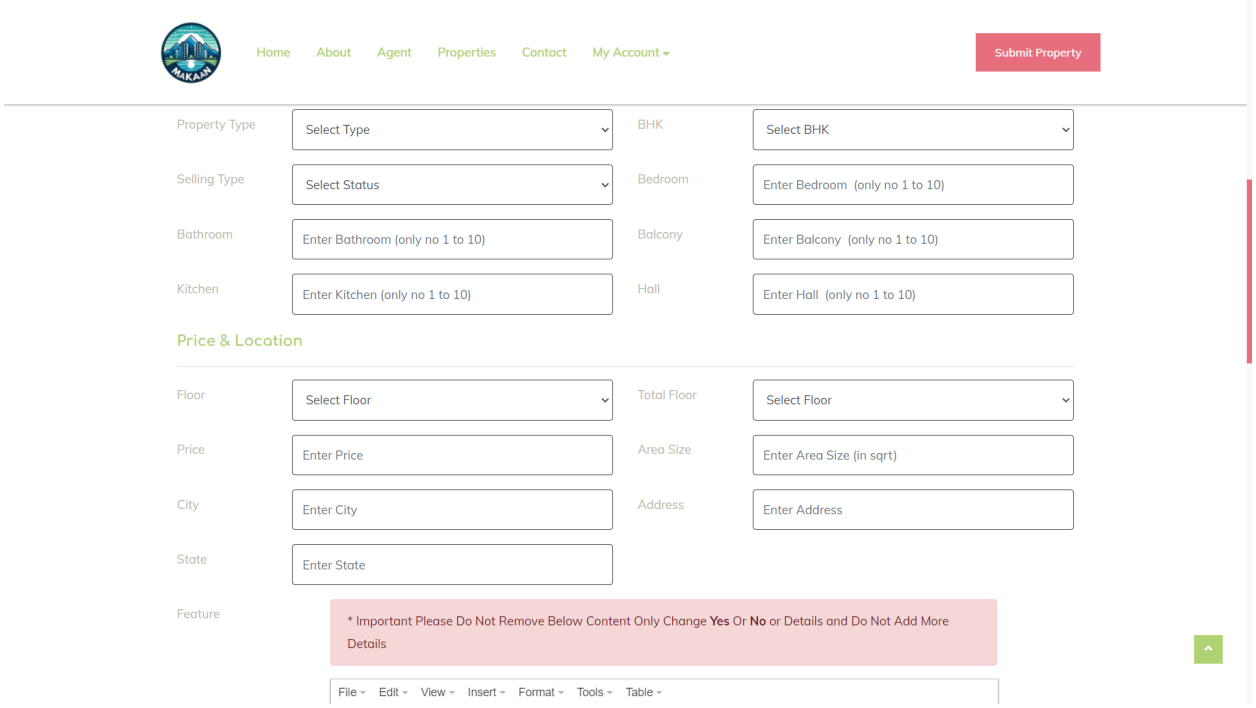



PROPERTY GRID
Home > Property Grid
For sale
₹897898
4321 Sqft
Final
Sabji Market Main Road
By : Rishabh
6 Months Ago
For rent
₹987898
321 Sqft
Shubhang
Main Road Chala Near Dominos Pizza
By : Demo
6 Months Ago
Installment Calculator
Property Price
Duration Year
Interest Rate
Calculate Installment
Recent Property Add
Sai Palace
Whitefield
For rent
For rent


USER LISTED PROPERTY
Home > User Listed Property
User Listed Property
Properties
BHK
Reason
Added Date
Status
Update
Delete
Tulsi Niwas
Akhdar
₹ 1550000
2 BHK
For Rent
2024-03-03 17:47:40
Available
Update
Delete
Sai Palace
Whitefield
₹ 20000
3 BHK
For Rent
2024-03-28 23:46:32
Available
Update
Delete

Submit Property

Basic Information

Title — Enter Title

Content — File Edit View Insert Format Tools Table; Formats