LEADING UNIVERSITY

Department of Computer Science & Engineering

A final year project submitted in partial fulfillment of the requirement for the award of the Degree of Bachelor of Computer Science and Engineering

CSE-4801

Project Title

RealEstate

Supervisor

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Submitted By

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Section-B(CSE-47th Batch)

Department of Computer Science & Engineering

Leading University
Date of Submission: 28-08-2022

August 28 2022

To
Head of the Department
Dept. of CSE
Leading University, Sylhet

Subject: Application for the approval of final year project proposal.

Sir,
With due respect, we would like to inform you that we are the students of CSE department,47th batch. We are interested in developing an Online web portal- "RealEstate" for our final-year project under your guidance.

So, we therefore request and hope that you would be kind enough to grant our proposal for the project work.

We remain
Sir,
Your most obediently –
Joydip Chowdhury (ID-1812020078)
Foysal Ibne Sulthan (ID-1812020059)

Project Proposal

Proposal for the project in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering.

Project Title

RealEstate

Project for

Bachelor Degree in Computer Science and Engineering

Date of Submission

28-08-2022

Course Code:CSE-4800

Supervisor

Shafakat Kibria

Assistant

Professor

Department of Computer Science & Engineering

Leading University

Acknowledgement

At first, we praise to Almighty “Allah” who gave us opportunity, capability, energy, spirit and patience to complete this project work.

It is our pleasure to express our profound sense of gratitude to our Supervisor Shafakat Kibria Department of Computer Science and Engineering, Leading University for his constructive academic advice and guidance ,constant encouragement and valuable suggestions , and all other supports throughout this project work and preparing this project report successfully. We are really benefited from his excellent supervision.

We would like to thanks to all our friends and those who helped, inspired and gave us mental support at different stages in different moment in our project.

Again also thanks to the Amlighty for helping us a lot in successfully ending this project work.

Declaration

The work here is an original and to the best of our knowledge, it has never been presented anywhere else for academic or any other purpose.

_____

Joydip Chowdhury
ID-1812020078

_____

Foysal Ibne Sulthan
ID-1812020059

Dedication

We would like to dedicate this project to our respectable parents, our instructor, our teachers and support staff of the Department of Computer Science and Engineering, at Leading University who are always dear and near to us and without whose patience, understanding, unsparing , support, affection and most of all deepest love it would not have been possible to come up to this positon.

Work Plan

We have followed a proper work plan to complete the project work in due time, we have to maintain a time schedule in months.

Task Distribution

We distributed our tasks as follows:

Time Scheduling :

Time Limits	Working Fields
February-March,2022	Phase 1:
	• Identification of source and materials. • A clear justification for our frontend area and we work on front end first. • A clearly written smart goal for our project.
April-May,2022	Phase 2:
	• Identification of learning materials for learning backend. • We go through the frontend project by comparing it with our action plan. • Justification for our Backend area and we work on backend with respect to our frontend.
June,2022	Phase 3:
	• Continuation of backend. • We check and justify the project according to our plan. • We clarify the standard of the project.
July-August,2022	Phase 4:
	• Testing, debugging and finalizing report. • We start working on our project book.

Abstract

The project entitled “Real Estate Property System” aimed to simplify the entire process of real estate property business operation. The project was designed and developed in PHP, MySQL and Bootstrap, with the core features of, registration and login/logout of a user, property posting, showing property details and communication channel between the seller and clients. Rapid Web Development was used as the Web development life cycle.

Hence, this project will provide a easy solution to the user who wants to sell their property & the user who wants to buy property in a beneficial way.

RealEstate

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Chapter 1:Introduction

1.1 Introduction :

The project RealEstate has been develop on HTML, CSS ,PHP, Java Script, Bootstrap, Jquery and My SQL. An online platform which will allow users to find their desired property and will allow formal and infromal merchants in developing countries to advertise and sell or rent their property on the internet. The main purpose of this project is to create an e-commerce web portal with a content management system which would allow property information to be updated securely using a mobile device or laptop or pc. The web portal will have an online interface in the form of an e-commerce website that will allow our users to buy or rent property from the merchants. There are two types of actors available in the project. First one is Users, Second one is Admin. Users have limited access right to access the system while the admin have full control over the system. We have used PHP for business logic, My SQL as a database, HTML for structure designing, CSS for web page formatting ,Java Script for form validation and animation. We have also attached screens of this project look into it .

1.2 Motivation :

For buying or renting property, people need to go to various places. It is very hard to find their desired property for buying or taking as rent. In manual system, they have to face many problems, like: in our country we have to look at the advertisement in the roadside or boundary wall. Sometimes people don't have enough time for find their desired property to buy or taking rent. Many of them are worried about price. Black-marketing and syndicating also make it impossible for them buying at reasonable price. Also on, if we look at the current situation of the world, COVID-19 pandemic situation created a big problem for all kind business. For saving time and staying safe we made a plan then.

Since this our final year project ,so we want to create a project which is easy but also challenging for us. Then we decided to work on RealEstate.

1.3 Objectives

The project objectives are:

-To make buying and taking rent of a property easier and comfortable
-Provide enough options of properties for potential buyers and renters
-Enable users to find the best matching property;
-Provide the possibility to reach a real estate agent;
-Allow for effective research of a real estate item
-To represent as a complete in the e-commerce of Bangladesh

1.4 Scope

The project has a wide scope, which can be applied by any business organization. This web application is for individual users who wants to save their time and get rid the trouble of finding their matching or desired property. Both, the home seller and the buyer or renter could be free from many trouble. Also this web application is going to provide a huge amount of summary data.

Chapter 2: Literature Review

2.1 Technology Used

Overview of the technology

Front End: HTML, CSS, Bootstrap, JavaScript, JQuery

- HTML : HTML is the language for describing the structure of Web pages. HTML gives authors the means to: Publish online documents with headings, text, tables, lists, photos, etc. Retrieve online information via hypertext links, at the click of a button. Design forms for conducting transactions with remote services etc.

- CSS: is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.

- Bootstrap: Bootstrap is the most popular CSS Framework for developing responsive and mobile-first websites.

- JavaScript: JavaScript® (often shortened to JS) is a lightweight, interpreted, object oriented language with first-class functions, and is best known as the scripting language for Web pages, but it's used in many non-browser environments as well. It is a prototype-based, multi-paradigm scripting language that is dynamic, and supports object-oriented, imperative, and functional programming styles. JavaScript runs on the client side of the web, which can be used to design / program how the web pages behave on the occurrence of an event. JavaScript is an easy to learn and also powerful scripting language, widely used for controlling web page behavior.

- jQuery: Query is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.

Back End: PHP, My SQL.

- PHP: PHP is typically used as a server-side language (as opposed to a language like JavaScript that's generally executed on the client-side). So what does that mean? In programming terms, client-side refers to website activity that takes place locally on a user's computer through the user's web browser. Client-side languages like HTML, CSS, and JavaScript give instructions that web browsers can parse and translate into content on your computer screen. Notice JavaScript (a scripting language like PHP) is on that list. Again, the processes scripted by JavaScript take place on the client-side—JS provides instructions that can be understood by and executed in your web browser. Client-side is the side you see when you're using the internet.

- MySQL: MySQL is a relational database management system on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for MySQL however, is for the purpose of a web database. It can be used to store anything from a single record of information to an entire inventory of available products for an online store. In association with a scripting language such as PHP or Perl (both offered on our hosting accounts) it is possible to create websites which will interact in real-time with a MySQL database to rapidly display categorized and searchable information to a website user

2.2 Hardware Requirements:

- Processor: Pentium 3.0GHz or higher.
- RAM:1024MB or more
- Hard Drive:10GB or more

For Users:

- Internet Browser
- Internet Connection

Chapter 3: Methodology

3.1 What is RealEstate:

Real estate platform is a digital space where realtors, home sellers, and homebuyers,renters can get in touch to make a purchase or rent contract for a real estate item. There is no intermediary service. The sales and purchases transaction is completed electronically and interactively in real-time. The development of this new system contains the following activities which try to develop online web application by keeping entire process in the view of database integration approach. User gets its email id and password to access their account. Administrator of RealEstate has multiple features such as Add, Delete, Update property details successfully.

3.2 Features of RealEstate :

- Secure registration and profile management facilities for Users.
- Browsing through the web to see the properties.
- Browsing through the web to see the property details and the details of the home-seller.
- User should be able to mail the admin panel about the items they would like to see/talk face to face.
- Updates to users about the property.

.

3.3 Software Requirement:

- Visual Studio Code (VS Code)
- XAMPP Server

3.4 Actors of RealEstate:

There are two types of actors available in the project:

- User: With limited access
- Admin: With full access

3.5 Functionality performed by User module:

- Registration for user
- Login for user
- Edit profile for user
- Edit property for user
- Home-owner as a user post for selling a property
- Home-owner as a user post for give rent a property
- Buyer as a user could find their desire property
- Renter as a user could find their matching property

3.6 Functionality performed by Admin module:

- Add property
- Edit property
- Delete property
- Add City
- Can view the number of user
- Can view the number of property
- Can access all the information of user

Chapter 4: Structural & System Design

4.1 ER Diagram

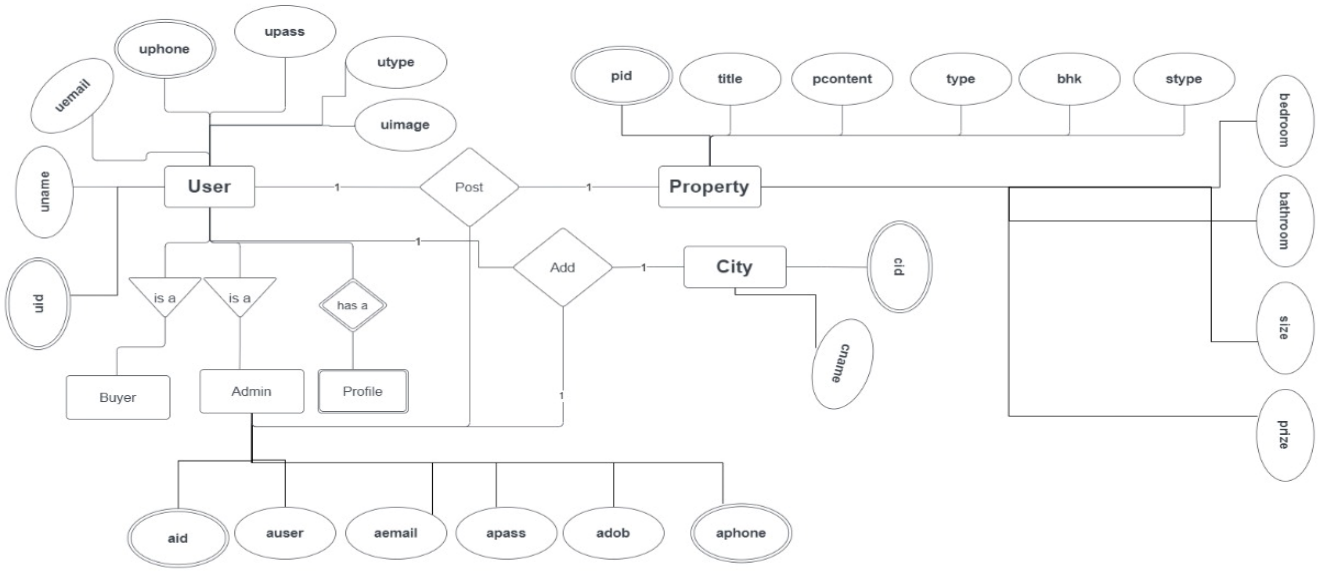

Figure:4.1

4.2 Use Case Diagram

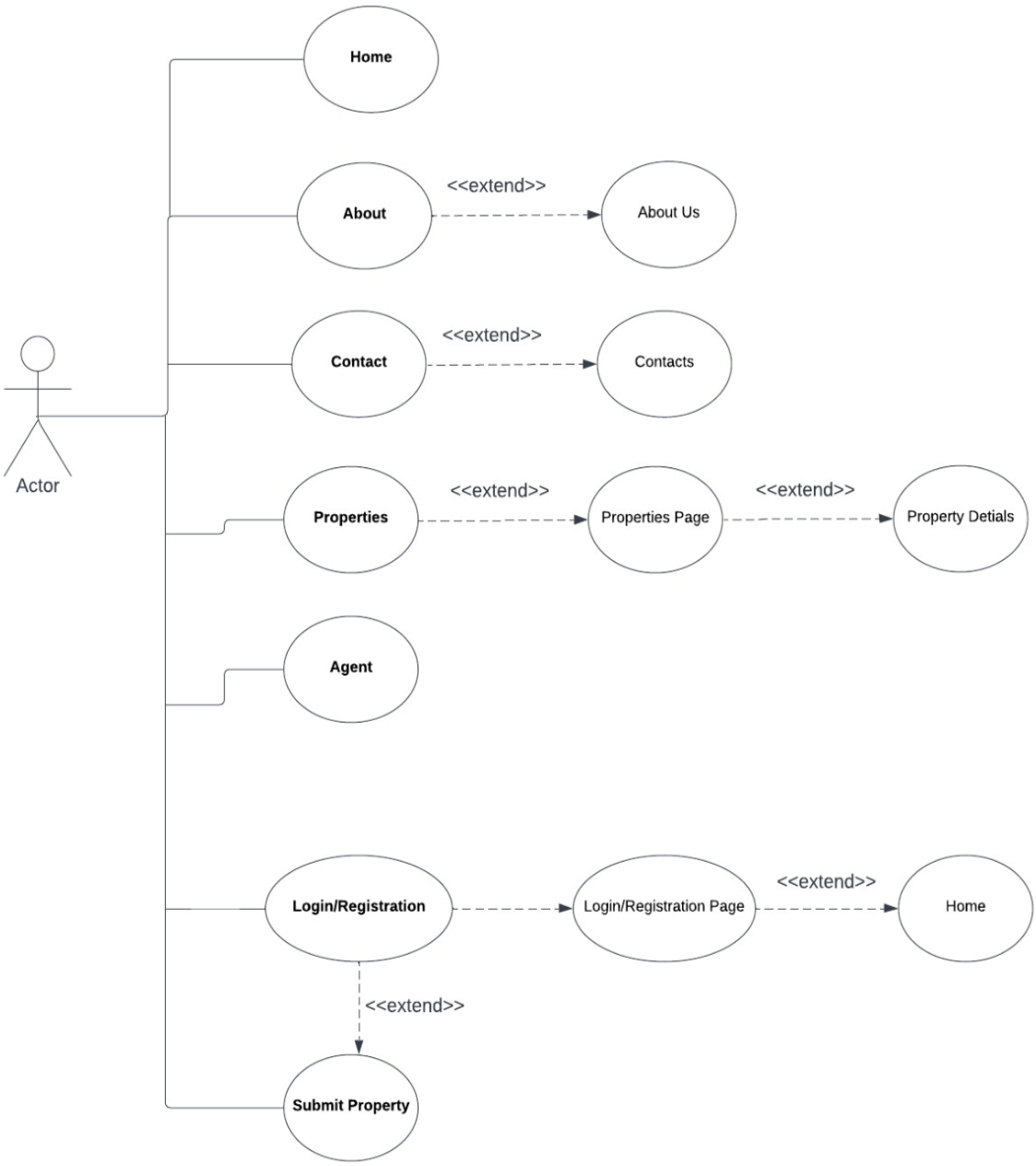

Figure:4.2

4.3 Context Level diagram

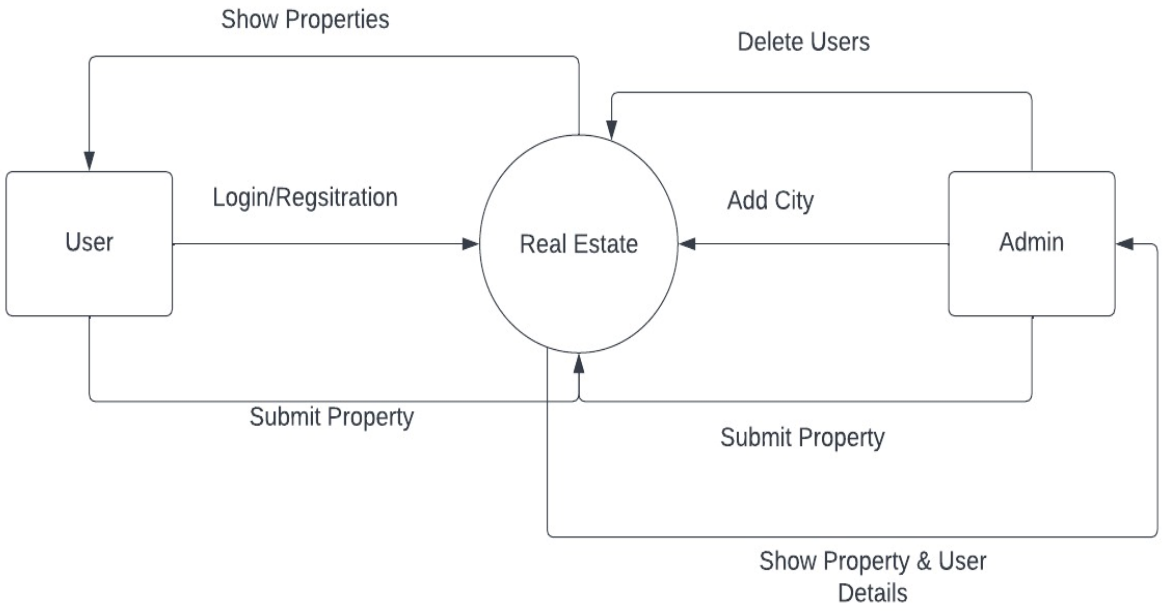

Figure:4.3

Interface (Web application)

Index page: This index page designed for users when anyone first come to RealEstate

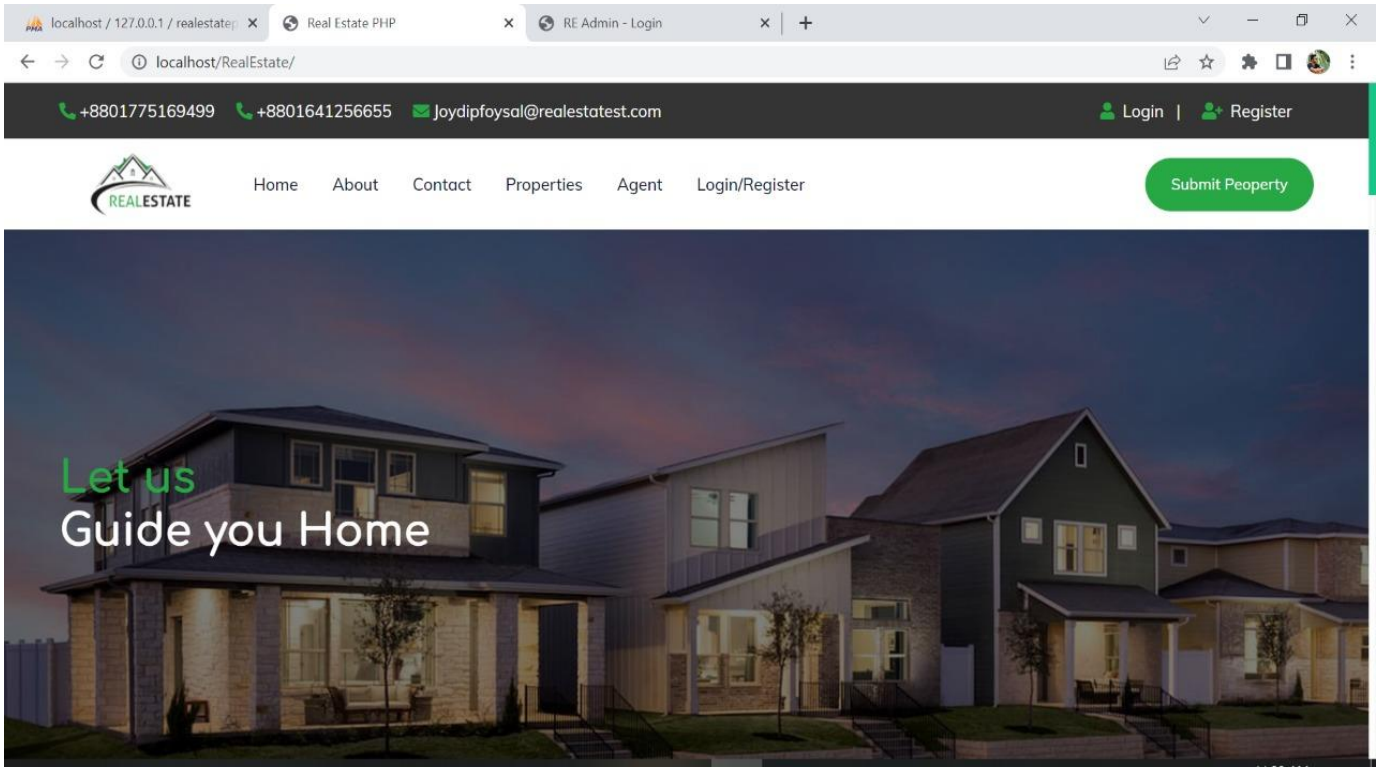

Figure: Index page for Users

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About Us Page

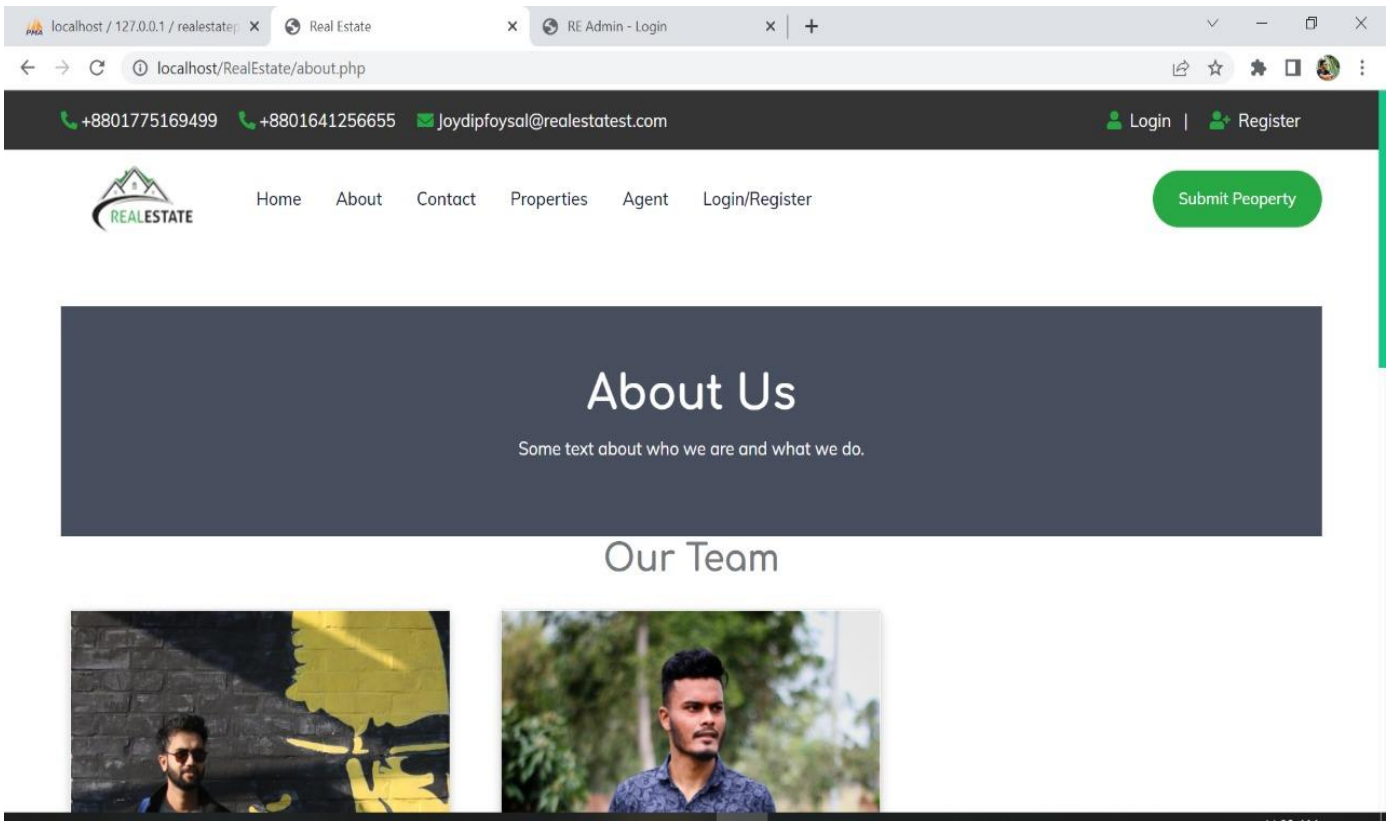


Figure:About Us page

Contact Us page

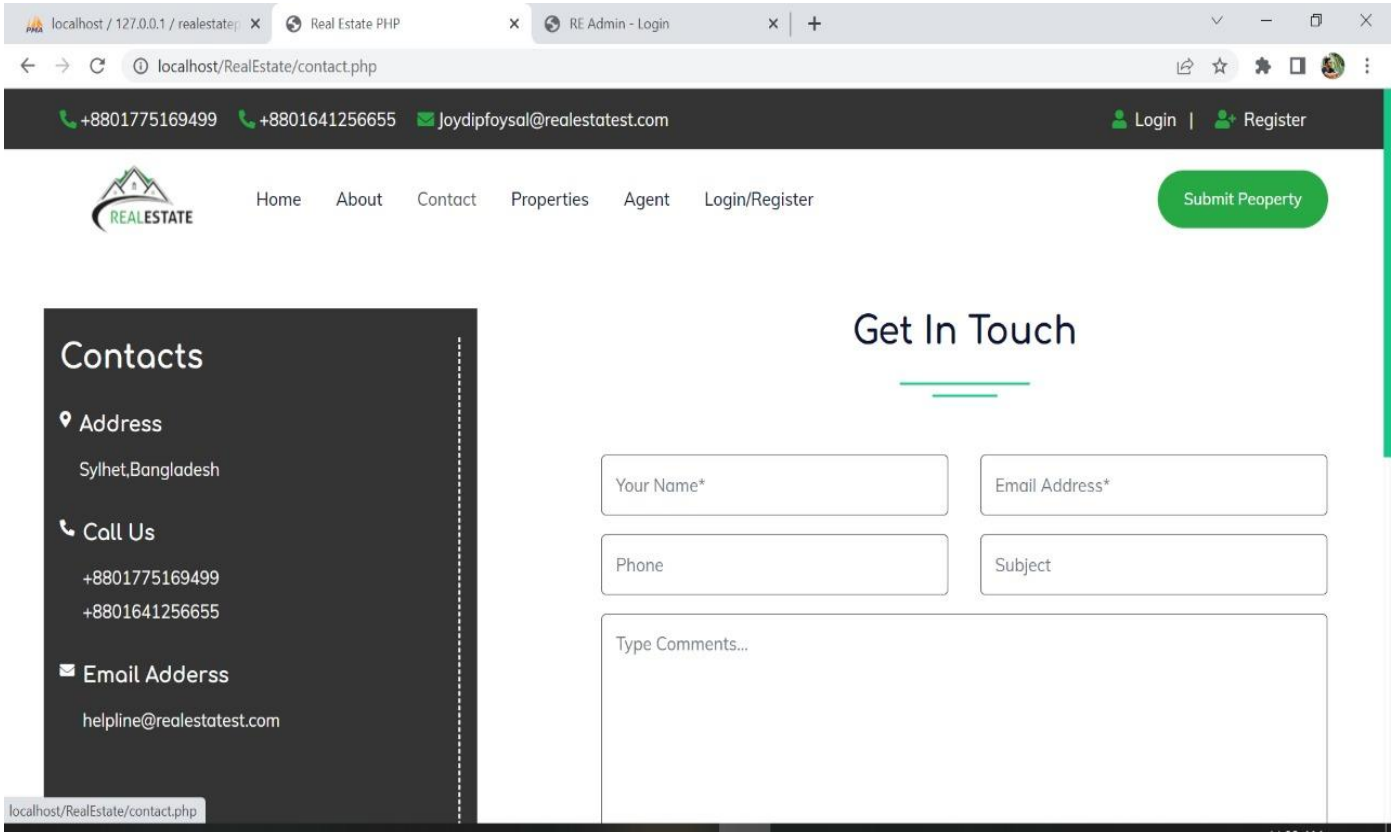
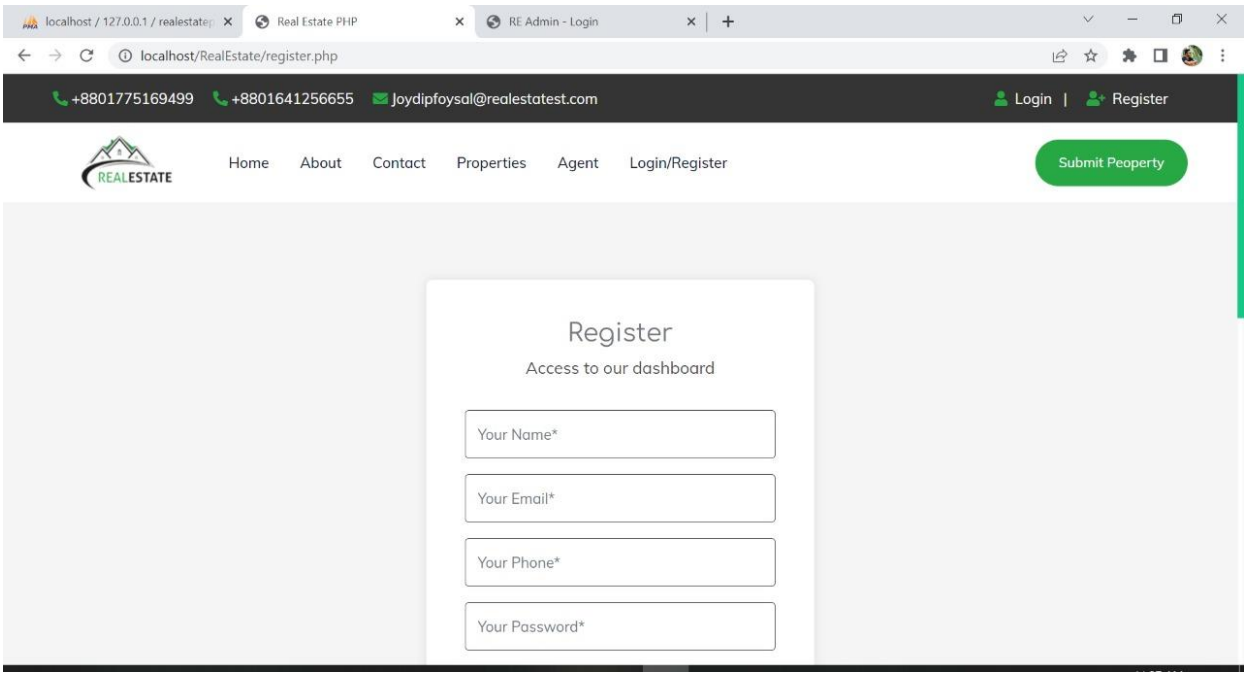


Figure:Contact Us Page

Register Page for user



Log in page for user

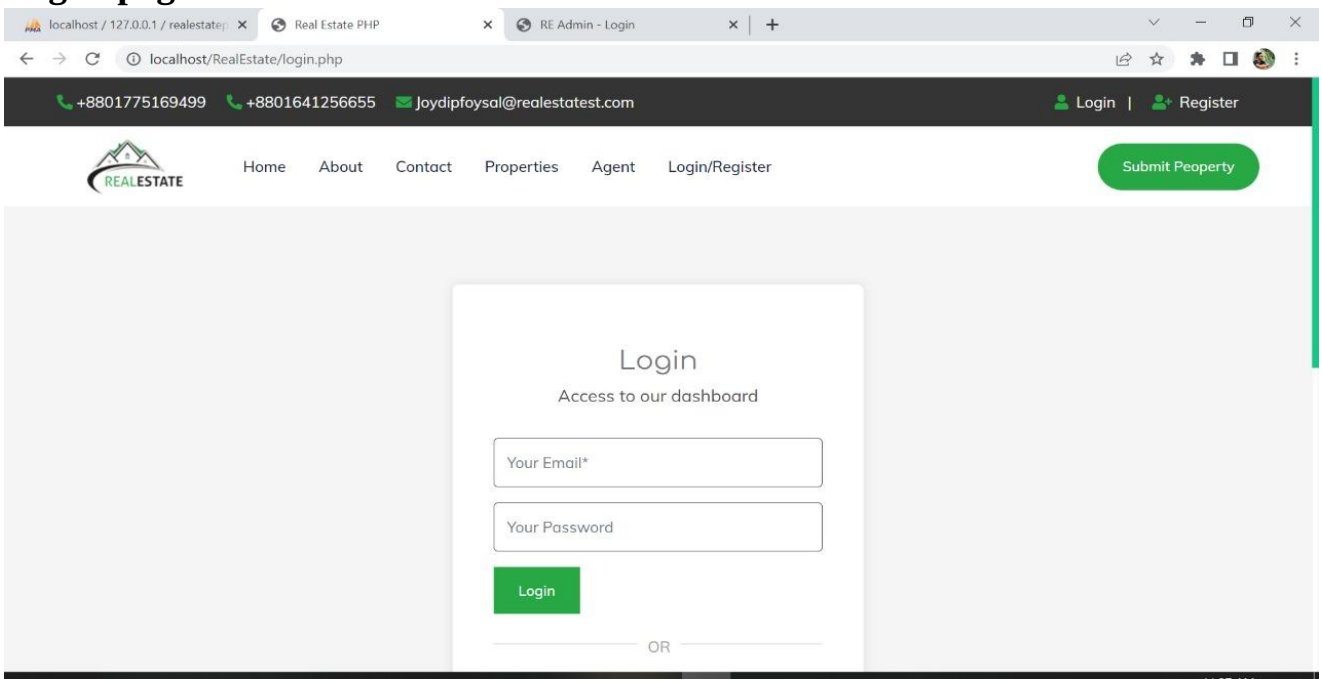


Figure: Login & Register Page

Submit property page for user

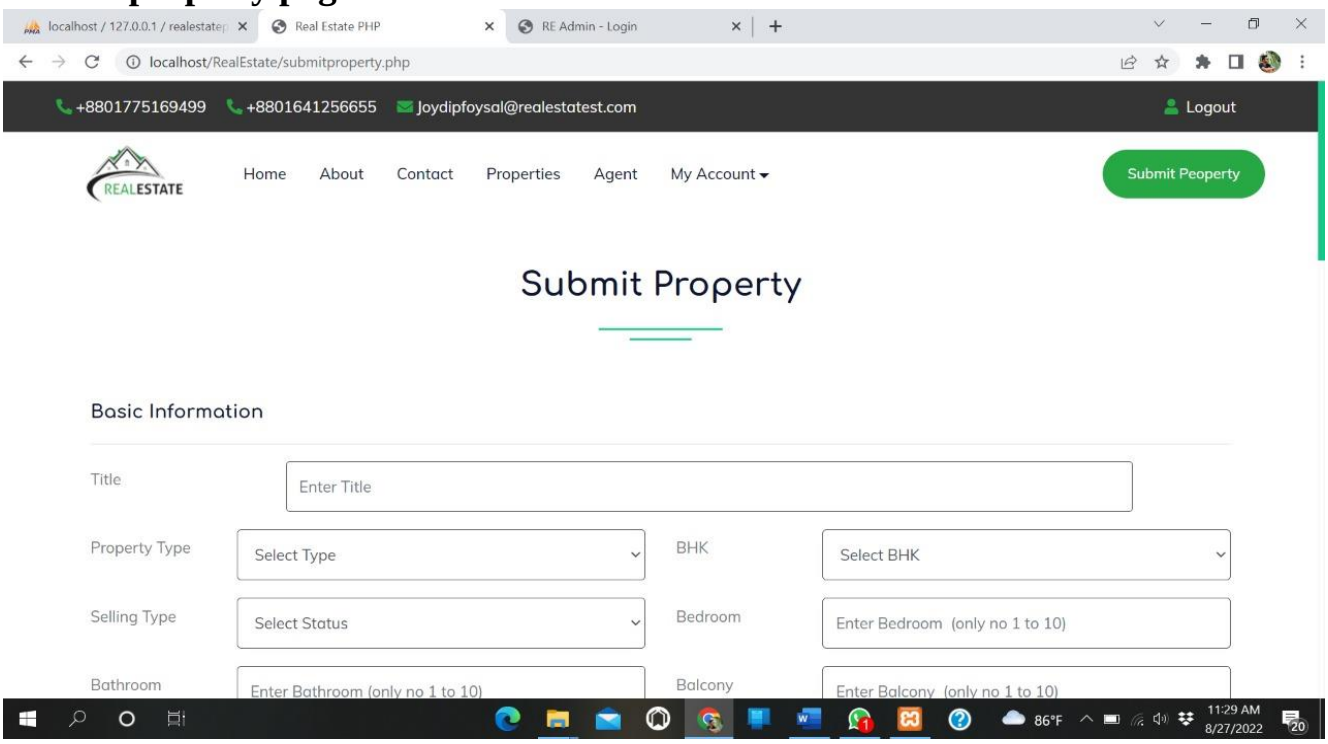


Figure: Submit property page for user

Property showing in the website

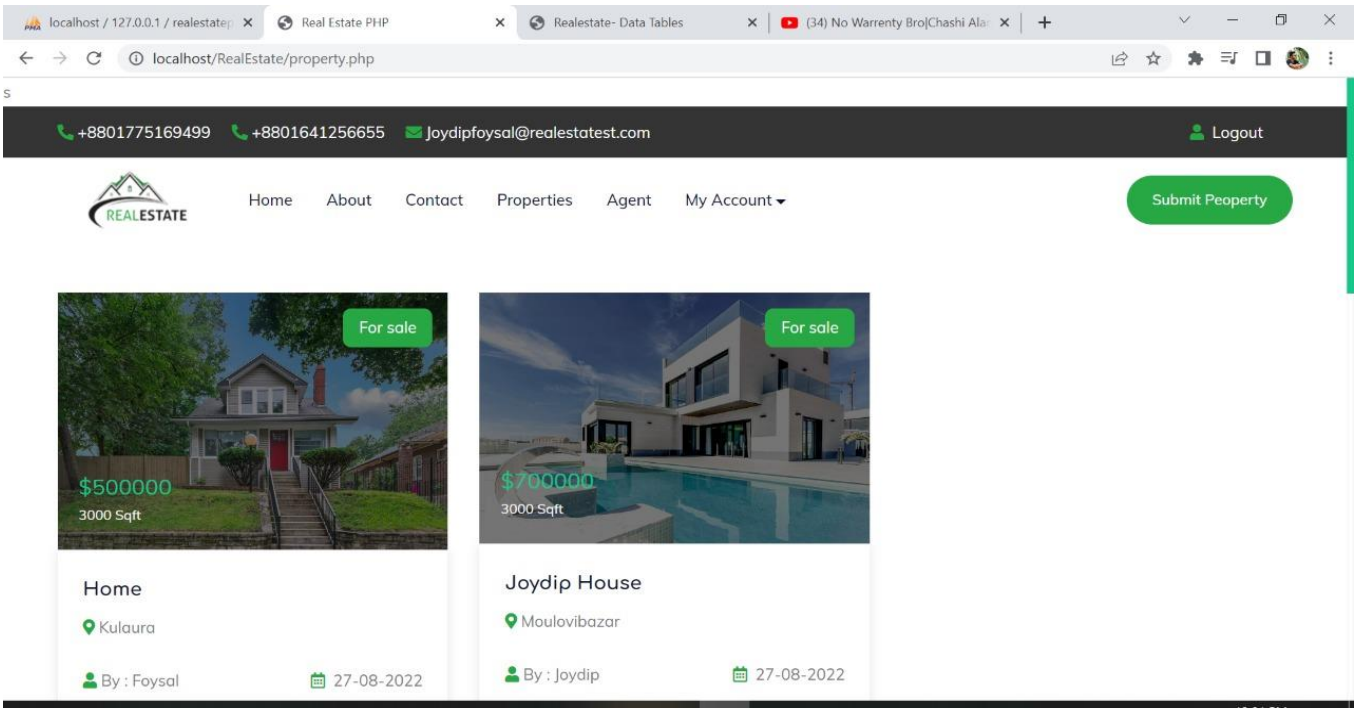


Figure: Property showing in the website

Property Details

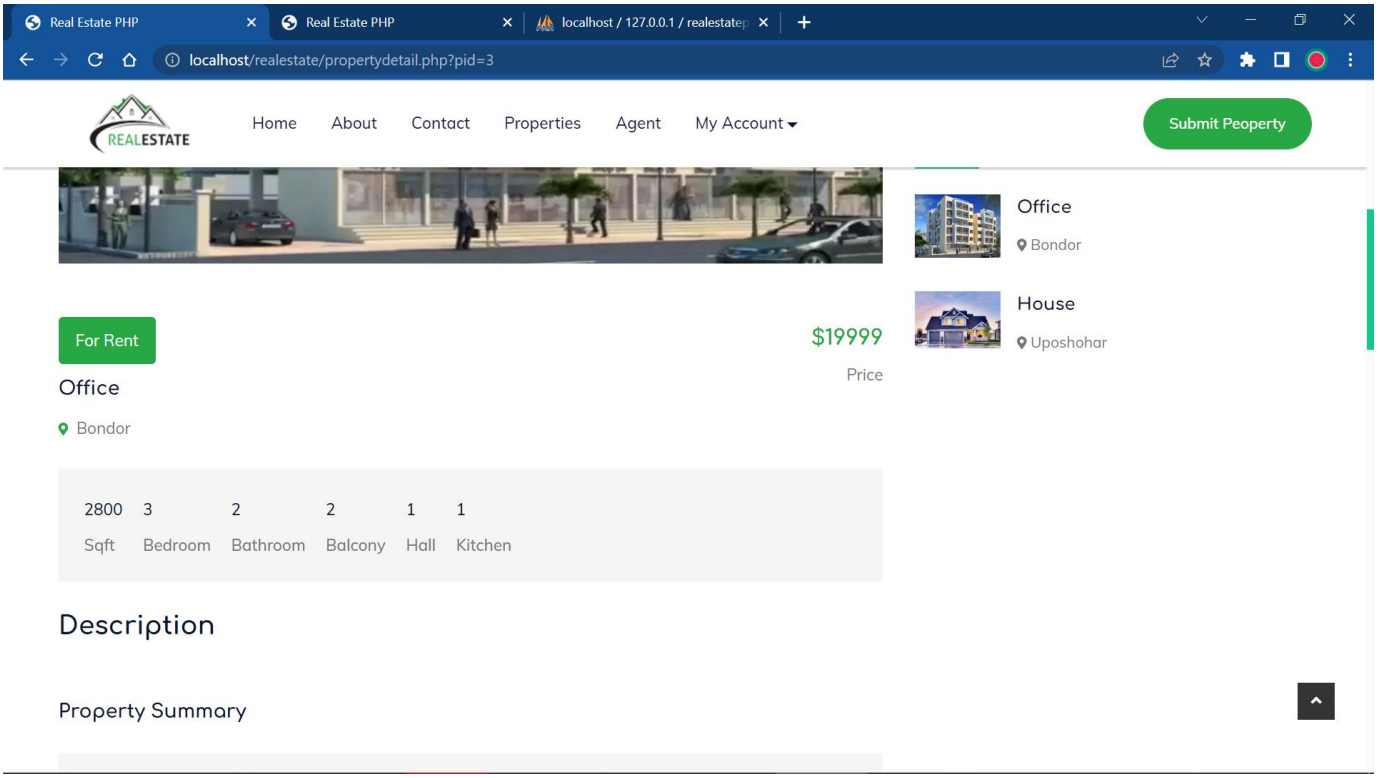


Figure: Property Details

Admin Login

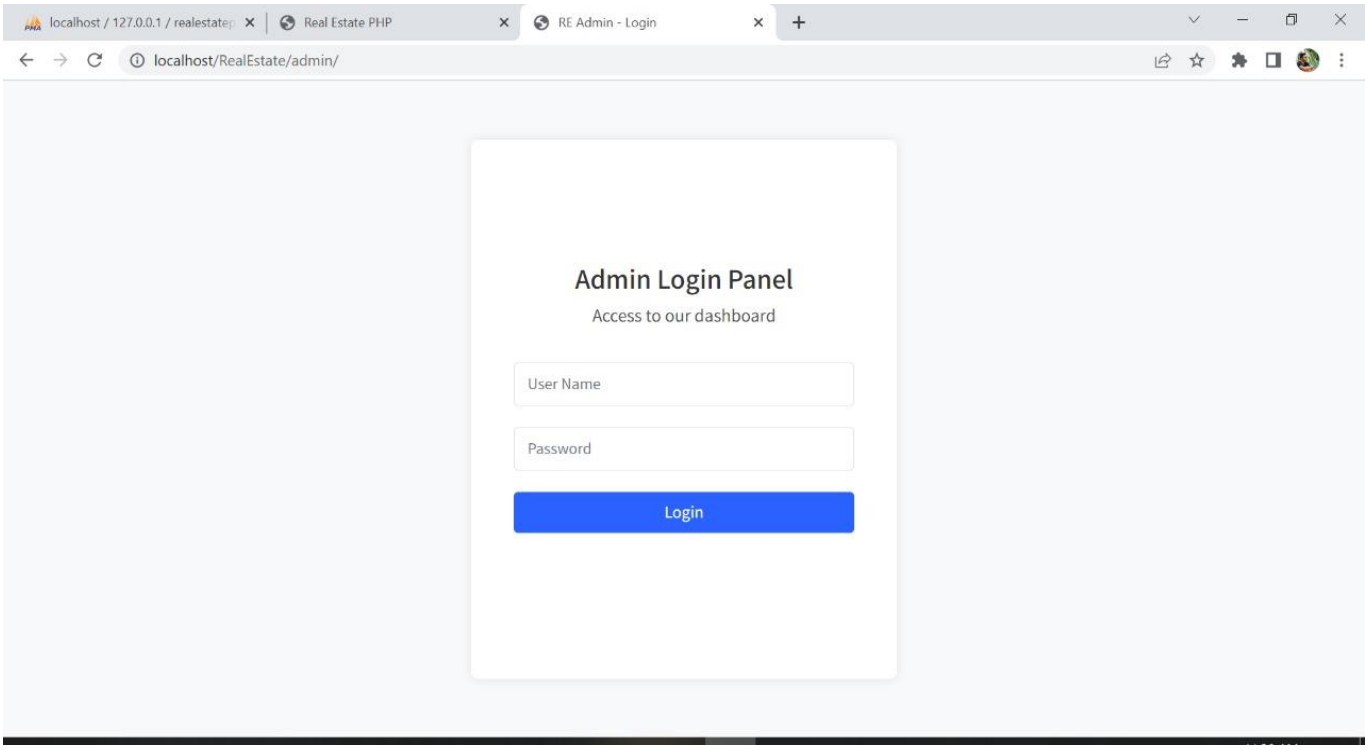


Figure: Admin login

Admin dashboard

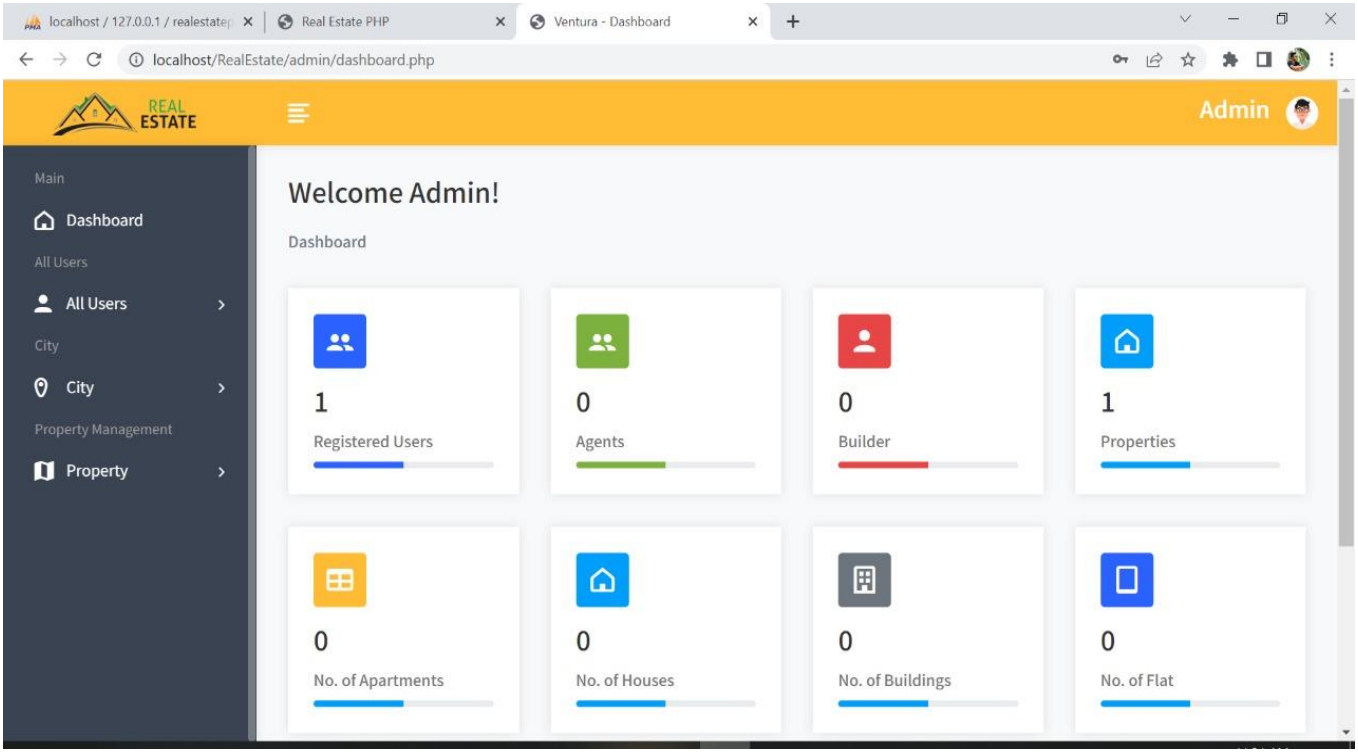


Figure: Admin dashboard

Admin Property view

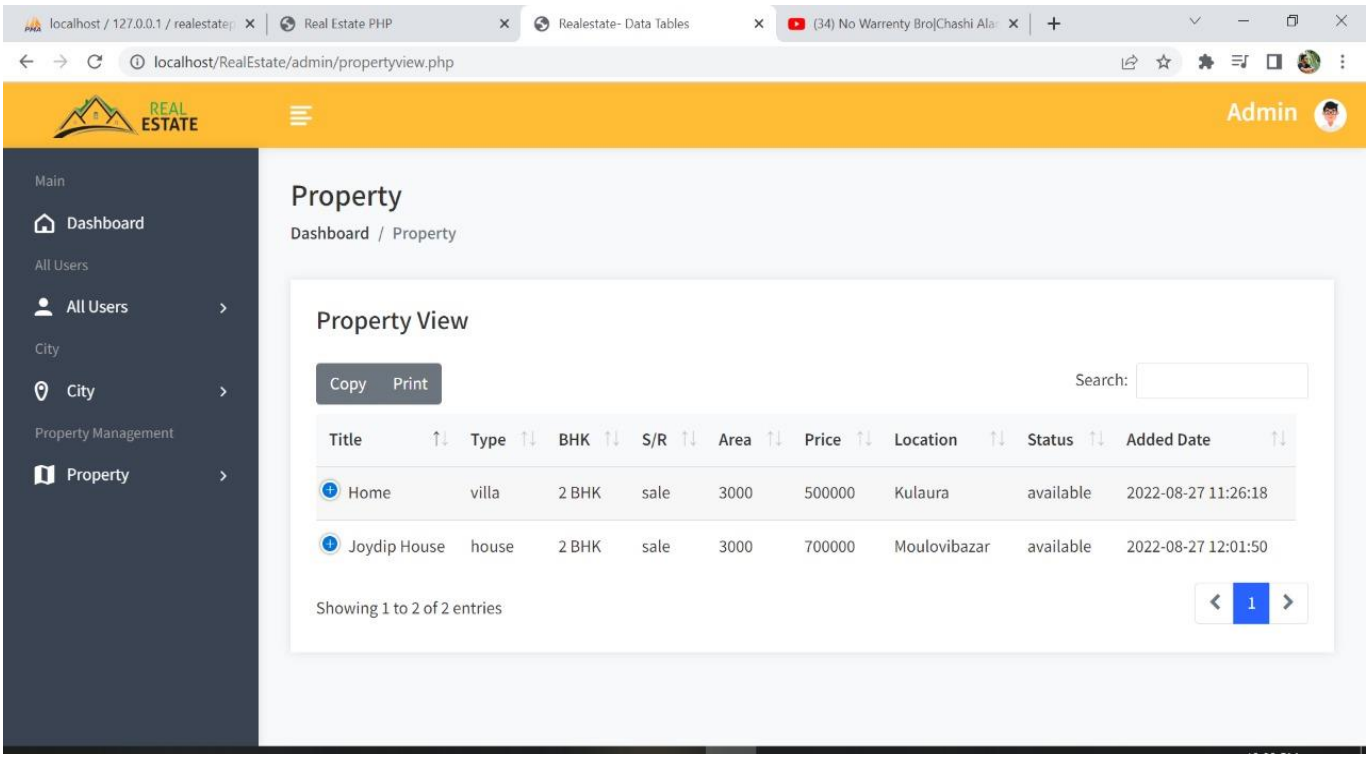


Figure: Admin Property view

Admin Viewing User List

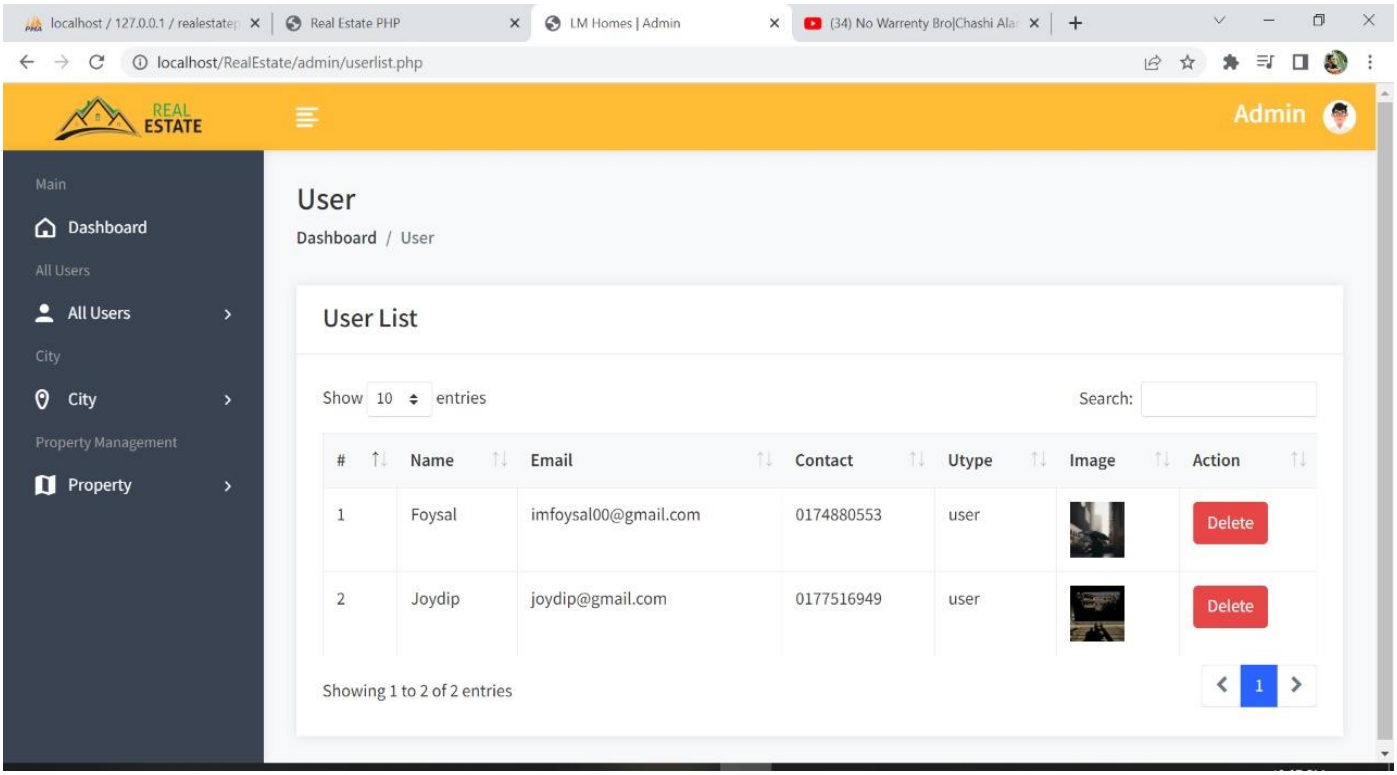


Figure: Admin Viewing User List

Chapter 5: Analysis

5.1 The Convenience Aspect

RealEstate: Now a days a good number of people of search for potential properties online before they look anywhere else. By not having a website, your business is virtually invisible to a very large pool of potential clients . There are also no overworked sales clerks. We never have to wait for service and there are no worries about findind the desised properties. We can buy property or rent property in a convenientway, on the otherhand home-sellers could find their customer.

In-Store/Market: It's crowded, it's noisy. We physically have to be there when it's open and we have to wait in long lines to pay everything.

5.2 The Merchandise Aspect

RealEstate: We can generally get a more extensive view of every properties on, whereas finding the property in manual way is very difficult. It may also be easier to get specifies on each property we are interested in. We can also view various types of property .

In-Store/Market: We can physically see what are getting, pick it up and even have it demonstrated. A lot depends on what we are purchasing. Buying phone/iphone is easy because we know what we are getting. But buying or renting property is problematic.

Chapter 6: Testing

6.1 Testing objectives

Testing is a process of executing a program or application with the intent of finding the error.
It can also be stated as the process of validating and verifying that a software program or application or product:

- Meets the business and technical requirements that guided its design and development
- Works as expected
- Can be implemented with the same characteristic.

Let's break the definition of Software testing into the following parts:

1) Process: Testing is a process rather than a single activity.
2) All Life Cycle Activities: Testing is a process that's take place throughout the Software Development Life Cycle (SDLC)
    - The process of designing tests early in the life cycle can help to prevent defects from being introduced in the code. Sometimes it's referred as "verifying the test basis via the test design".
    - The test basis includes documents such as the requirements and design specifications.
3) Static Testing: It can test and find defects without executing code. Static Testing is done during verification process. This testing includes reviewing of the documents (including source code) and static analysis. This is useful and cost effective way of testing. For example: reviewing, walkthrough, inspection, etc.
4) Dynamic Testing: In dynamic testing the software code is executed to demonstrate the result of running tests. It's done during validation process. For example: unit testing, integration testing, system testing, etc.
5) Planning: We need to plan as what we want to do. We control the test activities, we report on testing progress and the status of the software under test.
6) Preparation: We need to choose what testing we will do, by selecting test conditions and designing test cases.

7) Evaluation: During evaluation we must check the results and evaluate the software under test and the completion criteria, which helps us to decide whether we have finished testing and whether the software product has passed the tests.

8) Software products and related work products: Along with the testing of code the testing of requirement and design specifications and also the related documents like operation, user and training material is equally important.

Testing principle

Before doing the testing some points should be on mind . All tests should be traceable to university authority's requirements.

- Test should be planned long before testing begins.
- The principle should be applies to software testing.(it means that 80% off all error uncovered during testing will likely be traceable to 20% of all program components)
- Test should be begin "small" and progress toward large.
- Exhaustive testing is not possible.
- To be most effective, testing should be conducted by an independent third party.

6.2 Implementation of various testing techniques

Unit Testing

Unit testing emphasizes the verification effort on the smallest unit of software design i.e.; a software component or module. Unit testing is a dynamic method for verification, where program is actually compiled and executed. Unit testing is performed in parallel with the coding phase. Unit testing tests units or modules not the whole software.

We have tested each view/module of the application individually. As the modules were built up testing was carried out simultaneously, tracking out each and every kind of input and checking the corresponding output until module is working correctly.

The functionality of the modules was also tested as separate units. Each of the three modules was tested as separate units. In each module all the functionalities were tested in isolation.

Integration Testing

In integration testing a system consisting of different modules is tested for problems arising from component interaction. Integration testing should be developed from the system specification. Firstly, a minimum configuration must be integrated and tested.

In our project we have done integration testing in a bottom up fashion i.e. in this project we have started construction and testing with atomic modules. After unit testing the modules are integrated one by one and then tested the system for problems arising from component interaction.

Validation Testing

It provides final assurances that software meets all functional, behavioral & performance requirement. Black box testing techniques are used.

There are three main components

- Validation test criteria (no. in place of no. & char in place of char)

- Configuration review (to ensure the completeness of s/w configuration.)

- Alpha & Beta testing-Alpha testing is done at developer's site i.e. at home & Beta testing once it is deployed. Since we have not deployed my web-portal, we could not do the Beta testing.

Test Cases- we have used a number of test cases for testing the product. There were different cases for which different inputs were used to check whether desired output is produced or not.

1. Addition of a new product to the cart should create a new row in the shopping cart.

2. Addition of an existing product to the cart has to update the quantity of the product.

3. Any changes to items in the cart have to update the summary correctly.

4. Because same page is inserting data into more than one table in the database atomicity of the transaction is tested.

5. 5. The state of the system after a product has been dragged in to the cart should be same as the state of the system if the same product is added to the cart by clicking a button.

User Interface Testing:

We have verified the interface conform to GUI standards. The System has been developed to be easy-to-use and appropriate for the targeted group of mass housewives, youths and common people with a little knowledge of using a smartphone or a device.

Recovery Testing:

If the system needs any recovery we should update/add the change.

System accuracy test: After the development of whole Real Estate system, it has been tested with seeding the database to check the speed of processing, accuracy and correctness of results.

Chapter 7: Conclusion

7.1 Limitations

- In this web-portal there is no search option . For that reason we can not do search property.
- A typical virus can wash out all information stored in the computer. Then retrieval restoration of data becomes necessary.

- Many necessary features are not available now for user, admin.

7.2 Future Plans

This is the first version our project and undoubtedly, it is not free from imperfection. However, the project is successfully completed for the user experience and is found to be satisfactory. Even though this is not the end of this project, it is indeed a new beginning in that sense that the project can be expanded to larger dimensions So, the possible features that could be added with time are as follows:

- Enhance User Interface by adding more user interactive features
- We will add search option also voice search
- 24*7 customer service
- Feedback and Rating system
- Property request system
- Signup/login using their social media account such as facebook
- Builder and Agent option for the realestate builder and agent.

7.3 References

- All about Microsoft controls in C# https://docs.microsoft.com/en-us/

- Lucid chart for drawing all the Diagrams used in this report. https://lucid.app/lucidchart/f4ee16ee-574b-4294-996b-7c6d6beadbaf/edit?beaconFlowId=C9F3E23E78796E3B&invitationId=inv_9e46d c33-ce65-4750-9e24-423524eed835&page=0_0#

- HTML & CSS,Java Script,jQuery https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiYydHh5b2AhW34jgGHXqjCzkQFnoECBUQAQ&url=https%3A%2F%2Fwww.tutorialspoint.com%2Fhtml_css_and_javascript%2Findex.asp&usg=AOvVaw2PG8nELptaLfFZHRYrIfo

- Bootstrap https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiW-IG3iJb2AhX13zgGHb4lBUQQFnoECAIQAQ&url=https%3A%2F%2Fwww.tutorialspoint.com%2Fbootstrap%2Findex.htm&usg=AOvVaw2ZUzPovnj6sE2j7ahI3i_M

- MySQL https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiT85iBh5b2AhWg4zgGHbF1DO4QFnoECDcQAQ&url=https%3A%2F%2Fwww.tutorialspoint.com%2Fmysql%2Findex.htm&usg=AOvVaw2kRbOTXV6gep39L5wpJImo

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