HOUSE BUY SELL AND RENTAL SYSTEM

 \mathbf{BY}

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APPROVAL

This Project titled "House Buy Sell and Rental System", submitted by Md. Zakaria Nur, ID: 152-15-565 and Md. Robiul Sarker, ID: 151-15-4842 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06.04.2019.

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Tania Khatun**, **lecturer**, **Department of CSE**, Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

Bangladesh is a small country. But the population of our country is huge. For that we also have a lot of problems in different sectors. The housing sector is one of them. Besides many other sectors our housing sector is improving day by day. Though housing for the people of our country is not adequate according to its demand. The government of our country is sincere about it, but for the huge population the outcome is not good. We think this small step, providing a online based house buy sell and rental system will help to minimize the problem in our housing sector.

The purpose of this house buy sell and rental system is to serve the people by providing appropriate homes who wants to buy, sell or rent a house. Here the owner of the house can post ad to sell or give rent the house. And the buyer or tenants can buy or rent their appropriate house for them. The users can also find some real estate agents. The users can access their account from any location and able to edit their information from a central database.

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Chapter 1: Introduction

1.1 Introduction

We know that Bangladesh is a country with huge population. So the housing problem is a big problem here. People are facing this problem regularly. Especially this is a very big problem in our capital city Dhaka. About 18 millions of people lives here. For this housing problem is so big here. It is so tough to get expected homes for live here.

Peoples don't have enough time to search for homes for buy sell or rent. In our house buy sell and rental system they can find different types of houses from different areas at the same time. The main idea of this project is to provide comfort and reduce time for people to buy sell or rent houses. [1]

House buy sell and rental system is a system where authorized people can access their profile from anywhere, 24/7 where internet is available. There are different types of people lives in our country and their expectation is also different based on their income. All types of people can get all types of homes according to their expectations.

In this modern age everything is digital. And our government vision is digitalize our country. All the sectors are upgrading from analog to digital day by day. From this inspiration it's a small step to make the housing sector digital and minimize the pain of searching for homes by the analog way.

Now most of the young people do their daily shopping or something like that from online. They also search homes for buy sell or rent through internet. This is a smart way to find desired homes. People are getting smarter day by day. They don't want to waste their time if a thing can do a short way. Our house buy sell and rental system is a smart system to find desired houses in a short time.

Online based housing system is getting popular day by day. We want to take this one step ahead and more easier.

Usually when we want to buy or sell or rent a house we go there and visit the house if it is not goes with our expectation then we cancel that and go to another.

By this we have to waste a lots of time and also money by visiting multiple houses.

But in our system the users can give advertisement for their house or apartment for buy or sell. They can add photos of interior an exterior of the house. They can give all information about the house.

And the users who wants to buy or rent houses they can see the advertisements and get all the information's about the houses at the same time. They don't need to go to multiple places for searching houses for buy or rent. By this they can save their time and money.

If we look at the developed country, everything is digital there. The housing system like buy sell rent everything is digital there.

We have another type of user. They are the real estate agents. People who wants to contact with the developer or the real estate agents they can find different real estate agents in our system. If someone wants to buy lands or someone who wants to give their lands to the developers they can find different real estate agents here. [2]

Firstly a user need to register himself to get access to the system. Then he can post advertisements or see the advertisements. When a user want to post an ad he need to input some important information about his house. Then he needs to add some photos of the house and some description then he can submit the ad. After submitting the ad it will appear in the admin panel. Then an admin will check the ad and if it looks usual then he will publish the ad and it will appear on the system.

If any user don't know how to post ad or how to register he can learn this from our system.

People can search houses by location and category they want. This will make the process more easier to find desired houses and reduce more times.

1.2Motivation

We takes this project to help people to find houses for buy sell and rent very easily also that the consume time, comfortable to find expected houses. Also we get benefited from this project by business purpose.

1.3 Objective

This system will help people to find their desired houses more easily. It also allow people to find houses location and house category wise.

1.4Expected outcome

- Reduce time.
- Flexibility.
- Free service.
- Smart home search tool.

1.5 Overview

This project has three types of users and admin.

The users are-

- The house owners they can post ad for sell or give rent their house.
- Buyer or tenant they can buy or rent house.
- The real estate agents. People can easily reach them through us.
- And the admin can control all the system. He can Approve, delete ads and have access
 over all the sections.

Main opportunities available in this project are-

- People can save their time by using this system.
- They can find house according to their wanted areas and category.
- Users can edit their profile and can remove their ads.

In this project the data inputted by the user will store in a well designed database. After submitting the ad the admin will review the ad and if he think it is publishable then he will publish the ad and the users can see the ads.

Chapter 2: Background

2.1 Introduction

The House Buy Sell and Rental system is an important approach to provide easily find expected houses to peoples. Because it can access from anywhere via Internet Technology. People will get much benefit from House Buy Sell and Rental system.

2.2 Related Works

We know that it is one kind of housing related works. We also know that habitation is our fundamental right. And it's a part of housing. We can't ensure habitation but we can help to find expected residence easily. There are many projects like us. As like bproperty.com, bikroy.com, lamudi.com, pbazaar.com. These are the popular site in our country to house rental system. There is also another website in USA that is homes.com. In our country which websites are popular their user interface is not so user friendly. And their design is not very smart we think. They only works on house rental or some are working on sell also. But we also have a section for the users where user can find the real estate agents. If any user wants to buy land or give his land to developers they can find the real estate companies very easily through us. And our UI is more user friendly and anyone can understand everything quickly. We think the find agents section is an unique approach in our project. Here user can easily find everything related with housing they don't need to go multiple place for different things. Where there another works related this project there is not this kind of facility. [3]

2.3 Scope Problem

For working this project we face some problem.

- To collect user requirements.
- Design for proper work.

2.4 Challenges

- Ensure proper service to the users.
- Fully dependable on Internet Service.
- High traffic can slowdown server.
- It will be user friendly.

Chapter 3: Requirement Specification

3.1 Introduction

The Software Requirements Specification (SRS) is the requirements specification for the software system that's the overall description of the system being developed.

3.2 Overall Description

This part will describe the functions and their target in the project. It will also describe the constraints and the technical requirements of the project.

3.2.1 Product Perspective

House Buy Sell and Rental System will provide an easier way to find expected houses for buy or rent to the user. There will be a reliable database where the information of the houses and the users will store.

3.2.2 System Interfaces

The software is connected with a MySQL based database server. Besides all the users will connect trough internet.

3.2.3 User Interfaces

The software is a desktop based application. The form has been design as per as user friendly. The main form is an enriched MDI form. Same Login form for all user. After log in, every user will get the same window with distinct menu option as their role and level.

3.2.4 Hardware Interfaces

Our Project is a web base application. There won't need any special types of hardware interface in the system. If we add any feature in future, than we add it.

3.2.5 Communication Interface

The default communication protocol for the data transmission between server and the client pc is the Transmission Control Protocol / Internet Protocol (TCP/IP).

3.2.6 Memory Constraints

There is not a specific memory constraint for this application. In planning phase, project organization, quality plan, testing plan and documentation plan is performed.

3.2.7 Operations

The main operations are the information entry on the form, saving them in the database, searching, updating and publish the advertisements.

3.3 Business Process Modeling

In future we submit our project for business purpose. It's our vision.

A well designed plan is a like a guideline to deliver a high quality software using given resource, timeframe and within the budget available. To develop this software, a will organized plan is used.

3.4 Requirement Analysis and Specification

Extracting the requirements and specification of a desired software product is the first task in creating it. While customer probably believe that they know what can the software do and how to do it in the software, then it may require skill and experience in software engineering to recognize incomplete, ambiguous and contradictory requirements.

We visited different website related to our project and studied their service methods. The software and hardware requirements are also studied and specified in this phase.

We collect requirements first we discussed with some people and shared our idea. We asked them what type of information will help you to buy sell or rent a house? We took their opinion and tried to implement in our project. We also discuss with our supervisor many times for this problem. [4]

3.4.1 Hardware Requirement

To run this website, User need a device. Now we discus about hardware requirement for this project.

Processor	Any type of computer or smart phone's
	processor.
Motherboard	Any
Ram	Minimum 256 MB.
Internet card	Any
Graphics card	Any
Sound Card	Any
Hard Disk	No need
Casing	ATX
Monitor	Any Type Monitor
Keyboard	Any
Mouse	Any

3.4.2 Software Requirement

Different Type of software need to developing and maintaining projected website. Details Given below:

Software	Usage
Any version of windows operating system	To start up computer and coordinate all hardware components, application and customized software.
Wamp or Xampp	To create local server in our Computer
Phpstroam	This is one of the best editor to write code.
Phpmyadmin	To create a database.
Laravel composer	To run project with PHP 10aravel.

3.5 Design

Design phase describes desired features and operations in detail, including database design, software design, screen layouts and other documentation. There are different types of design performed to develop this software like, DFD, Process Flow diagram, use case etc.

We need to design the project some technology

- HTML.
- CSS.
- Java script.
- Bootstrap.

3.5.1 Hypertext Markup Language (HTML)

This module sets the stage, getting you used to important concepts and syntax, looking at applying HTML to text, how to create hyperlinks, and how to use HTML to structure a webpage. In 1987, Tim Berners-Lee, another engineer working as a contractor at CERN, adopted a simplified version of SGML plus a mix of tags from a different specification (CERBguid) and called it HTML. The simplification of SGML made it a more general-purposed markup language. [5]

3.5.2 Cascading Style Sheet (CSS)

CSS is the main demonstration of how different style sheets can change the layout of HTML page. Using CSS, we can change a page with new look selecting many id and class. Without CSS, HTML is like a frame. Hakon Wium Lie is the father of CSS. Lie proposed the concept of Cascading Style Sheets (CSS) in 1994 while with the W3C. [6]

3.5.3 JavaScript

JavaScript and java is the completely different type languages, both in concept and design. With JavaScript we can build real time data transfer web page. Brendan Eich is the father of JavaScript (1995). ECHAScript is the official name of the language.

3.5.4 Bootstrap

Bootstrap is frame work of CSS. We use it for more easy to design a web page. Using bootstrap we can easily a web page completely responsive. Bootstrap was created at Twitter in mid-2010 by @mdo and @fat. Originally released on Friday, August 19, 2011.

3.6 Development Requirement

- PHP (Laravel 5.5).
- MySQL.

3.6.1 PHP Laravel

Laravel is the free, open-source PHP web-framework. Laravel design followed model- view-controller pattern (MVC) and also based on Symfony. Taylor Otwell created Laravel. Laravel's first beta Release was made available on June 9, 2011. Laravel is more popular framework of PHP. It is more secure and developer friendly. Traditionally,

PHP had been like the wild west of programming languages. Because it is dynamically typed, there are a lot of things that could potentially go wrong with no warning. For example, in other languages, code is written in such a way that if a mistake is made it can be caught before code execution.

Either by trying to use the code or by compiling it, the compiler would actually stop you, identify the problem in the code, and require you to fix

it before moving forward. In May 2013, Laravel 4 was released as a complete rewrite of the framework, incorporated a package manager called Composer. [7]

3.6.2 MySQL

MySQL is an open source database product that was created by MySQL AB. It developed inSweden. The project of MySQL started in 1979. Michael Widenius developed an in-house database tool called UNIREG for managing databases. After that UNIREG has been rewritten in several different languages and extended to handle big databases. After some time Michael Widenius contacted David Hughes, the author of mSQL, to see if Hughes would be interested in connecting mSQL to UNIREG's B+ ISAM handler to provide indexing to mSQL. That's the way MySQL came in existence. [8]

3.7 Use Case Diagram and Modeling

Firstly user register and login in website. After login a user can post ad to the website. Without register the user can see the ads but can't post any ad. For posting ads firstly it takes input about the details of house then the user will submit the ad for publish. After submitting the admin will check the ad and if it looks like usual then he will publish the ad to the website. Here user can edit his profile, remove his ads. And the admin can also remove the ads.

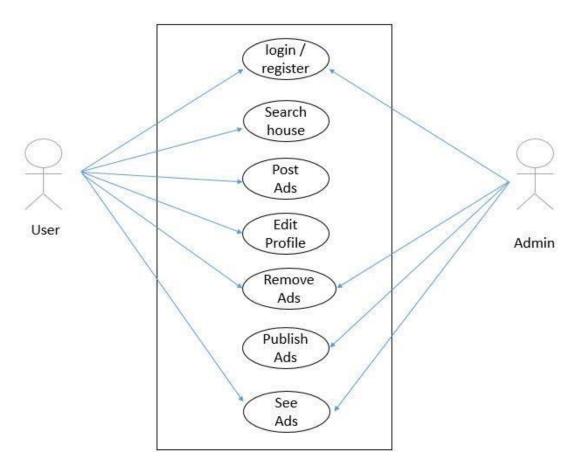


Figure -3.7: Use case Diagram

3.7.0 Use Case Description

Use Case Id:	1
Use Case Name:	Login
Created By:	Md. Zakaria Nur
Date Of Creation:	03-04-2019
Description:	This use case will allow user to login the system. User can easily login the system and see whatever want to see.
Primary Actor:	User
Secondary Actor:	None
Precondition:	None
Post condition:	The system will display the home page

Table 3.7.1 Use case 1

Use Case Id:	2
Use Case Name:	Search House
Created By:	03-04-2019
Date Of Creation:	23-6-2018
Description:	This use case will allow user to search .user can easily search what he/she want in the system
Primary Actor:	User
Secondary Actor:	None
Precondition:	None
Post condition:	The system will show the search result

Table 3.7.2 Use case 2

Use Case Id:	3
Use Case Name:	Post Ads
Created By:	Robiul Sarker
Date Of Creation:	03-04-2019
Description:	This use case will allow user to post ads and give information about the ads via internet.
Primary Actor:	User
Secondary Actor:	None
Precondition:	User have to give valid information and legal information.
Post condition:	The system will store the information and display the photo.

Table 3.7.3 Use case 3

Use Case Id:	4
Use Case Name:	Edit profile
Created By:	Robiul Sarker
Date Of Creation:	03-04-2019
Description:	This use case will user edit his advertise information and edit profile.
Primary Actor:	User
Secondary Actor:	None
Precondition:	None
Post condition:	The system will display the information of the user.

Table 3.7.4 Use case 4

Use Case Id:	5
Use Case Name:	Remove ads
Created By:	Zakaria Nur
Date Of Creation:	03-04-2019
Description:	This use case will provide to User and Admin. When an ads store many days ago but not get good feedback then User and Admin can minimize the Ads.
Primary Actor:	Admin
Secondary Actor:	User
Precondition:	None
Post condition:	None

Table 3.7.5 Use case 5

Use Case Id:	6
Use Case Name:	
	Publish Ads
Created By:	Md. Zakaria Nur
Date Of Creation:	03-04-2019
	This use case will Admin to publish Ads when user post Ads in the site .Admin check the user
Description:	post when the post not illegal and not unusual then Admin Publish the Ads.
Description.	then 7 kmm 1 donish the 7 kgs.
Primary Actor:	Admin
,	
Secondary Actor:	None
Precondition:	User must post auspicious Ads
Post condition:	None

Table 3.7.6 Use case 6

Use Case Id:	7
Use Case Name:	See Ads
Created By:	Zakaria Nur
Date Of Creation:	03-04-2019
Description:	Admin and User See the Ads .Only user can post ads and Admin monitoring The system.
Primary Actor:	Admin
Secondary Actor:	User
Precondition:	User must have proper internet Connection
Post condition:	None

Table 3.7.7 Use case 7

Chapter 4: Design Specification

4.1 Front-end Design

This is our home page. When user visit our website, first show this page. In home page without login user can't post ad page. But in home page user can see ad list and ad information's and other pages. When a user get registered of if user already logged in, can access post ad page. Otherwise show registration form for registration. User can also search homes by location here.



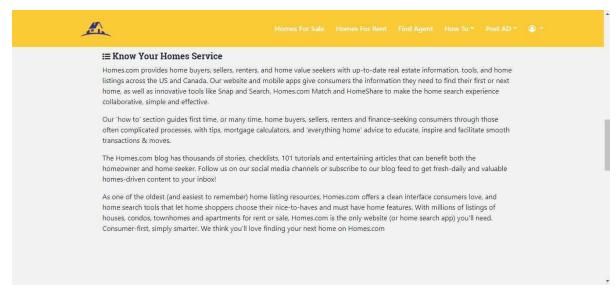


Figure: 4.1 Front-end Design © Daffodil International University

4.2 User Registration

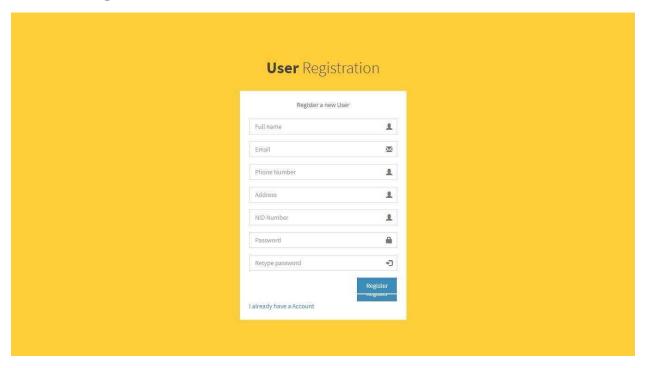


Figure: 4.2 User Registration

4.3 User Login

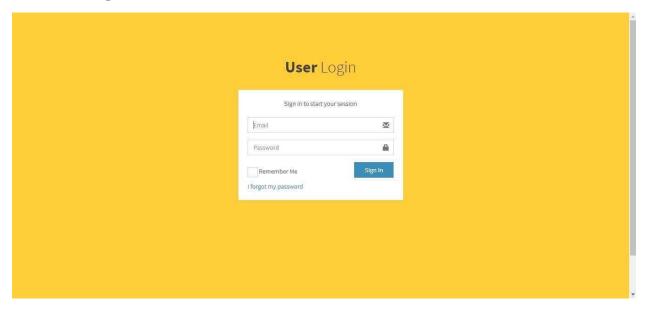
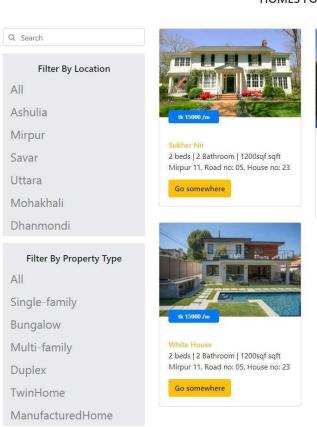


Figure: 4.3 User Login

4.4 Homes for rent



HOMES FOR RENT

4 beds | 3 Bathroom | 2000 sqft

Go somewhere

Mirpur 11, Road no: 05, House no: 23

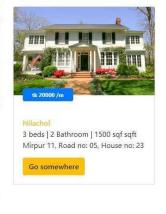


Figure: 4.4 Homes for rent

4.5 Homes for sell

HOMES FOR SALE

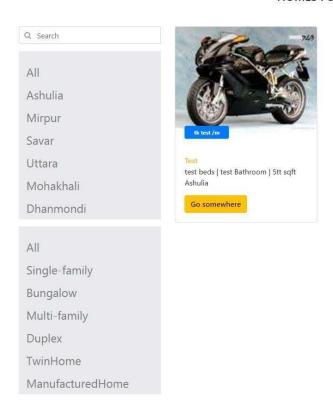


Figure: 4.5 Homes for sell

4.6 Post ad for rent or sell



Figure: 4.6 Post ad for rent or sell sell.

4.7 Find Agent

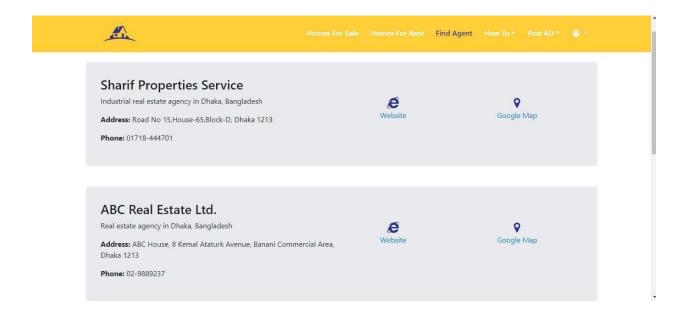
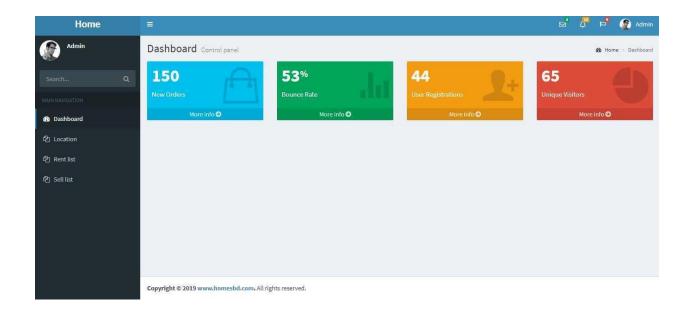


Figure: 4.7 Find agent.

4.8 Back-end Design

In admin panel, we use an admin panel template. In this template has all facilities of admin panel. We show data in admin panel by tabular format. From admin panel, we can create, update and delete any data. To get access admin panel, firstly we need to login. When we login in admin panel than we show the admin panel dashboard.



4.9 Implementation of Requirements

In previous we also discuss, we use HTML, CSS, JAVASCRIPT and PHP (27aravel). Firstly we design our template. Than we transfer it into code using HTML, CSS and JAVASCRIPT. For use PHP 27aravel, we transfer it into 27aravel blade template. For Proper segmentation we use unique folder and file. We also use bitbucket online store. It help us to control version and safe.

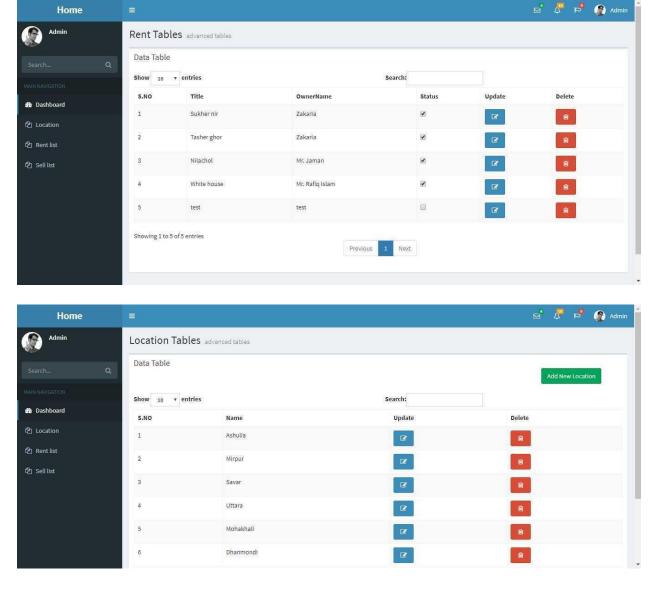


Figure: 4.9 Data Table

Chapter 5: Implementation and Testing

5.1 Implementation of Database

We know that database is very important part of every project. In our project, we try to design database with very clear segmentation. We use MYSQL database.

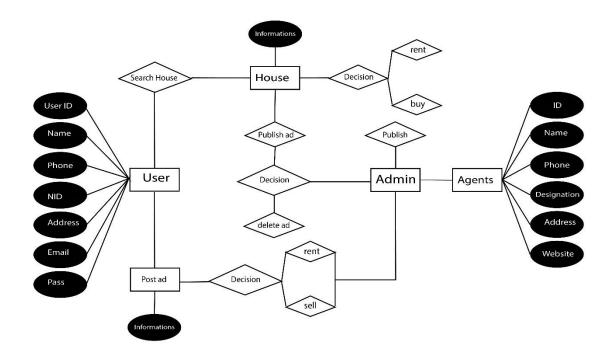


Figure: 5.1 ER Diagram



5.2 Implementation

Implementing the software design into the code and form design is the most significant part of the software. This is the development phase of the application. In this phase codes are written and necessary requirements are assembled to build the software.

5.3 Integration and Testing

In this phase, Brings all the pieces together into a special testing environment, then checks for errors, bugs and interoperability.

Chapter 6: Conclusion & Future Scope

6.1 Conclusion

The project House Buy Sell and Rental System is to provide people comfort to search for homes and minimize the time. The system also provide users to connect with the real estate agents through us. The developed project can deploy anywhere to make easy for searching home. Government should also digitalize this sector.

6.2 Future Scope

House buy sell and rental system is developed to provide easier and effective way to get expected homes. Now this system is capable to add user, user registration, post ad, search house by location and category wise through internet.

Development can be carried out. A few area of the future works are outlined below:

- a) Ensuring more option to search houses.
- b) Improving we will take review about our system and how can we improve more.
- c) Converting the whole system into android system.

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