



## **Master Project WS 2017 (M1)**

### **Real Estate Property Finder (REasy)**

**Team Number:**

fa17g19

**Team Members:**

Muhammad Omer Aslam

Saud Bin Habib

Guda Praveen Kumar

Abdul Bari Sheikh

**“Milestone 1”**

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## 1) Executive Summary

The scope of World Wide Web have spread across millions of household, so naturally, Internet has become by far the best platform for real estate marketing today. Nowadays, when everything is online, how is it possible that real estate left web application behind. There are a lot of real estate companies who advertise their property online so idea behind developing this application is that their property can also sell, or buy properties using this. These applications are not widely popular but in near future, they have large scope of growth.

Two entrepreneurs, Fulda AI alumni, decided to create a start-up comprising of a team of about 3-5 students to develop a web-based online service for allowing people to buy and sell their real-estate (apartments, houses) and selected real-estate companies to post their listings. This site will be exclusively used by listing real estate agents from 3 local real estate companies (SFStateHomes, SJStateRealtors and CSURealEstate) to post content. Name of our project is “REasy”

The Real Estate agents have their own dashboard through which they can upload the new real estate properties like houses, apartments and shops etc. Through that dash board they can also manage the previous properties and they can also able to get into the contact with the customer/ buyer which is interested in purchasing in any specific property.

**REasy** is an Online Real Estate business website through where a buyer can browse, search and filter for the different apartments and the buyer have their own dashboard through which buyer can also manage their contacts and their preferred properties which they most like and they can add that property into their preference list. The buyer can also contact or message the Owner of the property from the website so the both can discuss about the property.

This project is developed by 4 students of Master of Global Software Development. The First Member and the team leader is **Muhammad Omer Aslam** who is from Pakistan and has 5 years of experience in Software Development, The second member of the team is Saud Bin Habib who is also from Pakistan and have 2 years of experience in developing android and web applications. The third member of the team is Praveen Kumar who came from India and he has two year experience in developing web related applications. The fourth member of the team is Abdul Bari Sheikh who came from Pakistan and have 2 years experience of working different web related applications.

## 2) Use Cases

There are multiple use cases of this website which are as follows.

- Finding Real Estate

This application targets that audience who are looking for houses or apartments. They can visit the site and see the available real estate advertisements and choose any one according to their desire. Following are the possible use cases for this application:

- Selling Real Estate

This application can also be used by them who wants to sell their property. They can contact to the available real estate companies and post their property advertisements on this application.

- Real Estate Agents/Companies

There are some agents/companies who got a lot of leads to sell the property but due to the lack of advertisement or marketing they are unable to sell the properties easily. Here this application facilitate them to quickly post real estate ads.

- Real Estate Market

This application can also be used to have an idea about the current market valuation of the property with respect to the location and type of property.

As far as the functionality of this application is concerned, following activities can be performed by the users.

The Real Estate agent can login into the website and can upload the Images and description of any property which he want to sale.

The Real Estate agent can also check his dashboard and can manage or update the data regarding the previous properties information.

The Real Estate agent can also contact with buyer and can reply to the messages of the Buyer.

The buyer can login into the website and can browse, search and filter for the specific properties which he want to purchase.

The buyer can also check his dashboard for the sake of checking his interested properties and manage the record of all his history of properties.

The buyer can also send the contact request to the Real Estate agent or the buyer can send direct message to the Real Estate agent for the sake of querying the property.

### 3) Data Definition

Following are the key terms which will be used in application as well as further documents.

#### 1. Users

In this application, Users are those who are going to use this WWW application. Here users can do many activities like view real estate advertisements, search and filter the advertisement according to his/her need, contact agents/companies to post their real estate advertisements etc. There are some activities where user needs to sign up in order to do that.

#### 2. User Types

If we drill down the user further, there will be two types of users

##### Customer

Customers are the one who can browse and search the real state advertisements. They can also add/contact real estate agents to post their content

##### Real Estate Agents

Real estate agents are the one who post their own or customer's real estate advertisements. They can send/receive messages from customers.

#### 3. Real Estate

In this application, real state refers to the user's property which users want to sell or purchase. There can be two types of categories for Real estate property.

##### Apartment

##### House

#### 4. Real Estate Companies

In this application, there are three real estate companies who will be posting real estate advertisements and to which customer can contact for buying and posting their contents for selling. Name of above three companies are

##### **SFStateHomes**

##### **SJStateRealtors**

##### **CSURealState**

#### 5. Real Estate Advertisement

This is the main entity of application. It will contain the information about advertisement. There will be certain description of each advertisement. Real Estate Companies' agents will post it.

#### 6. User Messages

In this application, users can communicate via messages. Customer can send messages to real estate companies for posting their content. Also real estate agents can communicate with customers or reply on messages.

#### **4) Functional Requirements**

Functional requirements define what the system is supposed to do or what functions are required. By describing the activity of the user, the functional requirements for the implemented software can be gradually refined. Use cases describe the functionality of the system in a structured form and answer the question: "Who can do what with the system?".

- i- The Real Estate Agent can login into the Website.
- ii- The Real Estate Agent can upload the new property for sale.
- iii- The Real Estate agent can manage the previous properties through dashboard.
- iv- The Real Estate Agent can reply to the buyer.
- v- The buyer can login into the website.
- vi- The Buyer can browse, Search and Filter the properties.
- vii- The Buyer can manage the properties in which he/she is interested using dashboard.
- viii- The buyer can send contact request to the agent or can send message to the agent for querying the property.

## 5) Non-Functional Requirements

Non-functional requirements are requirements that do not directly affect the specific services the system provides to the user. Here all those characteristics which is being fulfilled by our website are mention below.

- i- Application shall be hosted and deployed on Google Cloud Platform as specified in the class.
- ii- Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of all major browsers: Mozilla, Safari, Chrome.
- iii- Application shall have responsive UI code so it can be adequately rendered on mobile devices but no mobile native app is to be developed.
- iv- Data shall be stored in the MySQL database on the class server in the team's account.
- v- Application shall provide real-estate images and optionally video
- vi- Maps showing real-estate location shall be required
- vii- Application shall be deployed from the team's account on AWS
- viii- No more than 50 concurrent users shall be accessing the application at any time
- ix- Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
- x- The language used shall be English.
- xi- Application shall be very easy to use and intuitive. No prior training shall be required to use the website.
- xii- Google analytics shall be added.
- xiii- Messaging between users shall be done only by class approved methods and not via e-mail clients in order to avoid issues of security with e-mail services.
- xiv- Pay functionality (how to pay for goods and services) shall not be implemented.
- xv- Site security: basic best practices shall be applied (as covered in the class)
- xvi- Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development.

## 6) Competitive Analysis

### Competitors

Trulia, Wg-gesucht and Zameen

### Proposed

REasy Project

S.no	REasy Project	Competitors
1.	Buyer, Seller and Agent can view the property listings with or without login.	Buyer, Seller and Agent can view the property listings with or without login.
2.	Buyer can see location of the property, can add property to his favourite list.	Buyer can see location of the property, can add property to his favourite list.
3.	Filter is provided for searching apartment, can save his search.	Filter is provided for searching apartment, can save his search
4.	Agents, buyers and sellers have their own dashboards.	Agents, buyers and sellers have their own dashboards.
5.	Buyer can refer/share a property to the his friend or to other customer.	Sharing option is not available.
6.	Buyer can rate the agent according to his/her dealing. (feedback)	Cannot rate the agent.
7.	Buyer can share his experience through comment with the company	

In the above analysis our project and competitors projects have similar features (1 - 4) and remaining features (6 -7) are not present in the competitor's websites. In our proposed project buyer can refer or share a property to his friend which suits his friends requirements. Buyer / seller can rate the agent based on their experience with agent. Buyer can share his experience with company through comments like he can describe about the house he bought or rented with the company and how satisfied he is.

## 7) System Architecture

System Architecture include all the main Software components and tools which are being used in the web application. The software architecture components are as follows.

- 1- Host: Google Cloud Platform
- 2- OS: Ubuntu Server, Version: 16.04
- 3- NGINX: 1.12.1
- 4- MySQL Version: 5.7.19
- 5- OpenSSH Version: 7.2
- 6- Git Version: 2.7.4
- 7- node: v8.4.0 (Express Framework)
- 8- npm: 3.5.2
- 9- pm2 : 2.6.1



## 8) Team

The team consists of four students of Master in Global Software Development. The team members are as follow.

Name	Role	Email	Phone
Muhammad Omer Aslam	Team Lead	md.omeraslam@gmail.com	+491636821459
Saud Bin Habib	Backend Lead	saudkhan3551@outlook.com	+491636744092
Guda Praveen Kumar	Backend Developer/ Front End Lead	praveenguda.kumar@gmail.com	+4917657905308
Abdul Bari Sheikh	Backend Developer/ Git Master	sheikh.bari00@gmail.com	+491636821466

## 9) Check List

Points	Done	On Track
1. Team Decide on basic means of communication.	Done	
2. Team found a time slot to meet outside of the class	Done	
3. Front and back end team lead chosen.	Done	
4. Github master chosen.	Done	
5. Team ready and able to use the chosen backend and frontend frameworks.		On Track
6. Skills of each team member defined and known to all.	Done	
7. Team lead ensure that all team members read the final M1 and agree understand it before submission.	Done	