co$moReal Property Management System

Software Requirements Specification

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1. Introduction

We are stuck with technology when what we really want is just stuff that works. With the current paradigm shift in the technological field, there is an urgent need to embrace and appreciate the power of technology. Housing and property management sector remains vigilant to face the challenges of change by employing a new strategy that facilitates easy management of properties. Hence there is a need to develop an Online Property management System. The Property Management System is searching based on apartments and houses for rent,buying and selling properties in metropolitan cities. Through this application, owners of the properties can sell or give their property on rent.

The portal is a platform for potential tenants/buyers to avail more information on the property, like, its location, area of the plot/flat, size of rooms, parking etc. A majority of unpleasant issues faced by owners and tenants seem to grow due to lack of communication. The Property Management System is also designed to support both tenants and owners by enabling them to document and communicate repair issues, send automatic rent reminders, package notifications and emergency information.

1.1. Purpose

Property Management System is a web application that will allow its users to view, compare, bid,make advance payments for the properties/apartments listed. The application will also provide its users with the facility of searching for different properties. There will three types of users (Owner, User and Administrator) in this application. Admin can manage user, manage property categories, manage property advertisements and verify posted property by owner. Owner can search property advertisements, post property advertisements and manage advertisements. User can view property advertisements and explore all categories in the home page GUI. User can also compare different properties and give his/her bid for specific property, after approval bid user can make payment and purchase property. The users can also search for apartments and houses for rent in metropolitan cities,pay their rents,file complaints through the website. There will be a proper registration/login interface for Owner, User and Administrator to access the application.

1.2. Scope

The Software Requirements Specification captures all the requirements in a single document. The *Online Property Management System* that is to be developed provides the users with buying,selling,renting properties,houses and apartments in metropolitan cities. The Online Property Management System is supposed to have the following features.

- The product provides the users with online buying,selling and renting of properties and the Online Property Management System is up and running all day.
- The system provides login facility to the users.
- The system provides the members with the option to check their account and/or change their options like password of the account whenever needed all through the day.
- The system allows the members to block the properties 24 hours a day.
- The system lets the admins or owners of properties to check which all members have blocked the property.
- The system allows the owners to create the properties catalog, add/delete properties and maintain the catalog.
- The system updates the billing system as and when the member blocks or unblocks properties.
- The property catalog is automated and the decision of offering the property based on the category of the property is automatically decided.

1.3. Definitions, Acronyms and Abbreviations

- PIN – Personal Identification Number

1.4. References

The *SRS document* uses the following documents as references:

1.4.1 IEEE Software Requirements Specification format

1.4.2 ISO Software Requirements Specification format

1.5. Overview

The SRS will provide a detailed description of the Online Property Management System. This document will provide the outline of the requirements, overview of the characteristics and constraints of the system.

1.5.1 Section 2: This section of the SRS will provide the general factors that affect the product and its requirements. It provides the background for those requirements. The items such as product perspective, product function, user characteristics, constraints, assumptions and dependencies and requirements subsets are described in this section.

1.5.2 Section 3: This section of SRS contains all the software requirements mentioned in section 2 in detail sufficient enough to enable designers to design the system to satisfy the requirements and testers to test if the system satisfies those requirements.

2. Overall Description

2.1 Product Perspective

The Online Property Management System is a tenant portal that would allow residents of a property to communicate with their property managers and fellow tenants. It manages almost everything ,from billing to tracking vacancies . This system will add the necessary tenant-related information to the backend databases to allow it to accurately track each tenant. The tenants will be able to query the system about various properties with a set of requirements . And the system manages a feed page where information about properties from owners are posted and updated as and when needed . This system also has a facility that gives access to the tenants for rent payments and also post any maintenance problems if any . The need for such an app is apparent: rent payments and maintenance requests are tasks that tenants must perform frequently and tenants do not generally have a simple way to perform them. By providing tenants with an application that lets them handle these menial tasks in an efficient and centralized manner, their lives will be made easier .

2.2 Product Functions

- Each tenant and landlord will have their own account
- Users will have the ability to login and out
- Users will be able to pay their rent through this system
- Users will be able to submit a maintenance request
- owners will be able to post information about the land they own
- Users - tenants/buyers will also be able to query for properties
- The tenants/buyers get a set of property suggestions based on their requirement
- Once a property is selected other required information about the property will be provided including an estimated cost
- The tenants/buyers get a confirmation message for the selected site

2.3 User characteristics

Users of this system will consist of tenants and owners along with administrators to maintain the system .The users are assumed to have basic knowledge of the computers and browsing .The proper user interface and users manual must be sufficient to educate the users on how to use the system without any problems.

2.4 Constraints

- The information of all the properties provided by the owners must be stored in a database that is accessible by the Online Property Management System
- The users access the system from any computer that has Internet browsing capabilities and an Internet connection.
- The users must have their correct usernames and passwords to enter into the Online Property Management System
- The user should be above 20 years old with an admissible financial background to be able to buy or sell a property

2.5 Assumptions and dependencies

- The users have sufficient knowledge of computers.
- The computers used should have Internet connection and Internet server capabilities.

- The users know the English language, as the user interface will be provided in English
- The product can access the property database

3. Specific Requirements

This section describes in detail all the functional requirements.

3.1. Functionality

3.1.1 Logon Capabilities

The system shall provide the users with logon capabilities.

3.1.2 Mobile Devices

The Online Property Management System is also supported on mobile devices such as cell phones.

3.2. Usability

3.2.0. The system shall allow the users to access the system from the Internet using HTML or it's derivative technologies. The system uses a web browser as an interface.

3.2.1. Since all users are familiar with the general usage of browsers, no specific training is required.

3.2.2. The system is user friendly and self-explanatory.

3.3. Reliability

The system has to be very reliable due to the importance of data and the damages incorrect or incomplete data can do.

3.3.1 Availability

The system is available 100% for the user and is used 24 hrs a day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

3.3.2 Accuracy

The accuracy of the system is limited by the accuracy of the speed at which the owners of the house /land ,the real estate agents, the bank, customers who want to rent or buy property use the system.

3.3.3 Maximum Bugs or Defect Rate

Not specified.

3.3.4 Access Reliability

The system shall provide 100% access reliability.

3.4. Performance

3.4.1 Response Time

The Splash Page or Information page should be able to be downloaded within a minute using a 56K modem.The system shall be allowed to take more time when doing large processing jobs.

3.4.2 Administrator Response

The system shall take as less time as possible to provide service to the administrator or the users of the online property management system .

3.4.3 Throughput

The number of transactions is directly dependent on the number of users, the users may be the property owners, tenants or buyers.

3.4.4 Capacity

The system is capable of handling 5 users at a time.

3.4.5 Resource Utilization

The resources are modified according to the user requirements and also according to the type of property/land requested by the tenants/buyers.

3.5. Supportability

The system designers shall take in to considerations the following supportability and technical limitations.

3.5.1 Internet Protocols

The system shall comply with the TCP/IP protocol standards and shall be designed accordingly.

3.5.2 Billing System Data Compatibility

The member balance amount that will be calculated and sent to the billing system shall be compatible with the data types and design constraints of the billing system.

3.5.3 Maintenance

The maintenance of the system shall be done as per the maintenance contract.

3.5.4 Standards

The coding standards and naming conventions will be as per the American standards.

3.6. Purchased Components

The system need not purchase any licensing products.

3.7. Interfaces

3.7.1 User Interfaces

The Website will display options for two different portals - Renting ; Trading of properties

- **Login**–The login page will provide users with two separate fields to enter their username and password and a login button that will submit that information. The user will also have links for requesting an account, retrieving a lost password and unlocking their account.
- **Request Account**– The request account page will allow the user to submit their email address and request an account be set up for them.
- **Reset Password**– The reset password page will have users submit their email address in order to receive instructions on how to reset their password.

For the rest of the pages, a general template is assumed. The header for every page in the protected area of property Management System will display a button for the user to modify their general application settings and a back button that will take them back to the main page. From the main page, the user will be able to navigate to the following pages:

1. **Rental Portal**

   - **Pay Rent**– The rent page will allow the user to submit a new payment. It will have inputs for the payment amount, the date on which to pay, the user's name and the user's bank account information.
   - **Maintenance Request**– The maintenance page will allow the user to submit a new maintenance request. This form will allow them to describe the issue and indicate whether maintenance personnel have permission to enter the complex.
   - **Contact**– The contact page is a simple form that the user can use to contact their property manager.

2. **Trading of Properties Portal**

   - **Buy Property**– This page will display a list of properties available to buy. Users can give inputs like the location of the property, price range, Type of property(apartments,villa,land), Number of BHK, Purpose(Commercial/Residential) , Used or New
   - **Sell Property**– This page will allow users to provide information about properties that they have to sell. If the owners are interested in the property,they will buy it and add it to their own list of properties.
   - **Rent Property**– This page will display a list of properties available to rent. Users can give inputs like the location of the property, price range, Type of property(apartments,villa,land), Number of BHK, Purpose(Commercial/Residential) , Used or New

3.7.2 Hardware Interfaces

The existing Local Area Network (LAN) will be used for collecting data from the users and also for updating the information about available property for selling or leasing for renting .

3.7.3 Software Interfaces

A firewall will be used with the server to prevent unauthorized access to the system.

3.7.4 Communications Interfaces

The Online Library System will be connected to the World Wide Web.

3.9 Applicable Standards

The ISO/IEEE guidelines for the documentation of computer based application systems will be followed.

4. Supporting Information

The use-case storyboards or the user-interface prototypes are not available. The appendices are not to be considered as part of the requirements.