Property Management System

Software Requirements Specification

Capstone Computing Project 1(Semester 1 2019 Sri Lanka Inst Info Tech)

Group No - SD07

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1.INTRODUCTION

1.1 PURPOSE[1]

The purpose of our project , Property Management System is to develop a system which enhances the management and efficiency of properties including User Management, Property Management,Review and Commenting,Booking Management,Searching and Preferences Management,

1.2 INTENDED AUDIENCE AND READING SUGGESTIONS

This document is intended for ,
- ❖ Our client Mr. Dammika De Silva ; Senior Lecturer at SLIIT.
- ❖ Developers
- ❖ Project Testers
- ❖ End Users

1.3 PROJECT SCOPE[2]

Our project Property Management System consists of main five functionalities ; Property Management, Booking Management, Bookmark and Save, Review and Commenting, User Management.One of our main goals is to provide an automated system to the client to manage daily requirements of hotels , apartments , houses , shopping centers and etc…

Help the customers to choose the best living environment, provide properties for affordable prices, maintain high security, handle bills more accurately are few of our objectives.Primarily our aim is to provide anytime anywhere service to the customer.

By using an automated system with advanced technologies we can save time as tenants can access information at anytime anywhere easily through a device.Also transactions can be handled over the system effortlessly.Keeping track of tenants requests , updation of details , recording of data , communication between the property manager and tenants can be done smoothly through this system.

1.4 REFERENCES

[1]Available at: [online] https://www.allpropertymanagement.com/resources/faq/what-is-a-property-management-system/ [Accessed 8 March 2019]

[2]Available at: [online] https://headchannel.co.uk/7-benefits-of-using-property-management-software-321 [Accessed 8 March 2019]

Available at: [online] https://tejalal.files.wordpress.com/2015/09/atm-srs.pdf [Accessed 9 March 2019]

2. SYSTEM

We are planning to build a web based application for this project to give the user a mobility and ease of use over desktop and mobile devices.Project will be mobile responsive.

Back end will be developed using PHP,We are using a PHP framework called Laravel to build the dashboard. It will also use HTML,CSS or AngularJs as front end languages & Javascript for small calculations. Data will be stored in the server. We are using mySQL for database data handling.

We are using Github to manage the project repositories. The reason to choose this platform is we have experience in Github with past projects .All the project codes and other resources will be stored in github.

For Project management,Task allocations and progress will be handled using Trello.

3. FUNCTIONAL REQUIREMENTS

3.1) User must be able to manage residential units.

3.2) User must be able to be informed about bills and payments.

3.3) User must be able to book residential units(tenant booking management).

3.4) User must be able to manage maintenance through the system.

3.5) User must be able manage complaints(ex:-Technical issues of units)

3.6) User must be able to log in to the system using any device.

3.7) Stored data must be secured and able take backups.

3.8) user should be able to change user passwords and profile.

4. FUNCTIONS

4.1. User management

There are 3 type of users in this system.
  1.System Admin
  2.Tenant
  3.Landlord

These users are able to do following functions using this system.

1.1 Register to the system using email,facebook
1.2 Login/Logout
1.2 Recover password
1.3 Add details to user profile
1.4 Admin can delete users from the system
1.5 Tenants can view there saved/bookmarked properties
1.6 Landlords can view new notifications about the properties they posted.

4.2. Property Management

Property management involves managing a property owned by another person or an entity. The tenants are able to rent their real estate for the customers. The real estate can be anything from commercial, residential and industrial including apartments, rooms and detached houses. The main actors of this function are the tenants who rent the property. The individual agents can advertise their property in the online property management system to attract the potential customers. In this module the tenants can add information regarding their properties and update them as necessary and delete it according their preference and the system admin can keep records of all the tenants and properties and manage them accordingly.

1.1 First the tenants have to register into the system if they are new users
1.2 If they already registered for the system they can sing in using the login credentials
1.3 They can add property they wish to sell by selecting from the main categories which includes whether it's an apartment, room or a detached house etc.
1.4 Then they can add more features like the number of rooms, the area of each room , whether furniture is provided or not etc
1.5 If they have repair the property or re-built new features they can update those additional features as well.
1.6 Same tenant can add or update more types of properties too for rent.
1.7 They can choose the time period they want to rent their property
1.8 Tenants can delete the property from their list if they no longer rent them.
1.9 Tenants must be able to search the location in the map to assign the location their specific property they want to sell for the use of their buyers.

1.10 Finally tenants can sign out after they have completed their task.

Managing of the real estate properties are solely implemented in this function. Managing the properties and features of real estates efficiently and accurately will help to attract many potential buyers because they can easily search real estate according to their needs by the features they are looking for.

4.3. Bookmark and Save

Users can save their favourite properties using a single click.This helps them to get notifications if those properties are sold/rented/or available.(description of this function is based on back end algorithm we are using)

4.4. Booking Management[1]

Booking Management is a platform to manage front end functionalities.The key roles of the function are Tenants and Property Manager.The main objective of this function is to cover bookings , check-ins, check-outs, manage rates, assign properties of large scale hotels, private residencies, vacation properties and etc..

Our system provides the information about each property that the tenants can reserve.These information includes no of rooms per property, property size, facilities the property provide, rentals, whether the property is already reserved or not, available time period and so on.As a result tenants can easily identify the property that best suits for their preference.

Our system provides direct bookings for the tenants from our web application.And also tenants can change or update their bookings easily.Apart from that system allows the user to rserve with their mobiles, desktops or laptops which means our system is responsive on any screen.Therefore without going to the property manager, tenant can do the reservation of a property as well as the payments for a particular property online.After tenant completes her/his booking the system generates an invoice containing the summary of the reservation.Moreover our system provides anytime anywhere service to the tenant.

Basically Our Property Management System facilitates the entire booking management process through this booking management function.

[1]Available at : [Online]
https://www.littlehotelier.com/all-in-one-online-system/ [Accessed 9th of April 2019]

[1]Available at : [Online]
https://www.oracle.com/industries/hospitality/what-is-hotel-pms.html [Accessed 9th of April 2019]

4.5. Search and Preferences Management

4.5.1 Search

This function allows the tenant to search properties.Tenant can search properties by the rental, no of rooms, facilities and so on.When the tenant click on the search button the system displays the result.By clicking on the results tenants can view properties easily.

4.5.2 Preference Management [1]

Tenants expect a personalized experience with this property management system that they choose to engage with. This function enables,
>How well we know our tenant?
>What does tenant want from system?

It's better to communicate with our tenants to get better understand about them. Then we can understand who will be our target. We can learn what our tenants say about our system. There are 3 ways for it.

1. Listen - We can collect tenant preferences using tenants feedback to enhance the overall tenants experience.
2. Remember - We can managed these preferences data. From that we can know our tenants.
3. Respond - We can provide more targeted and relevant communications based on tenants preferences.

Using tenants informations we can give preferences for them. Also we can see tenants reviews and comments to get further details.
We can prefer what sort of things that they want by searching their preferences. We can collect information about what they search most times and what they search least times to summarise their preferences.

6. Review and Commenting [2]

This function uses to take tenant's reviews and comments. Also tenant can rate the service. Using this function we can manage reviews and comments.

Tenant must both rate and review the system. They can't rate the system without leaving reviews. And also they can't add comments without rating the system. Five rating stars are shown in here. Tenant can rate our system by looking at standard,looking at design,looking at performance and looking at accessibility.

These reviews and rating are displayed on the page with reviewers name and date. Their rating stars are show in first and reviewer name in second and the date after that. Under these details comments and reviews of tenants shown. Normally newest reviews are shown in top of the reviews as first. And this page indicates how many total ratings are there. Only one review is allowed per tenant.

[1] Available at: [online]
https://possiblenow.com/ [Accessed 6th of April 2019]

[2] Available at: [online]
https://dev.weebly.com/pf_apps_comments.html [Accessed 8th of April 2019]

5. NON FUNCTIONAL REQUIREMENTS

5.1)   System should be easy to access.

5.2)   User must have a simple interface to interact.

5.3)   Service must be uninterrupted.

5.4)   Database should be able to handle large loads of data.

5.5)   The user interfaces are simple and easy to use.

5.6)   Minimum response time

5.7)   The load time for the interfaces should be minimum.

5.8)   Reliability of the system.

5.9)   Interoperability of the system by using both web and mobile application.

5.10) Maintainability of the software.

5.11) Availability of the software for the end users of the system.

6. CONSTRAINTS

6.1) We will not build a mobile application for this project.But the software we are going to develop is responsive on both web and mobile devices.

6.2)   It requires more resources and time to test our software on different screen sizes.Therefore we won't be able to test software due to less resources.

6.3)   Even if the tester didn't recognize any errors in the system , still there can be system failures.Therefore it will lead to limited testing on the robustness of the system.

6.4) In different networks loading time is different from each other which means loading time depends on the speed of the network.

7. VERIFICATION

7.1) We will upload sample data and Test all the functionalities.

8. EXTENSIONS

8.1) Include more functions; utility bill management , maintenance management, payment management.

8.2) Hope to develop a mobile app for the system in the future.

8.3) Extend the current property management system to the hospitality industry by implementing Hotel Property Management.The system automates functions of the hotel management system.

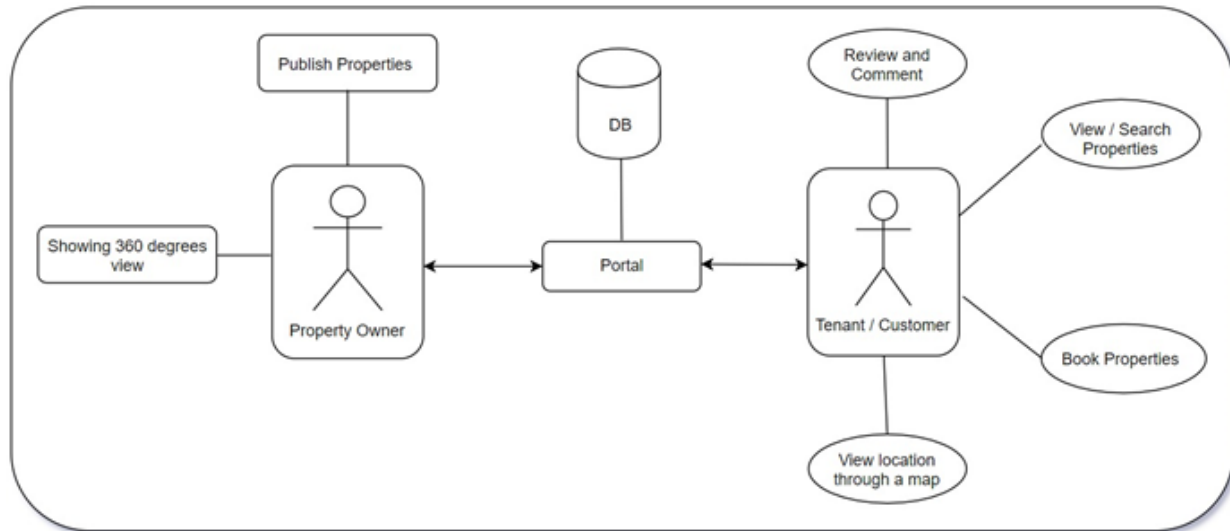# 9. APPENDIX

Figure 9.1 : System Diagram

Figure 9.2 : Function Diagram

Approval of the Client :

Date : 12/04/2019   Signature :

Approval of the Supervisor :

Dear Student

It looks alright and covers what is required though it has deviated from the template. Better to use standard terms in appropriate places e.g" system features" ; You have used topics such as system, functions etc.