

CS383 GROUP PROJECT SOFTWARE REQUIREMENT SPECIFICATION (SRS)



Report By :

Sadeem Al-resaini

ID:421202041

Reef Alkhudhairi

ID: 421202087

Leen Alsheeb

ID:421202006

Rana Alnughaimshi

ID:392207728

Latifah Alamer

ID: 421201944

Lina Altuwayjiri

ID: 421201911

Raghad Alshammari

ID: 421202094

**Supervisor: Dr.Delel
Rhouma**

CONTENT



1. Introduction

- 1.1. Purpose
- 1.2. Scope
- 1.3. References
- 1.4. Structure

2. System Overview

- 2.1. Product Perspective
- 2.2. Product Features
- 2.3. User Roles and Characteristics
- 2.4. Operating Environment
- 2.5. Assumptions and Dependencies


3. Functional Requirements

- 3.1. User Registration
- 3.2. Main Activity
- 3.3. Payment

4 External Interface Requirements

- 4.1. User Interface
- 4.2. Hardware Interface
- 4.3. Software Interface
- 4.4. Communication Interface

5. Non-functional Requirements

- 5.1. Performance Requirements
 - 5.2. Security Requirements
 - 5.3 Safety Requirements
 - 5.4. Authentication Requirements
 - 5.5. Software Quality Attributes
- 

INTRODUCTION

1.1 Purpose

A property rental application aims to simplify the process of managing and renting properties. The application provides a comprehensive and efficient platform for property owners and tenants, to streamline the search, rental, and management of properties in a seamless and organized manner.

Ethics and Responsibility:

- **Client and Employer:** Prioritize client and user privacy by adopting strict data protection measures. Communicate to users how their data will be used and ensure that their consent is obtained.
- **Product :** Provide accurate and clear information about rental properties. This includes truthful descriptions, clear pricing structures, and realistic images. Misleading information can lead to dissatisfaction and potential legal issues. By maintaining integrity in the product presentation, the app ensures a positive experience for users and builds trust in the platform.
- **Public:** Implement a robust review and verification process for property listings, and Implementing a secure and trustworthy payment system is crucial for public safety. The property rental app should integrate reliable and encrypted payment gateways to safeguard users' financial information during transactions.
- **Profession:** Stay updated on industry best practices, legal regulations, and emerging technologies. This commitment to continuous learning ensures that the app operates in accordance with the latest standards and remains a responsible player in the industry.

1.2 Scope

A property rental application provides a convenient platform for property owners to list their available properties for rent, offering comprehensive details including location, size, amenities, and rental price. Simultaneously, it empowers tenants to search for properties and provides filtering options that allow them to refine their search based on property type, location, and budget. This enables tenants to find the most suitable rental options that align with their specific needs and requirements.

INTRODUCTION



1.3 References

- CS383 lecture notes
- IEEE Std 830-1998, "IEEE Recommended Practice for Software Requirements Specifications".

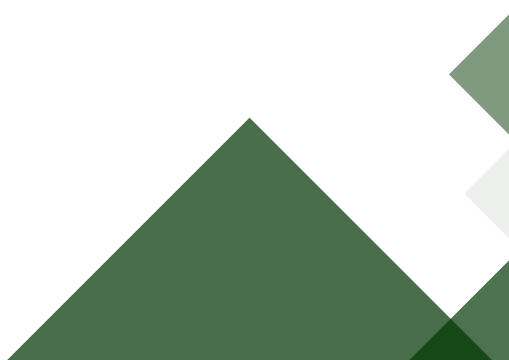
1.4 Structure

1.4.1 Introduction This section offers an overview of the entire document, encompassing its purpose, scope, the system's intended functions, and a list of references used.

1.4.2 System Overview In this part, we delve into the product's context, its features, user types and their characteristics, tools and software components to be implemented, along with certain assumptions.

1.4.3 Functional Requirements Here, we outline the potential outcomes of the software system and present all functional requirements in an organized list. This may encompass its behavior, calculations, data processing, user interaction, and more.

1.4.4 External Interface Requirements This section defines the external components that can interact with the software. These components may include user interfaces, hardware, and software interfaces, among others.



SYSTEM OVERVIEW

2.1 Product Perspective

Our cutting-edge property rental application functions as a trusted intermediary, facilitating connections between landlords and tenants in the dynamic residential and commercial real estate market. Offering a diverse portfolio of property types, including offices, apartments, villas, and more, our app provides an intuitive platform for landlords and tenants to collaborate and streamline the rental process. Landlords can effortlessly list and showcase their properties, while tenants benefit from advanced search capabilities and comprehensive property information. The app ensures seamless communication, enabling efficient negotiation and lease agreements. With features such as automated reminders, secure transactions, and personalized recommendations, our app guarantees a hassle-free and gratifying rental experience for both landlords and tenants. Immerse yourself in the convenience and efficiency of our transformative app as we simplify the rental landscape, enhancing the journey for all stakeholders involved.

2.2 Product Features

2.2.1 User Registration Users can create an account on the app by providing their email address, name, and contact details. This registration process enables users to save their preferences and keep tabs on their rental activities.

2.2.2 Geolocation Services The application will employ geolocation services to identify the user's position and offer a list of nearby properties.

2.2.3 Filtering service Users can customize properties search by location, property type (apartment, villa, etc.), and specifying their budget preferences

2.2.4 Properties Details Users have the ability to access details about properties, including their size, Location, available services, and contact information of the owner

SYSTEM OVERVIEW

2.2.5 The app makes it easy for property owners and renters to chat. You can send messages about property details and rental questions right in the app. Plus, you'll get quick updates with push notifications, so you'll know when there's a new booking request or confirmation. It's a simple and convenient way to communicate within the properties rental app.

2.2.6 The app includes a safe and straightforward online payment system, allowing users to easily handle transactions for property rentals. the app offers multiple secure payment options. This feature ensures a hassle-free and secure payment experience for both property owners and renters.

2.3 User Roles and Characteristics

In our application we have 2 users roles (proprty owner and tenants) for users who use this application.

Proprty owner: is someone who makes their property available for rent to potential tenants.

Tenants: are individuals seeking to lease and occupy a property owned by someone else.

2.4. Operating Environment

Our application can be run on different operating environments such as IOS, Android. The application will require a reliable internet connection to function properly.

2.5 Assumptions and Dependencies

Assumptions for the applications include the user having a reliable internet connection, a mobile device compatible with the application, and creating an account to use the full range of features. The application depends on GPS is accessible, and property may be rented and customer service support team for handling customer queries and complaints, machine learning algorithms for providing personalized recommendations, Integration with third-party payment gateways is essential for handling financial transactions securely, and The application's functionality and availability may vary depending on geographical regions. Without these dependencies, the application may not be able to provide accurate information, suggestions, or customer support.

FUNCTIONAL REQUIREMENTS

To Determine requirements:

We followed several methods to analyse requirements Such as comparison with competitors' applications , interviews , forms and Observation.

3 User requirments

The program is a real estate brokerage application that serves as a mediator between owners, tenants. It provides a platform for users to browse and search for properties, connect with owners, and facilitate property transactions. Here are the key features and requirements of the application:

3.1 User Registration:

Requirement 1: Account Creation

Allows new users to create an account by providing their name, email, phone number, location, and password.

Verifies the provided data to ensure no duplicate user accounts exist with the same information.

Requirement 2: Login

Enables registered users to log in to their personal accounts using their email and password.

Validates the provided data, allowing access if correct, or displaying an error message if incorrect.

Requirement 3: Password Reset

Allows users to enter their registered email for password reset.

Verifies the provided email, matches it with a registered user account, and sends a secure password reset link via email

FUNCTIONAL REQUIREMENTS

3.2 main Activity

Requirement 4: Property Listing

Display a list of available rental properties.

Include basic information for each property, such as property type, location, price, number of bedrooms and bathrooms, and any additional features or amenities.

Present property listings in an attractive and organized manner.

Property Search:

Provide a search feature for users to find specific properties based on keywords, location, or other relevant criteria.

Requirement 5: Property Details:

Allow users to click on a property to view detailed information.

Display comprehensive details such as property description, high-quality video, floor plans (if available), property size, and any additional amenities. Include contact information for the property owner or tenants to facilitate inquiries

Requirement 6 : User Interactions

Enable users to leave ratings and reviews for properties they have rented in the past.

Display the average rating and individual reviews for each property to assist users in making informed decisions.

Requirement 7 : User Account Management

Enable users to register and log in to their accounts.

Provide a feature for users to save properties as favorites for future reference.

FUNCTIONAL REQUIREMENTS

3.3 payment

Requirement 8: Rental Payment Process

Display the payment screen to the user once they have completed the rental selection process.

Enable users to make easy online payments using Apple Pay,STC Pay, Bank Transfer,or Credit Card.

Requirement 9: Credit Card Payment

Provide a dedicated screen for users to select credit card payment .

Requirement 10 : Payment Confirmation

Ensure successful completion of the payment transaction.

Display a confirmation message to inform the user that the payment was successful.

Requirement 11 : Contract Display

Display the rental contract to the user after confirming the booking. Include all terms and conditions of the contract clearly and in detail. Provide an option for the user to accept or reject the contract.

EXTERNAL INTERFACE REQUIREMENTS

4.1 User Interface

During the application design process, our primary focus is to ensure a user-friendly experience for all individuals, regardless of their level of technical expertise. Our aim is to develop software that is intuitive and easy to comprehend, minimizing any potential difficulties in understanding its functionalities. Additionally, our application will be compatible with all major operating systems, ensuring seamless accessibility and usability across various platforms.

4.2 Hardware Interface

mobile devices, computers, and internet connections.

4.3 Software Interface

4.3.1 Operating Systems:

The software will ensure broad compatibility by supporting multiple operating systems, including iOS and Android, thereby ensuring accessibility and availability across a wide range of devices for users of diverse platforms.

4.3.2 Database:

In order to achieve optimal compatibility across iOS and Android platforms, the Flutter framework was utilized, leading to the incorporation of SQLite as the preferred data storage mechanism within the application.

4.3.3 Browser:

The software requires regular updates to ensure compatibility and optimal performance when accessed through specific web browsers.

4.4 Communication Interface :

The program seamlessly accommodates operating system updates and leverages user-friendly electronic forms, specifically HTML forms, to facilitate various functions within the program, including reservations. Additionally, the program utilizes the HTML Geolocation API to accurately determine the geographical position of users when necessary. To ensure secure communications, the program employs the HTTPS protocol, encrypting all data exchanges for enhanced privacy and data protection.

NON-FUNCTIONAL REQUIREMENTS

5.1 Performance Requirements

- The app should provide fast response times for all interactions, including messaging, contract processing, and search functionality.
- It should handle a large number of concurrent users without significant performance degradation.
- The search feature should deliver search results quickly, minimizing the time it takes to display relevant listings.

5.2 Security Requirements

- User authentication and authorization mechanisms should be in place to prevent unauthorized access to user accounts and sensitive data.
- The app should protect against unauthorized access attempts, such as brute-force attacks or rate limiting.
- It should have measures in place to detect and prevent fraudulent activities.
- The system should implement data encryption and secure communication protocols to protect sensitive information during transmission.

5.3 Safety Requirements

- The app should ensure the privacy and confidentiality of user communications, contract information, and personal data.
- It should implement secure protocols for transmitting, storing, and handling sensitive information, such as messages, contract documents, and payment details.
- The system should protect against unauthorized access attempts, fraudulent activities, and data breaches.

NON-FUNCTIONAL REQUIREMENTS

5.4 Authentication Requirements:

- The authentication process should be efficient and secure, it involves phone numbers or email addresses.
- The system should deliver authentication codes promptly and reliably via SMS or email.
- Strong password policies should be enforced in conjunction with the authentication code to enhance security.

5.5 Software Quality Attributes

- The app should have a user-friendly interface that enables effective and intuitive communication between tenants and owners.
- It should support features such as message notifications, read receipts, and search functionality to enhance the user experience.
- Error handling mechanisms should be implemented to handle exceptions, network issues, and other potential disruptions during the communication and contract process.
- The app should provide mechanisms for archiving or storing communication history, contract documents, and payment records for reference and record-keeping purposes.
- Electronic contracts should be legally binding and enforceable, adhering to relevant laws and regulations.

WORK SECTION

student Names	section work
Reef	Introduction
Lena & Latifah	System overview
Rana	Functional Requirements
Rag had & sadeem	External Interface Requirements
leen	Non-functional requirements