**Functional Requirements**

**Registration**

**1.** The user must be able to register an account on the system.

**1.1.** The system must display text fields for the user to enter his information

**1.1.1.** The text field must consist of username.

**1.1.2.** The text field must consist of phone number,

**1.1.3.** The text field must consist of Email Address,

**1.1.4.** The text field must consist of Password,

**1.1.5.** The text field must consist of Password confirmation.

**1.2.** The user must fill in all of the text fields before clicking “Register” button

**1.2.1.** The system must verify the fields when the user clicks the “Submit” button

**1.3.** The system must verify the fields filled in by the user before creating an account.

**1.3.1.** The username must be unique for all users of this system.

**1.3.2.** The email given has never registered in the system.

**1.3.3.** The email given has never registered in the system.

**1.3.4.** The password given must contain at least 1 uppercase character and 1 special character.

**1.3.5.** The password given must contain at least 8 characters.

**1.3.6.** The phone number given must be a verified phone number.

**1.3.6.1.** The system must send a OTP to the user’s phone number

**1.3.7.** The system must provide error messages describing the reason the user’s information is rejected.

**1.4.** The system must create an account for the user upon verification.

**1.5.** The system must log the user into the main page of the system.

**Login**

**2.** The user must be able to log into the system

**2.1.** The system must display text fields for the user to enter his information.

**2.1.1.** The text fields must consist of email

**2.1.2.** The text fields must consist of password

**2.1.2.1.** Passwords entered must be masked.

**2.1.2.2.** Password field must have an option for users to see what they are typing.

**2.2.** The user must fill in all of the text fields before clicking ‘Log In’ button.

**2.2.1.** The system must verify the fields filled in by the user before logging the user into the system.

**2.3.** The system must log the user if the information obtained from the text fields are verified

**2.3.1.** The email must be found in the database of the system

**2.3.2.** The password entered must match the password of the user

**2.5.** The system must have a forget password feature.

**2.5.1.** Forget password feature will ask for the user's email.

**2.5.2.** An email to reset the password will be sent to the email address.

**2.6.** The system must log the user into the main page of the system.

**Home Page**

**3.** The user must be able to view home screen

**3.1.** The system must display the welcome message “Welcome, \*username\*”

**3.2.** The system must display all property listings

**3.2.1.** The system will display listings within a 5 metre radius

**3.2.2.** The system will display listings each with 4 icons information

**3.2.2.1.** Number of bedrooms,

**3.2.2.2.** Number of toilets,

**3.2.2.3.** Numbers showing square feet of the property,

**3.2.2.4.** Price per square foot of the property.

**3.2.3.** The user must be able to tap on each individual property listing.

**3.2.4.** The user must be able to tap on “add to like” button for each individual property listing.

**3.2.2.1.** The system will display listing in user’s likes page

**3.3.** The system must display a textfield for search bar

**3.3.1.** The textfield must consist of text at most 255 characters

**3.4.** The system must display a navigation bar at the bottom of the screen

**3.4.1.** The system must display “Home” button

**3.4.1.1.** The user must be able to access home page

**3.4.2.** The system must display “Chats” button

**3.4.2.1.** The user must be able to access chats page

**3.4.3.** The system must display “Likes” button

**3.4.3.1.** The user must be able to access likes page

**3.4.4.** The system must display “Profile” button

**3.4.4.1.** The user must be able to access Profile page

**3.4.5.** The system must display “+” button

**3.4.5.1.** The user must be able to access create listing page

**Chat Page**

**4.** The user should be able to browse chat messages from the browse chat page.

**4.1.** The system must display all existing chats

**Add Listing**

**5.** The user should be able to create listings from the create listing page.

**5.1.** The system must display text fields/image upload for user to enter his input

**5.1.1.** The user should be able to upload pictures of his house

**5.1.2.** The text field must consist of Address of the apartment.

**5.1.3.** The text field must consist of Selling price.

**5.1.4.** The text field must consist of Number of toilet(s).

**5.1.4.** The text field must consist of Number of bedroom(s).

**5.1.4.** The text field must consist of Square feet.

**5.1.5.** The text field must consist of further details about the house.

**View individual properties**

**6.** The user must be able to browse details of listings.

**6.2.** The system must display details of listings

**6.2.1.** The system must display a picture of the house,

**6.2.2.** The system must display the address of the apartment

**6.2.3.** The system must display the price of sale,

**6.2.4.** The system must display additional details of the apartment.

**6.2.5.** The system must display a map of the address in the listing.

**6.2.5.1.** The map must be interactive, allowing users to move it within our application.

**6.3.** The system must be able to calculate the available grants for the user.

**6.3.1.** The system must display dropdown field for user to enter his input

**6.3.1.1.** The dropdown field must consist of Loan Amount

**6.3.2.** The system must display slider field for user to enter his input

**6.3.2.1.** The slider field must consist of Monthly Repayment Amount

**6.3.3.** The system must calculate and display grants available for user

**6.3.3.1.** The system will display “Proximity” grants if current residential address is within 5 metres radius

**6.3.3.2.** The system will check database for SC/PR citizenship, first-timer couple/family, Age, Monthly income ceiling and display “Family” grants.

**6.3.3.3.** The system will check database for SC/PR citizenship, first-timer couple/family, Age, Monthly income ceiling and display “Enhanced Housing” grants.

**6.3.4.** The system must calculate and display loan repayment time

**6.3.5.** The system must calculate and display total price per month

**6.4.** The system must display a “Inquire Now” button

**6.4.1.** The system should be able to chat with seller

**View likes properties**

**7.** The user should be able to view likes properties from the likes properties page.

**7.1.** The system will display all the listings that users liked previously.

**7.1.1.** The system will display listings within a 5 metre radius

**7.1.2.** The system will display listings each with 4 icons information

**7.1.2.1.** Number of bedrooms,

**7.1.2.2.** Number of toilets,

**7.1.2.3.** Numbers showing square feet of the property,

**7.1.2.4.** Price per square foot of the property.

**7.1.3.** The user must be able to tap on each individual property listing.

**7.1.4.** The user must be able to tap on “Remove from like” button for each individual property listing.

**7.1.2.1.** The system will remove listing from likes properties page

**View profile**

**8.** The user should be able to view their profile

**8.1.** The system must display username

**8.2.** The user must be able to edit profile information

**8.2.1.** The system must display text fields/image upload for user to enter his input

**8.2.1.1.** The text field must consist of username

**8.2.1.2.** The text field must consist of phone number

**8.2.1.3.** The text field must consist of email address

**8.2.1.4.** The text field must consist of address

**8.2.1.5.** The text field must consist of username

**8.3.** The system must display all listings that user is selling

**8.3.1.** The user must be able to edit listings

**8.3.1.1.** The system must display text fields/image upload for user to enter his input

**8.3.1.1.1.** The user should be able to upload pictures of his house

**8.3.1.1.2.** The text field must consist of Address of the apartment.

**8.3.1.1.3.** The text field must consist of Selling price.

**8.3.1.1.4.** The text field must consist of Number of toilet(s).

**8.3.1.1.5.** The text field must consist of Number of bedroom(s).

**8.3.1.1.6.** The text field must consist of Square feet.

**8.3.1.1.7.** The text field must consist of further details about the house.

**8.3.2.** The user must be able to delete listings

**8.4.** The user must be able to change password

**8.4.1.** The system must display text fields for user to enter his input

**8.4.1.1.** The text field must consist of email address

**8.4.2.** The system must display send reset link button

**Non -Functional Requirements**

**1.** Security

**1.1.** Password is to be masked with ‘.’

**1.2.** 100% of the email sent must be to the correct email address.

**2.** Reliability

**2.1.** 95% of users must be able to login within 10 seconds after pressing the login button.

**2.2.** Email should be sent out within 1 minute after the registration.

**2.3.** Email should be sent out within 1 minute after the users press the ‘Send email’ button for the forget password function.

**3.** Scalability

**3.1.** Applications should be able to increase the number of listings at any time.

**4. Usability**

5.

* **Performance: This refers to the speed, response time, and throughput of the software application.**
* **Scalability: This refers to the ability of the software to handle increasing amounts of data or users without any degradation in performance.**
* **Availability: This refers to the ability of the software to be available for use when needed, without any downtime or interruptions.**
* **Security: This refers to the ability of the software to protect against unauthorized access, hacking, and other security threats.**
* **Reliability: This refers to the ability of the software to perform as expected under normal and abnormal conditions.**
* **Usability: This refers to the ease of use and learnability of the software.**
* **Maintainability: This refers to the ease with which the software can be modified or updated.**
* **Portability: This refers to the ability of the software to run on different platforms or operating systems without any modification.**