**3 Functional Requirements**

**3.1 Users and their permissions:**

The user will open their browser and type in our website into the address bar. Once they enter that, they should be on our website. From there, the user can do multiple things. There are a few other options the user can do upon entering the website, including logging into their own personal account. Users are limited to editing their own data and any data they have created. That person can be a guest, or a registered user. A guest only has the ability to read, while a user has the ability to read and write. The system is functional for those looking for housing, and those who are looking to put up a listing onto the website. The former has the ability to read, and the latter has the ability to write, but as long as they are users, they have both options open to them.

**3.2 Functions, functional processes, and I/O:**

**3.2.1a: Creating an Account:**

If they do not already have an account, they would be able to do so by navigating to the new user button next to the returning user button. All they need to input is a login name and password to be able to create an account.

**3.2.1b: Returning User**

If s/he is a returning user, all the user needs to do is click on the returning user button and it will redirect them to the page asking them to type in their username and password. On failure to do so will prompt them to try again, or to create a new user. On success will lead them back to the home page to resume their interactions. If they would like to log out of their account, there is a logout button where the new user button used to be.

**3.2.2: Editing Profile:**

If the user would like to edit their profile, they can do so by heading to the top right of the homepage. If the user is logged in, instead of the log-in button there would be a button named profile that they can click which would redirect them to a webpage that contains their user information. There they can edit any information that they have access to and apply those changes. There are also some other options that they can view and edit while on this webpage such as any listing that they have added to a favorites list, or any listing that they have uploaded themselves.

**3.2.3a: Searching:**

On the homepage, the user can click on the search bar in the middle of the page and start typing keywords like “bedroom apartment,” “room for rent,” or “shared room” to start searching and help refine those search results. If they would rather look at all results our websites has, they could push a button under the search bar to look at all the results on the website.

**3.2.3b: Filtering**

If they want to refine these results even further, we have a filter on the side of the results that can search for desired results. Whether they are searching for a house, shared house, apartment, room, or shared room they can narrow down the search results to their heart’s content by clicking on the boxes which checks off that specification in the filter menu and clicking the apply button. Similarly, the filter also includes other categories such as the number of roommates or housemates, size of the bedroom or house, amount of bathrooms and bedrooms, other necessities like air conditioning or having a pool, price range, and duration of the lease all of which are on the filter bar to the side of the search results. If the filtered results are not to the liking of the user, s/he can compromise and remove one or more of the filters by unchecking the marked box(es) and clicking apply to expand the results in order to find a better housing option.

**3.2.4: View Listing:**

If the user has selected a housing option, they can expand on their chosen by clicking the expand button which would redirect them to the page containing all the information on the listing. On that webpage, the person can find all the information pertaining to the listing as well as additional information like the contact information of the person who input the listing. The user could also message the person on the website and converse that way.

**3.2.5: Favorite List:**

If multiple listings are found to be favorable, but the user still wants to look around, the user can click the star button next to the listing to put it onto their favorites list to look at later. This list can be viewed in their profile. If the user wanted to view this list, they would head to their profile and a button on the webpage of the profile would say favorite. By clicking this button, it will redirect them to a different webpage that contains all the favorited listings. From here, they can either view the listing by clicking on the expand button, or unfavorite the listing by clicking on the star button again.

**3.2.6: Creating a Listing:**

If the user is looking to put up a listing onto the website, on the homepage, there is a button stating, “put up listing.” If the user is not already logged in, then it will redirect them to do so. If the user is already logged in, then it will redirect them to a different webpage that will prompt them for information on the lodge such as pricing, bedrooms, bathrooms, the number of people who will be living there, any extra amenities provided, etc. It will also prompt the user for some contact information in case someone does take an interest in the listing. Once all the needed information has been successfully inputted, the user can press the submit button at the bottom of the page to put the listing in our database for our website to display. If the needed information was failed to be inputted, it the webpage will display an error stating to the user to input information in the required boxes.

**3.2.7: Editing a Listing:**

If the user would like to instead edit or take down a listing that they had put up, if they are logged in, they can head to their profile where that information. Once at the profile, the user can click on the listings button on the side of their profile which will redirect them to a webpage displaying all their listings. If the user clicks on one of the listings, then a popup will display prompting the user to either view, edit, or delete the listing. View will take the user to the webpage of the listing, edit will take the user to a webpage to edit the listing, and delete will prompt the user to make sure that they want to delete the listing before deleting it.