Roomer Project Proposal

CS 480: Software Engineering Capstone 1

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Stakeholders

This project is one that should be able to scale with its demand, potentially reaching a very large audience. There are three primary varieties of stakeholder involved in this project; internal stakeholders, users, and external stakeholders.

Internal stakeholders include our clients and future programmers. Our clients are hoping for a working site that allows them to put into practice the concept they have been testing effectively, and any future programmers on the project will want the code to be maintainable and well-documented, as to ensure that development moving forward is easier.

User stakeholders include buyers and sellers. As this application is about flipping the market, buyers will be very invested in seeing if this results in finding the place they wish to move to. Sellers will be invested as the flipped model will allow them to gauge interest in a property they are interested in selling and also get in contact with potential buyers whose listings they have seen on the app.

External stakeholders include server hosts and domain name suppliers. While the method of server is undetermined as of yet, such a website would by definition require a server to accept traffic, and a domain name to use to allow users to access the site, which will mean investment in both of these varieties of service.

Domain

Currently when a buyer wants to rent a contract, the buyer has to go out and look through listings from companies, renters trying to sell off their contract, or landlords. This takes time and is a tedious process. The Roomer application intends to shorten the time it takes to find a rental and flip the rental real estate market. Roomer intends to create a Buyer Side Market by having prospective renters list what housing they are looking for and have landlords and/or renters selling contracts approach the prospective renter.

Roomer will have two types of users; buyers and sellers. Buyers are prospective renters. Buyers create an ISO Post (also known as a Buyer Listing) where the buyer indicates what amenities they are looking for in a rental, the approximate location of the rental, and a price range the buyer is willing to pay for a rental.

Sellers are people or entities who are trying to sell a contract to a Buyer. Sellers will search through Buyer's ISO Posts to find a prospective buyer. Upon finding a prospective buyer, the seller will use the roomer application to send an email to the prospective buyer. The email contains details of the property and a method to contact the seller. The prospective buyer then has the option to either respond to the seller or ignore the seller.

If a prospective buyer chooses to respond to a seller they can do one of the following options: Indicate that they are not interested in the seller's property; Begin to negotiate the terms of a rental contract; Accept the proposed terms of the contract as they were offered by the seller. If the seller's property was rejected or if the buyer and seller don't agree on terms in a negotiation and decide to move on from each other, then the seller restarts the process of finding a prospective buyer. Otherwise if a buyer and seller agree on terms of a contract then the seller transfers ownership of the rental contract to the buyer. During the process of buying a contract, the buyer could receive multiple offers from sellers. A buyer could leverage one seller's offer against another seller's offer in order to get the best value for their rental. The buyer removes their ISO only after signing the contract from the seller.

Roomer concepts and terms:

- **Seller**: A person or entity who is looking to sell a rental contract
- **Buyer**: A person or entity who is looking to buy a rental
- **ISO Post or Buyer Listing**: A post where a buyer specifies what amenities, price, and approximate location of a house/apartment they'd like to rent.
- **Rental:** A house/apartment that is being rented out.
- **Amenities**: a desirable or useful feature of a rental.
- **Market**: The combination of buyer listings and seller listings.
- **Buyer Side Market**: The idea of putting buyers in a position of power by making sellers seek out buyers rather than the opposite.
- **Rental Contract**: A contract where a property owner or manager grants temporary possession of a property to a renter.
- **Selling a contract**: The process where a seller transfers the obligations of a contract to a buyer.
- **Subletting a contract:** The process where a seller sub leases out the rental to the buyer and retains the sellers name on the original rental agreement. Also known as subleasing.

Problems and value proposition

Value Prop: We provide a user-friendly, buyer-side, real estate market that makes buying and selling housing faster and easier. Roomer will be a platform for only buyers to post their ISO's ("In Search of"). Sellers are able to reach out to buyers with potential real estate that meets the requirements.

Problems:

- **Finding a place to move to can be overwhelming and difficult.** Oftentimes finding information about properties/real estate (like rental rates, floor plans, financing options, etc) are scattered over many websites and hidden behind account walls. Roomer seeks to turn everything inside out by focusing on ISO posts only - which focuses on helping the buyer find suitable matches in the most user-friendly and easy way possible - where the sellers must seek out the buyers.
- **It is hard to conceptualize the demand and availability of the market** (for both sellers and buyers). Roomer seeks to help the users (both on the buying and selling end of the market) realize the actual market opportunities through visualizing buyer demand. For example, a user may be more likely to gain the confidence to sell as they see many people looking to buy a property similar to theirs in the area.
- This would also solve the problem of **freeing up the housing market**, in a historically difficult period. Roomer seeks to stimulate the market's movement by giving buyers and sellers the incentive to move within the market. Additionally, flipping the market (with a buyer-sided emphasis) should also stimulate market movement.

What will you build?

The project is to build the minimum viable product of a social media style website. Its purpose is to create a platform that streamlines house/apartment hunting by connecting a buyer with specific housing needs to potential sellers. The website will feature a home page with a scrolling feed of buyers' posts for all to see, including those not authenticated to the app. A user can register and login from the home page, thus allowing them to post, save favorite posts, view post analytics, and privately message other users according to their needs.

The website will be mobile friendly with a front end built using Javascript react. A domain will be purchased to make the website live and begin the evaluation process to see what features are effective and what features are not serving the needs of users. Details of the backend implementation will be determined by the product owners according to their priorities and budget. It will have to be able to handle an initial potential client base of hundreds to thousands of users.

Key Stories:

- As a registered or non-registered user, I want to view the feed of buyer's posts
- As a non-registered user, I want to securely register with the options to register with facebook, google, or a new username/password
- As a user, I want to securely login
- As a user, I want my private information to be inaccessible to other users

- As an owner, I want to protect user data
- As a buyer, I want to create a post that specifies location, house type, amenities, and price requirements
- As a seller (or any user), I want to "favorite" a post and easily find my list of favorites
- As a seller (or any user), I want to search for posts using a filter by location, house type, amenities, and/or price
- As a seller, I want to message a buyer to offer my house/apartment in response to their post
- As a buyer, I want to receive messages from sellers to get in contact with a good housing fit for my needs
- As a user, I want to report inappropriate messages or posts
- As a user, I want to be able to block other users from messaging me
- As an owner, I want to respond to and protect users from inappropriate messages or posts
- As a user, I want to view analytics of posts to track buyer interests

Tooling and Team Process

The project management software that we'll be using is Jira. Based on research, we learned that Jira is one of the most common project management software that is used regularly by developers. The reason for this is mostly because it's free and also it's very simple and intuitive to use compared to any other project management software. Jira also has many other features that fit well with the agile framework such as being able to group multiple tasks into one and progress tracking for the current sprint.

"Done" criteria is defined such that it meets the story's criteria which will be defined by the product owner itself when we groom and create a user story. The reason for this is at the end of the sprint will be doing a demo of the completed story to the product owner. If we're able to align the product owner's criteria this will give us a clearer picture of the vision the product owner has of the story that's being developed. A must criteria is that each story has its unit test and passes the test to prove that it accomplishes the goal of the user story.

The day before the current sprint ends and before a new sprint starts the scrum master will schedule a backlog grooming session, ensuring the product owner, and a couple of people from the development team will be present. To keep the backlog grooming session productive the grooming session will be limited to an hour. In this grooming session, the main goal is to make sure that each story in the backlog contains enough contextual information. Furthermore, we can use this time to add more stories because we have more information about the product. Along with that, this process also includes breaking down bigger stories into smaller manageable stories. Lastly, the grooming session will also be a good time to prioritize user stories where the stories are arranged from the most important to the least.