

Managing Made Easier

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Overview

For most rental owners, there is lots of work to manage their properties. From applications, to complaints, to maintenance. What if there was a piece of software that helped make managing rentals much easier? My idea is to create a piece of software that would allow people to create an account, apply, pay rent, register complaints, contact fellow tenants, and put in notices for maintenance. The idea would consist of a website, and would have different sections based on the user type signed in.

Entering an application to rent a property. People who would like to apply could make an account and enter their information into a preliminary application. The owners could then use that information to do background checks, and credit checks. If the applicants are accepted, the software could also handle the signing, through a program such as docusign. This process could be completely virtual, or renters could make an appointment to see the property in person. This schedule would be available on the website as well. If the tenant wishes they could also take a virtual tour of the property on the website as well.

Message boards for tenants. As with any group of people, there can be moments of discord between tenants. A message board would allow for communication, and there could also be a feature to message the owner directly to lodge a complaint. This would allow for both community among the tenants, and quick problem solving should any issue arise.

Paying their rent. Collecting all the rent from either a tenant's door or from the mail can become a challenge. This software will make paying one's rent as simple as clicking a button. Using something such as a paypal extension, or any other cash app service. This would allow tenants to pay their bills with ease on time. Every tenant will be able to view their balance on the website, and if any fee should need to be added it will automatically appear. The owners will have the ability to manually enter payment as well through their admin accounts.

Entering notices for maintenance. As with any piece of property whether it is a car or a house, maintenance is required. A major problem with my clients' rentals is that their tenants wait before contacting them about maintenance. In some cases this has caused more problems than the original one. This feature would allow tenants to input any notice of maintenance and the priority they deem it. For example, an overflowing toilet would be labelled urgent and a message would be sent immediately out to the owner with the tenant information and maintenance notice attached. Though a cracked screen would be labeled low priority.

This idea is a piece of software, available over a website and compatible across all devices, that will handle the management, scheduling, payment, and consideration between tenant and owner. Today, people everywhere pay so much of their profits to organizations to do exactly what this application could do. This piece of software will be exponentially useful for my client, but could also be converted to be useful with Radford University as well. Great management is the key to any successful business and with this software, management would be made easy.

Goal

As a computer science major, concentrating in software engineering building this website will be an imperative experience and a significant way to showcase my abilities as a Software Developer.

After some research into other types of management software, it seems that there is great need for usability for both the owner and the tenant. The idea for this website will not only have functionality for the tenant, but also a lot of management tasks will be handled for the owner. Based on the current system, we have a lot of similar features as other property websites. My goal is to continue to add to and change the website to allow for every task of management possible to be automated.

This full automation of management will not only save time for owners and tenants, but will also create a seamless line of communication that will allow for transparency. It is important to remember that renting is a business transaction, and seeing as people become very attached to their homes this can be forgotten. With Managing Made Easier we will be able to keep renting from Jarrett properties a professional automated experience.

Specifications

- Website Application
 - Available for use on all devices
- Google based Hosting, Database, Storage, etc
 - All utilizing a platform named *Firebase*
- Agile Software Development
 - “In software development, agile practices involve discovering requirements and developing solutions through the collaborative effort of self-organizing and cross-functional teams and their customer/end user.”

Projected Features

As this is a project that I have started in a previous class, I will be finishing building this website. My goal is to take all client, user, and professor feedback and put together a final product that is

both usable and professional. The current system consists of two Portals, Owner and Tenant, with functionality for the respective user types. Building off of the current system, below are listed features the client has requested.

Owner Portal

- The owner is able to review pay logs for properties.
 - **It will be necessary that the owner be able to access these pay logs in a pdf that will be printable. This pay log will also need to keep track if there was any missed or late payment. The formatting of this pdf will be discussed with the client.**
- The owner get's emails from an automated email address for information regarding the website.
 - **The client would like to receive text messages for important updates from the website, such as maintenance requests.**

Tenant Portal

- The user is able to submit a copy of their Application currently, but the client is wanting a more automated approach.
 - **This feature will require more work, as the client is expecting the users to be able to complete an application on the website.**
- The user should be able to access the credit and background check services from the website
 - **The application process should be expanded to allow for users to access these services, as well as information on what exactly needs to be done.**
- The user should be able to pay fees and rent.
 - **The paypal accounts and basic pairing have all been set up, but extensive testing and security is needed for this feature to be usable.**
- The user should be able to schedule an appointment for a walk through.
 - **The basic library and page has been set up, but the client is expecting a more automated approach for scheduling appointments to make this easier for tenants.**

Along with the above features it is also important to make note of nonspecific features that need to be addressed with the conclusion of development of this website, including **Security, Search Engine Optimization, and Documentation**. Security needs to be ensured, not only for payment but also for any confidential Tenant information. Search Engine Optimization will be very helpful in regard to prospective tenants, we want to create a website which brings as many people as possible without the need to pay for advertisements. Lastly, documentation for this website is imperative for use. This is something I have found many websites seem to be lacking. I wish to create thorough documentation of all features of the website that will allow for ease of use for my client and their tenants.

Milestones

The first step will be meeting with the client to prioritize our next move with the website. My hope is to set a specific “Go live” date (the day the website will be fully usable and available to the public).

Once priorities have been set and a “Go live” date has been picked, I will go deeper into the planning process. I plan to use the Agile method of Software development, as it is the method used at my place of work. This includes planning out short *Sprints* (usually about two weeks), in which I will complete all the tasks I have laid out. At the end of a *Sprint*, I will meet with both my client and my Mentor to get feedback on my work and prioritize any new features or problems. After a sprint has finished the planning phase will start again, and the cycle will continue.

I will be making a more specific plan once my capstone is approved and the meeting with my client is complete, but I would assume the “Go live” date will be sometime in the middle of November (my projected date is November 12th). That would give us ample time to not only make any quick last minute adjustments, but also get feedback from the clients' tenants.

The list of bolded features in the *Projected Features* section will be broken down into tasks that will be workable throughout my *Sprints*. From what I have listed above, I will have a total of 20 weeks, allowing for possible breaks. I will plan for about 8 *Sprints* total in this development process. Which would allow one major task per sprint, along with any bugs and minor changes requested by the client.

Client feedback is very important with the project, but overall usability is also very important. I plan to make usability a top priority and I will be seeking out opinions from not only other professors, but also regular users.

Overall, my plan is to utilize the Agile method of development, focusing on Client and user feedback to create a website that will be usable long after this capstone project is completed.

Budget

Monetary resources have already been discussed with the client, once the system goes live for the public there will be small fees associated with some features of the application.

Conclusion

This website will be not only an amazing learning experience for me, but will be a great resource to a local company. It is very important to me to not only finish with a great product for my

Capstone, but also create something that will be usable long after I graduate college. I am very excited to continue work on this website, and I look forward to seeing the final product.