

Senior Project Proposal

Problem Description

Many people have the desire to do fun activities like going boating, or need to repair something at home, but you don't want to buy the equipment just to do it once. There are many people who have all the equipment for these activities, but they don't use it all the time. They could benefit from it by renting out to those who do need it. The problem is how to find the people that need or want something for a short time, and connect them to another person that has the item and can rent it out. This happens to lots of people and they have to go to the store and buy the equipment or gear in order to complete the task. They need a way to be able to communicate and rent these items from each other so that they can both benefit.

Solution

The solution is somewhat simple, if they could just work together it would be easy for these people to rent/lend their equipment to those that need it. That's why I came up with the solution to create a web app that people can get on to rent out items and see what everyone else is renting out. That way they can rent or get the item they need for a while. The app allows users to sell all kinds of things in 3 categories. They are activities, tools, and technology. That way everyone can find the item they need or want, and can keep things organized. I allowed users to post their items with images attached so they can show their products. I also allowed the users to email back and forth after the transaction so they can discuss issues and locations. I created an 8 minute video showing all the features of my project here:

- My Video (8-9mins): <https://www.youtube.com/watch?v=SkXlktpx2zE>
- My Website: <https://rent-project-y4xry.ondigitalocean.app/rent.html>
- My Github Repository: <https://github.com/hirschi675/RentProject>

Technical Overview

I created a Web App that would allow the two parties to join together written using the front end in vue.js, html, css in order to display all the information to the users. The server / backend was written in node.js and express, and connected to mongoDB which allows me to store all my items and users. I used the stripeAPI to allow the users to complete payments and rent out their items for a price. I also used node Multer to allow the users to upload images to the server so that they could show the image of the item that they are trying to rent. That took me awhile because I didn't know how to use

form data to send it to the node server but I watched a video that explained how to do it better. Then I added a node mailer to allow the users to send emails from the page itself instead of having to enter into their emails just to send the message to the people they are renting the items out to. That way they can discuss issues, prices and locations to talk with that person. I used a lot that I learned in web apps II this semester with DJ, and that's how I created my app.

Research Summary

I used a lot of resources especially at the end of my project when I implemented certain things that I didn't learn in my web dev class. I watched a lot of videos and I looked up a lot of questions on stack overflow, I also used codepen to give me ideas of elements to put into my websites to make it look better.

Here's a list of the videos:

- <https://www.youtube.com/watch?v=Va9UKGs1bwl>
This video showed me how to use nodemailer to be able to send emails between the different users on the server.
- <https://www.youtube.com/watch?v=9Qzmri1WaaE>
This video showed me how to use Multer and allow the users to upload images using a form. It also allowed me to save the items with images and names so you could display your items.
- https://www.youtube.com/watch?v=ml_-1tbIXQI
This video showed me how to use the Stripe API and allow users to pay with real money buy authenticating their credit card and sending it to their bank accounts.
- <https://stackoverflow.com/>
This answered my questions and issues that I had, by looking at examples of others.
- <https://codepen.io/>
This helped me add to the front end and make everything look more pretty and be able to scale down better.
- <https://account.mongodb.com/account/login?n=%2Fv2%2F5f0ba8ebb0b7496345d10f4e&nextHash=%23clusters>
Used this to store all my items inside the mongo database and the users.
- [My web apps 2 classes and assignments](#)
This helped me with the Vue.js Node.js and all the authentications and other features that a basic web app needs.

Further Work

In the future, I want to add some features to the site, I would even be willing to work with someone to make this an actual business later on. I want to add a search

feature that makes things easier to find, and more organized to look through, the categories. Right now you can post anything you want in the category so it could get full fast, so it will make it better. I would want to focus on the items so that there aren't so many things otherwise it would be too confusing, because you wouldn't be able to find the objects with such a broad category. I think I would want to simplify it more and more, to be able to be more user friendly. I also want to add the ability to have the owners lower and raise prices, right now the update function is implemented in the server but there isn't a way to do it on the front end. The same thing goes for a delete function I have it implemented but it's not on the front end. I also would like to add a feature to connect to the Google Maps API so that the two users can easily pick a place to meet to get the item.