

Comp 225 Fall 23 - Project Vision document
Mac Community Trade Center
Team Jachris - Christian, Jacob, Jake

Project Vision Statement

Our vision for our course project is to build something which resembles a virtual Mac Free-Swap. This will be an online and easily accessible space for any member of the Macalester community to buy, sell, trade or donate used items. The ultimate goal is to connect members of the Macalester community with each other and with the Mac Free-Swap, creating a sense of community while reducing the potential for waste on campus.

Solutions Offered

Our project will provide a number of solutions to the problems which members of the Mac community may face including, but not limited to:

- Increased accessibility, especially for students who do not have the means to go off or far from campus, to purchase cheap or free items which they may find useful
- Create a safe space to buy, sell, donate and trade items within the campus community
- Allow students to save money while having access to the essentials they need for college
- Reduce waste on campus

Languages and Tools

This website will be built using Google Firebase for much of the backend functionality. In addition, we will use Glitch to better understand backend architecture. This will serve as a starting point for our project. Our front end will be built using JavaScript / NodeJS, CSS and HTML.

Audience and End User

The intended audience for this project will evolve with the project. Initially, we hope that the members of the Fall 2023 Software Development course will be the first to view or access our software, and will provide valuable feedback while the project is still in development. We hope, with the help of Mac Free Swap, to make our product available publicly to any member of the student body at Macalester, and eventually faculty as

well. Once the product is in a completed state, it will be accessible and available for any member of the Mac community.

Risks

With the creation of this project there are a handful of risks that we have to consider. First, between the three of us there is very minimal knowledge of the necessary tools we need to use to create this project. The learning curve to understanding them and being able to effectively use them is something that we are yet to discover. Beyond lack of knowledge of the tools there is also a lack of knowledge on creating a website. Being able to create efficient back end code while having a user friendly front end and connecting the two parts together is a challenge of unknown difficulty to us. Finally we cannot guarantee that users will find the site something they should be using. We have no control over the public consumption and the effectiveness of the site could be limited to individuals we share it with rather than the broader range of the Macalester community.

Project Timeline

Our first step in this process for our project is technical research. This entails learning google firebase which will help us develop our website to be more interactive and user friendly. In addition, we will determine what other tools/languages we need to learn for creating our site. Finally, we will consider the ways in which we will test our code or the website itself, including the possibility of an automated test suite. We will also emphasize implementing risky features and functionality early rather than later so we can spot bugs and fix errors in our code or website.

The first phase that we would like to implement is a basic outline of the website. This would allow users to be able to login and create a profile with contact information and preferred meeting locations for product exchanges. In addition, this basic website would let users post goods that they would like to sell or donate along with a text description of the product. Other users will see these posts on the homepage. Finally, we were thinking of including a baseline price for goods, of around \$5.

Once we have this baseline website that works and functions for users, our next step would be to implement a chat feature on the website itself to allow sellers and buyers to interact directly within the site. In addition, we would add new features to posts and allow users to update previous posts. This would include adding more pictures of the product, changing pricing of items, creating more in depth descriptions, and adding tags/categories for each post. Finally we would also implement a new page on the user

profile which contains saved or archived posts from other users. At this point, the website would have three main pages, Home, Chat, and the User Profile.

If we have more time and everything works, one of our last steps would be to implement user preferences and filter according to preferences. These preferences would correlate to the tags/categories that can be attached to each post. This would then lead to a “For You” or “Preferences” page. Furthermore, if users don’t know how to use the website, we could have a technical page explaining how to use the website effectively.

Potential Extra Features

- Users Request Page: Allows for users to post something they are looking for and someone else could chat with them and sell it to them
- Translate into different languages
- Authentication with Google

Project Prototype

