

## Introduction

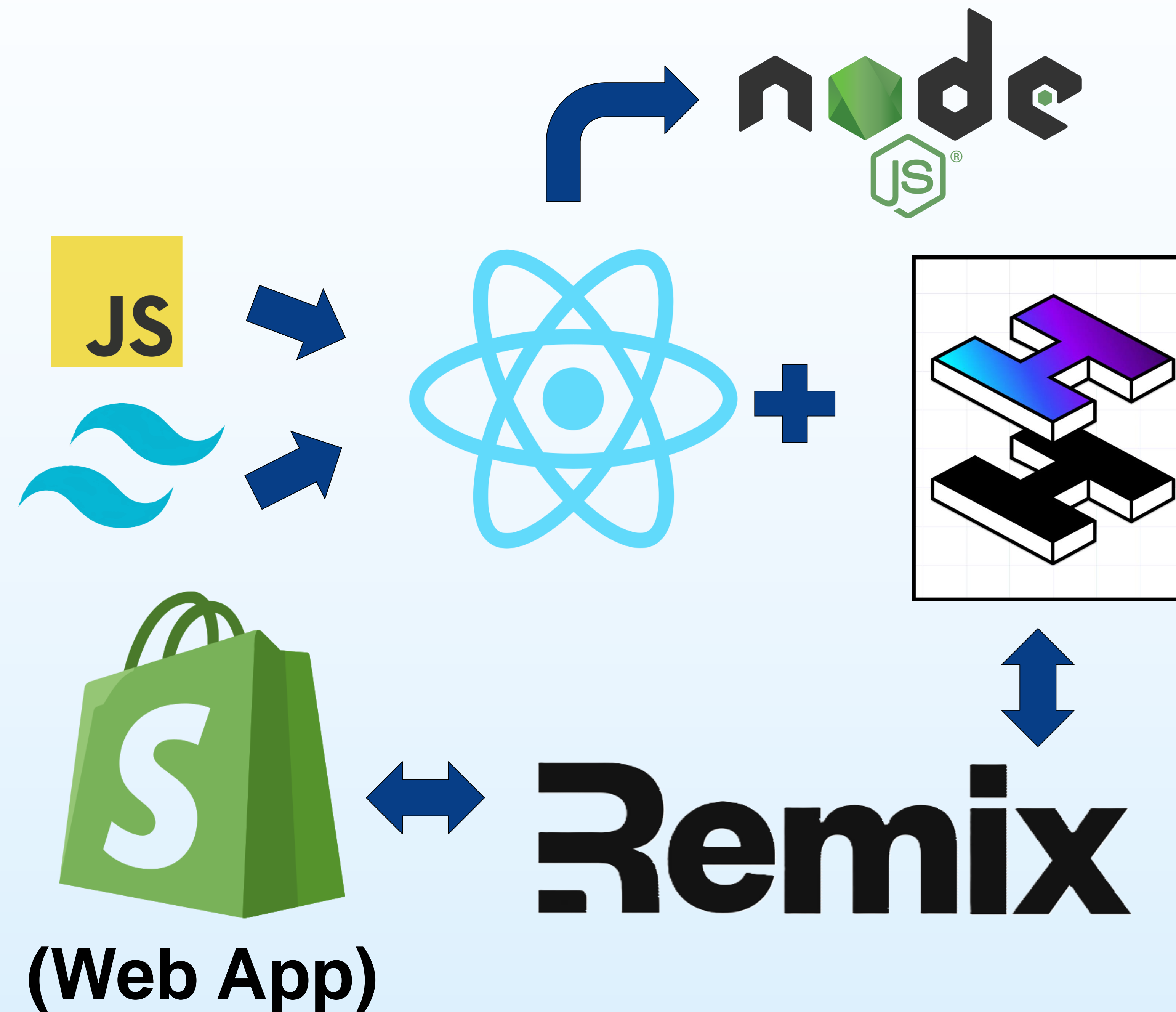
- 70% of college students experience financial distress (1). Our group is trying to solve the problem of financial burden for college students.
- Tuition and housing place significant financial stress on students. Additionally, students need to buy schooling and college life necessities.
- We can make a difference when it comes to the market for student commodities; creating a web-based application that would facilitate students to buy and trade used or new goods such as textbooks, tools, and living essentials and offer their services as well, attempting to consolidate the student economy
- The key feature the web app would use to solve this is transactions done locally, opposed to range limits

## Methods

To achieve this, our group built a web application which uses a React.js framework for the front-end and uses Shopify's Hydrogen / Remix / Oxygen technology stack for seamless front-end / back-end development. Node.js is the general open-source server-side JavaScript runtime. Hydrogen uses Remix (a React based framework) to handle routing and communication with the Shopify store server. The front-end was created using JavaScript and Tailwind CSS. The React framework can be integrated into a Hydrogen storefront, allowing for functionalities to work based on the React and Remix frameworks respectively, with the default being Remix.

Oxygen allows for continuous development by linking with the remote Shopify store through various Application Programming Interface (API)'s built into the Oxygen workflow. Changes are pushed through a Shopify linked GitHub repository and are deployed onto the application in real-time. These API's include: Fetch API, Cache API, Storefront API, Admin API, etc. For testing purposes, we used a Mock.shop API which allowed us to simulate mock products being used through the website.

## Development Diagram



## Results

- Website built (not deployed)
- Students on campus were surveyed through various platforms with the purpose of finding the preferred layout of a student marketplace for their college community.
  - Fig. 1 received 60% of the student survey votes.
  - Fig. 2 received 40% of the student survey votes.
  - Fig. 3 received 0% of the student survey votes
- These results were likely due to the more thorough development of layout #1, which was also noted by some survey respondents.
- Students were also asked if they wanted anything added or removed.
- Students suggested adding:
  - A small description for items.
  - Search filters.
  - A new listings section.
  - More categories.
- Students did not suggest removing anything.

## Discussion

- Currently, the project has no impact in facilitating student economy.
- Troubles were found in 1) navigating the complicated tech stack used, 2) compiling and finding enough students for a comprehensive survey, 3) measuring data to facilitate a student economy through a deployed website.
- The project could not be deployed for more in-depth testing and user feedback.
- In the future, the website would be deployed to collect evidence to support our claims. With this evidence and a deployed website, we can consolidate and facilitate a student economy through a web application.

## Survey Options

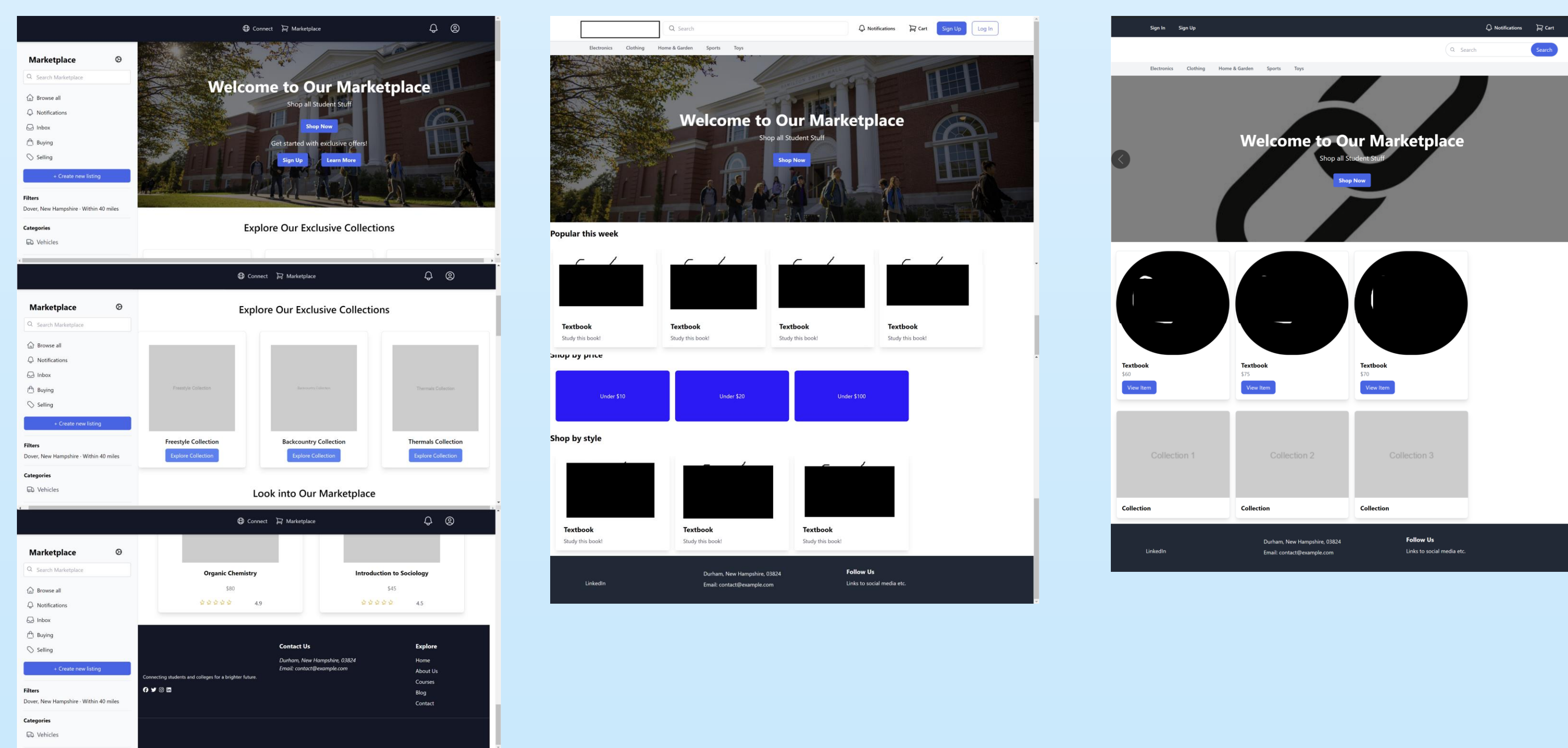


Fig. 1

Fig. 2

Fig. 3

## References

1. Grabmeier, J. (2015, June 30). 70 percent of college students stressed about finances. <https://news.osu.edu/70-percent-of-college-students-stressed-about-finances/>
2. Moore, A., Nguyen, A., Rivas, S., Bany-Mohammed, A., Majeika, J., & Martinez, L. (2021, May 22). A qualitative examination of the impacts of financial stress on college students' well-being: Insights from a large, private institution. <https://doi.org/10.1177/20503121211018122>
3. "Hydrogen - the Shopify Stack for Headless Commerce | Shopify App Store." Apps.shopify.com, apps.shopify.com/hydrogen?shpxid=c98ed76e-A448-49DF-D762-9C6919595A99. Accessed 18 Apr. 2024.