



Drift

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Abstract

Drift is a thrifting mobile application as well as a software service specifically for public users to buy and sell thrifting goods (i.e., an e-commerce app for thrifting specifically). Our project is important because it will pave the way for a more sustainable thrifting experience while making it easier to buy/sell, connect with other thrifters, and discover all types of second hand items.

The major features that we intend to design and implement are user login/signup authentication, item posting, item discovery and querying, cart use, checkout, and chat functionality. Our thrifting and e-commerce centralized application will provide a virtual thrift shopping experience for browsing for items, posting items to sell on one's profile, and perusing saved items.

User Interface

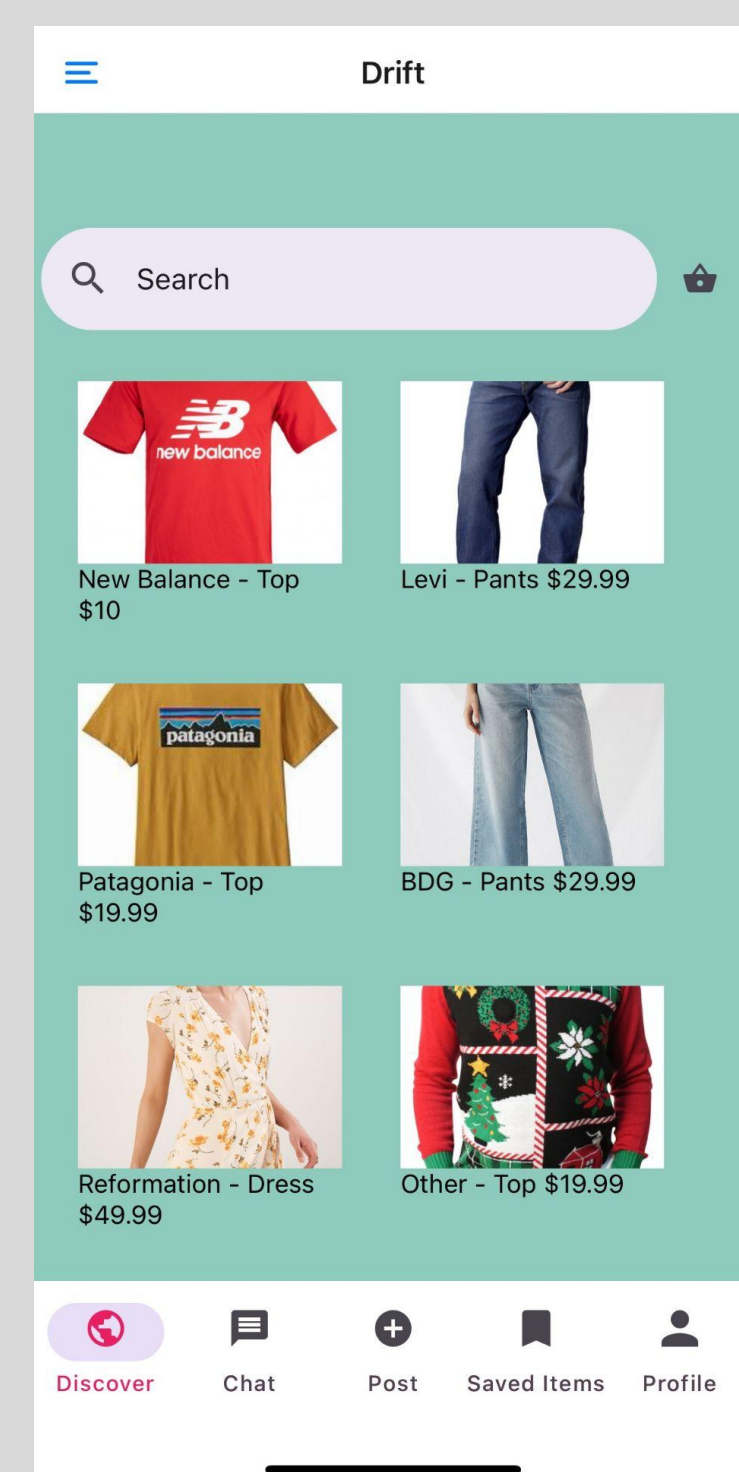


Figure 1: Drift Discover Page.

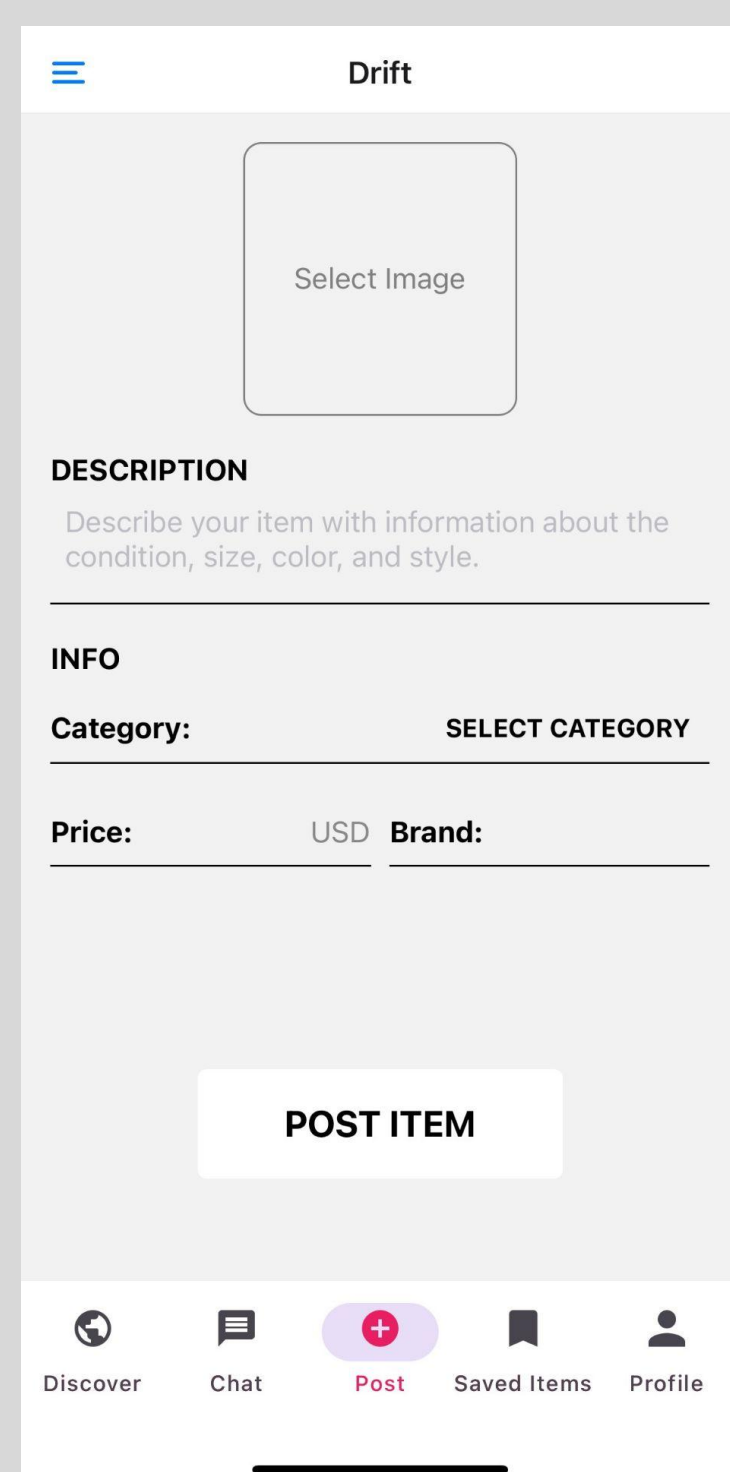


Figure 2: Drift Post Page.

Drift was made to have a user friendly interface and seamless user experience to allow for all to effortlessly utilize our apps features. Figure 1 depicts the main discover page which is comprised of a feed of items up for sale by other users. Additionally, figure 2 illustrates our post page which allows users to post items they want to sell. This page takes a variety of input to properly put an item up for sale.

Project Description

GOALS

With Drift, we aim to contribute to the reduction of textile waste caused by fast fashion production and consumption. By creating an easy-to-use mobile application for users to sell their old clothing, buy new clothing secondhand, and connect with others in the thrifting community, we seek to offer a more affordable, ethical, and overall attractive alternative to more traditional shopping experiences.

OVERVIEW

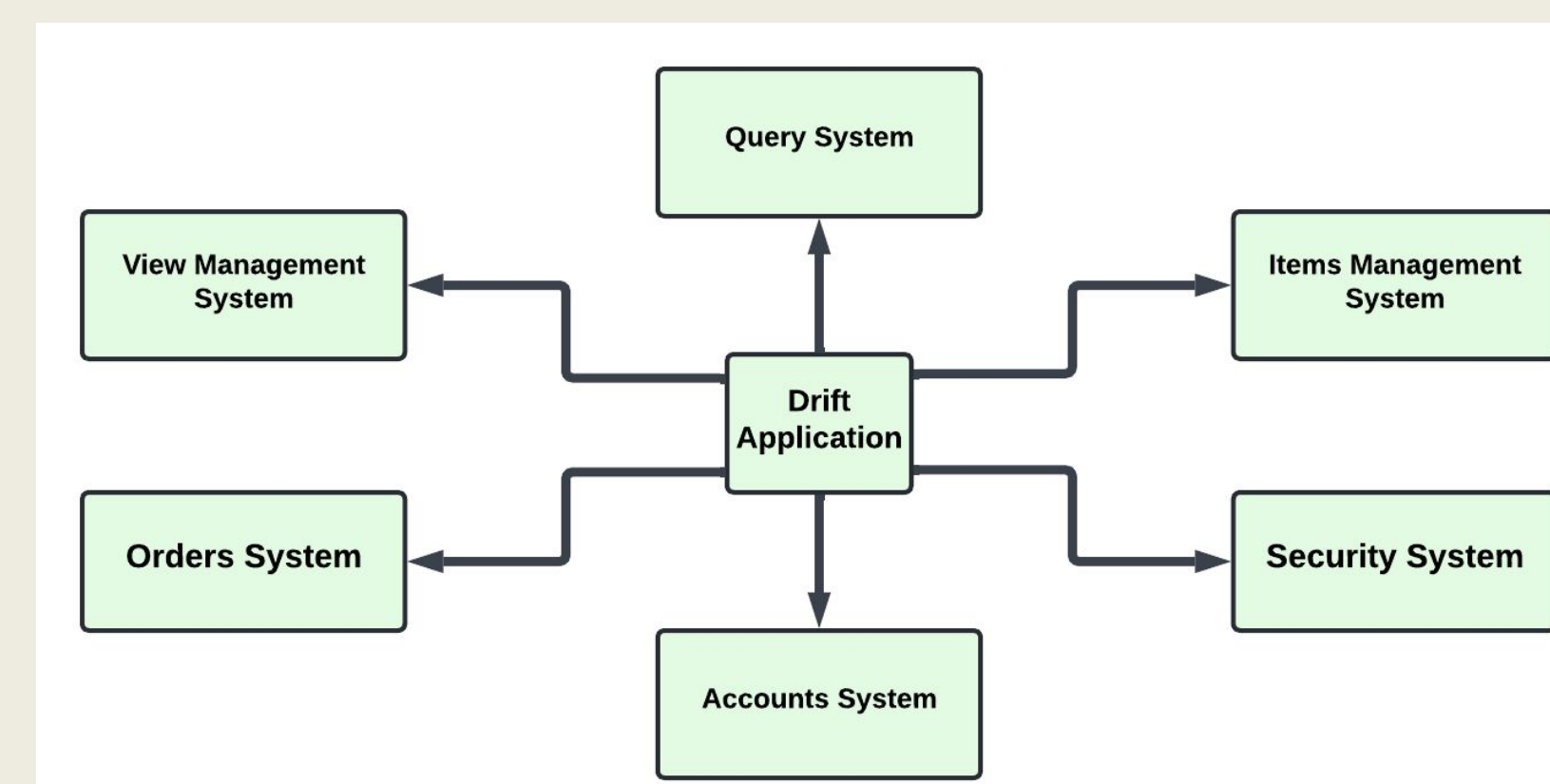


Figure 3: Context diagram describing the system and Drift's environment.

Drift is composed of six subsystems which separately handle different responsibilities, as illustrated in Fig. 3. The query system interacts with the database to retrieve necessary information for the items management, orders, and accounts systems to perform their functions. To implement authentication and password hashing, we have a security system in place, and finally the view management system ensures our navigation and interfaces are responsive and user-friendly.

SYSTEM ARCHITECTURE

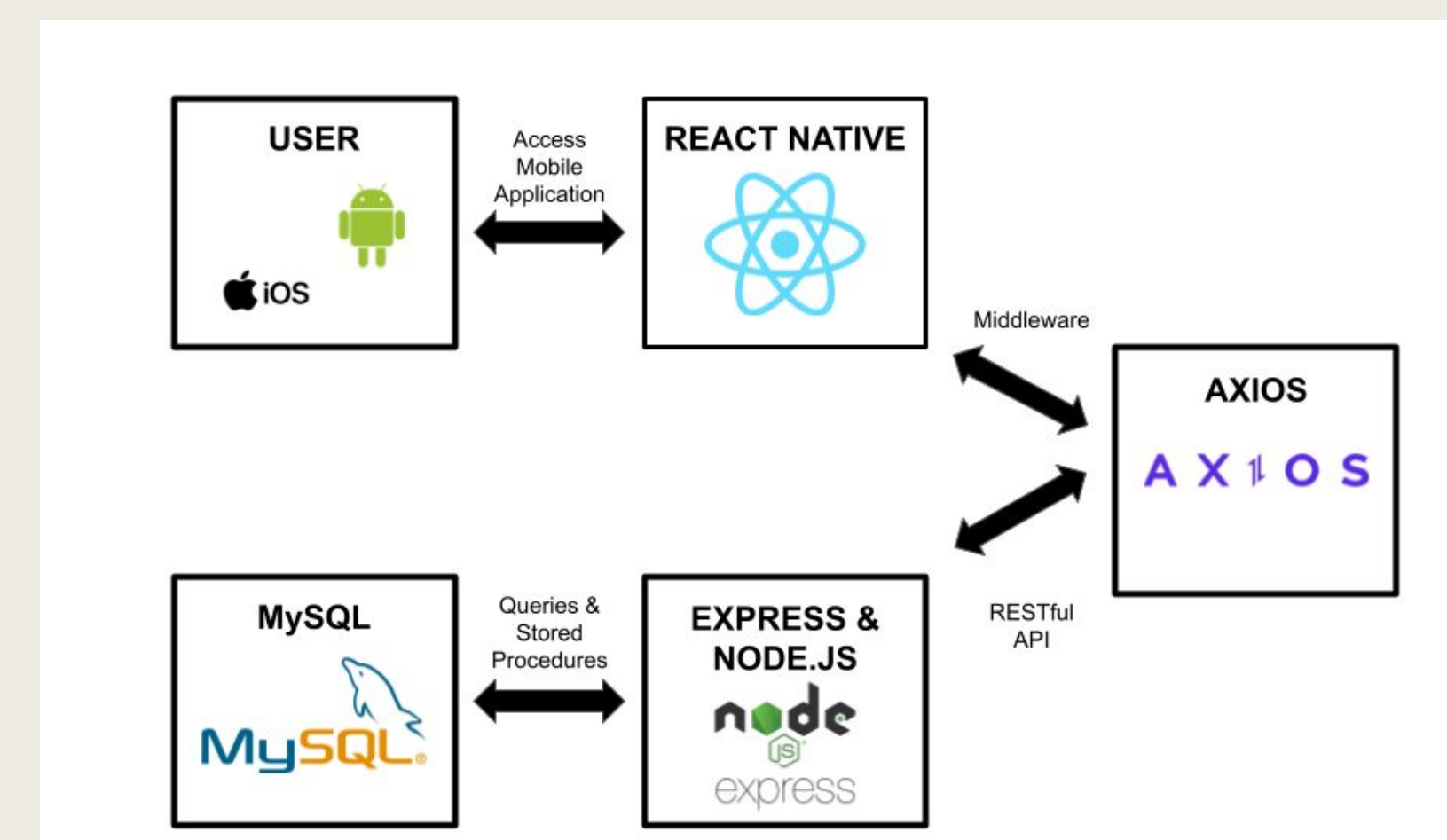


Figure 4: System architecture of Drift and associated technologies.

Our project leverages several technologies to fulfill requirements across the stack. As displayed in Fig. 4, our frontend is built using React Native, a JavaScript-based framework for developing mobile applications. Utilizing the library Axios, our frontend is able to communicate with a Node.js server on the backend which is connected to a MySQL database, where all of the data for the application is stored. To manage card verification and payment processing, we are taking advantage of the third-party online payment API Stripe.

FEATURES

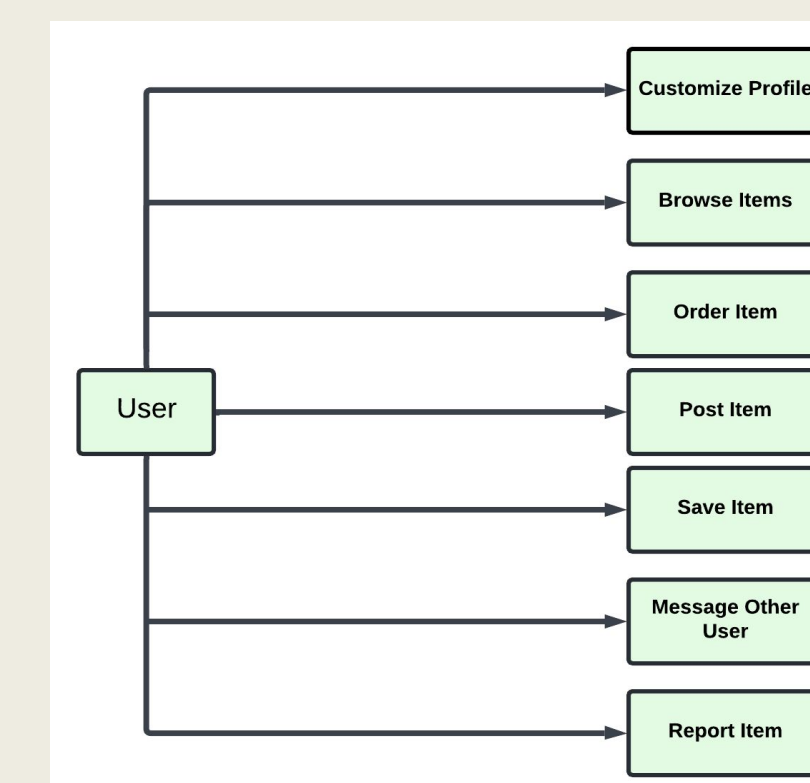


Figure 5: Use case diagram displaying features available to user accounts.

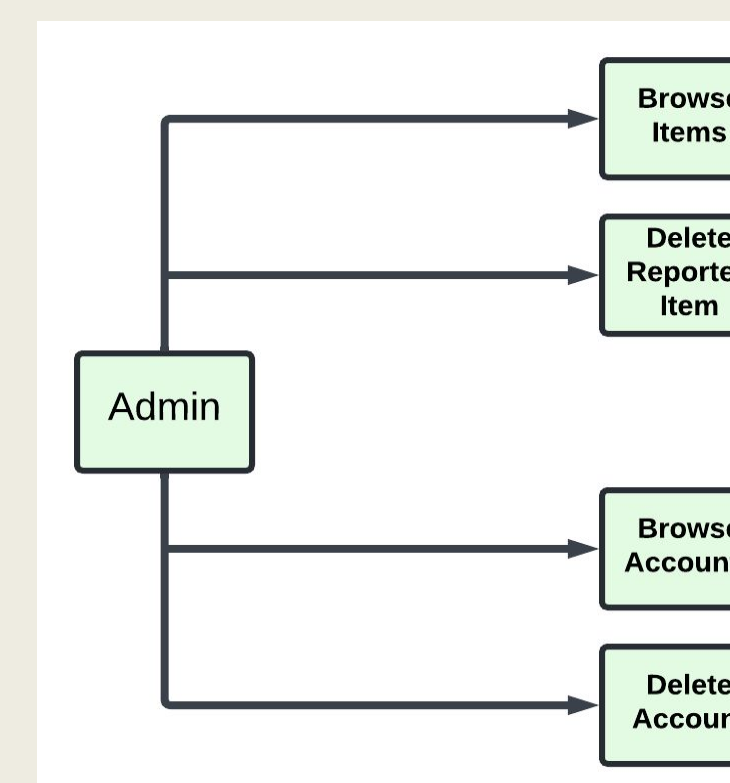


Figure 6: Use case diagram displaying features available to admin accounts.

Drift provides for two types of accounts: admin, and user accounts. The features of the user account, as delineated in Fig. 5, include the ability to create and customize a profile, browse items, order an item, post an item for sale, save an item to a folder, message other users, and report items. The features of the admin account, as shown in Fig. 6, are designed to moderate activity on the application and include the ability to browse items and user accounts, as well as to take down harmful posts or malicious user accounts from the platform.

Future Developments

- **Personalized Recommendation System:** Upon opening the app, users will be welcome with personalized thrift recommendations based on what items they saved, bought, and aesthetics they like.
- **Offer Feature:** Users can make an offer on an item. In response, sellers can accept the offer, decline the offer, or counteroffer.
- **AI outfit maker:** For an item, AI can provide outfit inspiration to help buyers see the "potential" in how to style the item
- **Price Recommendation:** Based on details such as the item's brand, condition, and market trends, the seller will be recommended pricing suggestions when posting an item.
- **Item Drafts:** Users will have the option of saving drafts of the items they want to sell so they can finish posting it at a later time.
- **Boosting Listings:** For a percentage of the sale, sellers can opt to boost their listings. Boosted listings will show up at the top of corresponding search results. This would increase the chances of a sale.
- **Hold Status:** Sellers can set items on hold if they want to save an item for a buyer or aren't actively selling.

Conclusions

Drift works towards the effort of reducing textile waste and promoting a new avenue for a more ethical, sustainable way of shopping. The Drift application allows users to buy secondhand goods from other users, create profile for posting items for sale, connecting with other Drift thrifters, and being a medium to provide an exceptional virtual thrifting experience with its multitude of additional features highlighted in our features section. Drift makes thrifting easier than ever and provides a modern user interface and experience while paving the way for a more sustainable future.