# Introduction

Welcome to SFU Trade. The purpose of this app was to provide SFU students with a reliable app that allows them to buy and sell items locally. The site is designed to be similar to ebay, kijiji, craigslist, etc. The aim is to provide a simple to use but reliable trading application that includes all necessary features that sellers and buyers will be looking for. We aimed to combine the the local convenience of Craigslist with the simplicity and convenience of online shopping like Ebay. Users can browse items through our directory, or find items near them by geolocation.

Features

Login and Registration

Users can register to the site by providing their first and last name and email address and providing a password. Our Site passes this information to that database where the user information is stored. We use Passport, an authentication middleware for Node.js which allows us to authenticate users through their choice of authentication. The standard standard login process, using email and password is provided, but to increase flexibility and to accommodate the rise and convenience of social media, we have included a Facebook login. Alternatively users can GitHub to signup (this was an extra feature based on the fact that we are all computer science students). Once a user has registered they can log in to the site with email and password, github, or facebook.

But we got some issue when login with github account. Originally, if user click the github login button, it will redirect user to the following page. But now we have a issue with github public, so only the person who create the client key can access that page. We will work on that later.
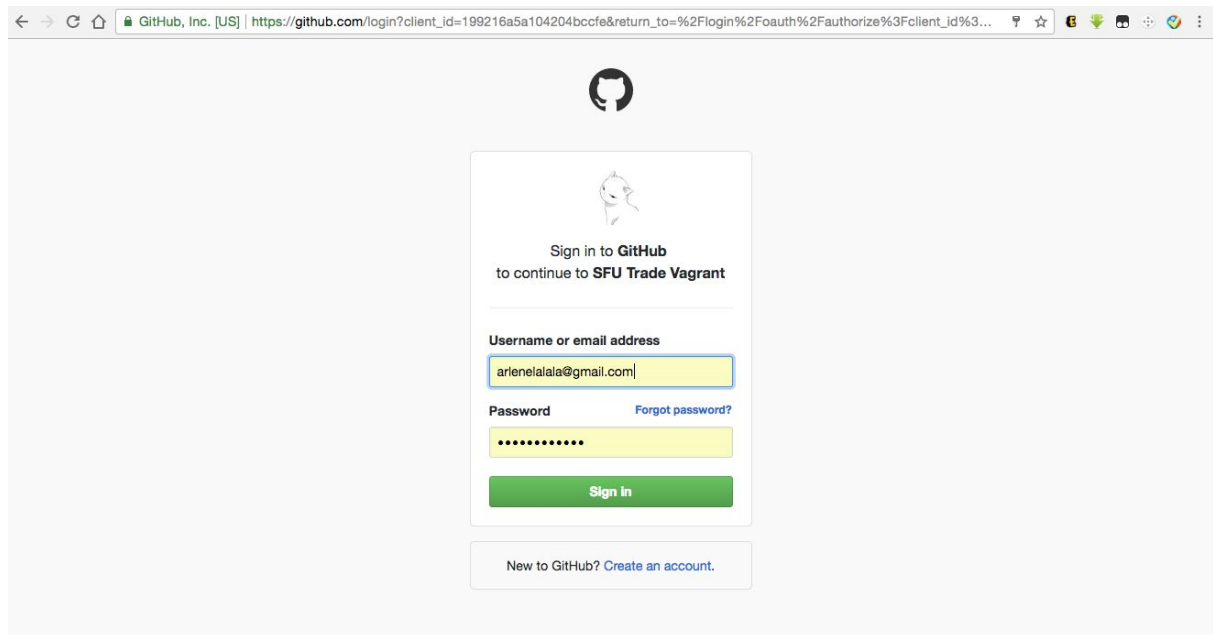
User Profile

After registering, the user can update their profile to include their age, gender and location. If a user tries to access a page that requires them to be logged in (ie. Buy page), they will be redirected to the login page. This prevents illegitimate buyers (ie bots) from making purchases of items without a legitimate account. In the original plans we considered the idea of having a social user profile that allowed other members to add each other or view profiles. We decided against that as it distracts from the main purpose of our site. We allow for interactivity through the chat and email messaging system but allow for users to keep their information private. We wanted to model an interactive online classifieds site as opposed to a social media platform. This creates a better user experience by not cluttering the main goals (buy and sell items) of the site, or confusing users.

Authentication

If an activity needs the user to be logged in, he/she is redirected to login page and then the page is loaded. Following activities are examples that are available only to logged in users:

- Leaving a review
- Adding, editing, and buying an item
- Viewing profile

Security

All user inputs are escaped and trimmed, and inputs such as emails and credit card numbers are validated in both client- and server-side to ensure data consistency. Moreover,

"express-mongo-sanitize" package is used to sanitize user inputs used in database queries to avoid SQL injections. Additionally, Cross Site Request Forgery has been considered in protecting web server.

Item Database

Adding items to the site is simple and quick. Users only have to enter a few details about the item and a photo before submitting. Once submitting the item is instantly added and the site is updated. If the seller wishes to delete the post they can automatically do so without any trouble. To increase security only members of the site can make purchases, there is no guest checkout.

Adding Items:

Viewing Items

From the directory page of our site, you can browse all the items currently for sale. Item's can be sorted alphabetically, popularity (Ranked by view count), and price (ascending or descending). From this directory page you can preview the image associated with the item,

see

If user upload multiple files, then you can see images in carousel. If there is only one file, we support image zooming feature.

Reviewing and Rating Items

Users can also review the item
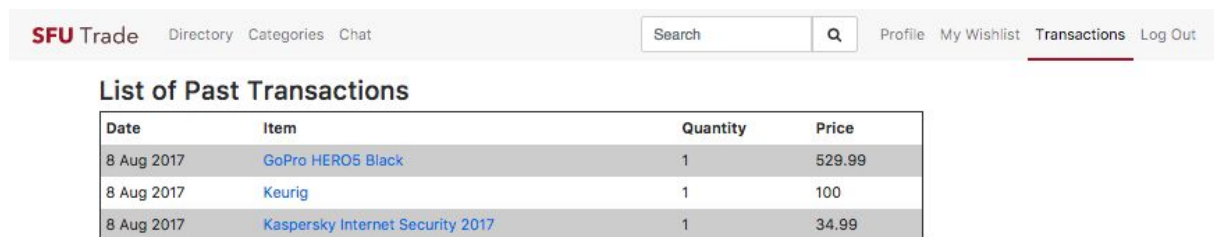
Purchasing Items

Our site allows users to message sellers as well if they would like to meet in person to purchase something (similar to craigslist) -and save on shipping! If a seller is far away, or the user does not want to meet them, they can use the online checkout to make a purchase. Item's can be purchased by any logged in user who is not the seller. (That is, our site will check to make sure that the buyer is legitimate, and sellers cannot "buy" their own products to increase popularity of an item") After clicking the "buy" button, users can enter payment information.

Wishlist

Users can track items they are interested in by adding them to their wishlist. The wishlist is unique to each user and allows them maintain a personal record of their favorite items. Items can be easily removed from the wish list as well. This feature is helpful because it allows users to take advantage of our price history tracking. Because our site tracks the price history of items, users can keep watch by adding the item to the wishlist, this creates a better user experience so they do not have to keep searching for the products they want. It is far more convenient.

Transactions

User's can view items they have previously purchased at their Transactions page (localhost:9000/transactions)


SFU Trade   Directory Categories Chat   Search Q   Profile My Wishlist Transactions Log Out

List of Past Transactions

Date	Item	Quantity	Price
8 Aug 2017	GoPro HERO5 Black	1	529.99
8 Aug 2017	Keurig	1	100
8 Aug 2017	Kaspersky Internet Security 2017	1	34.99

Messaging System

Chat

The chat system allows users to discuss items being sold on the site. When a user clicks "chat" on the header, they are taken to a chat system which allows them to exchange messages in an IRC like chat. Users will be redirected to the login page if they are not currently.
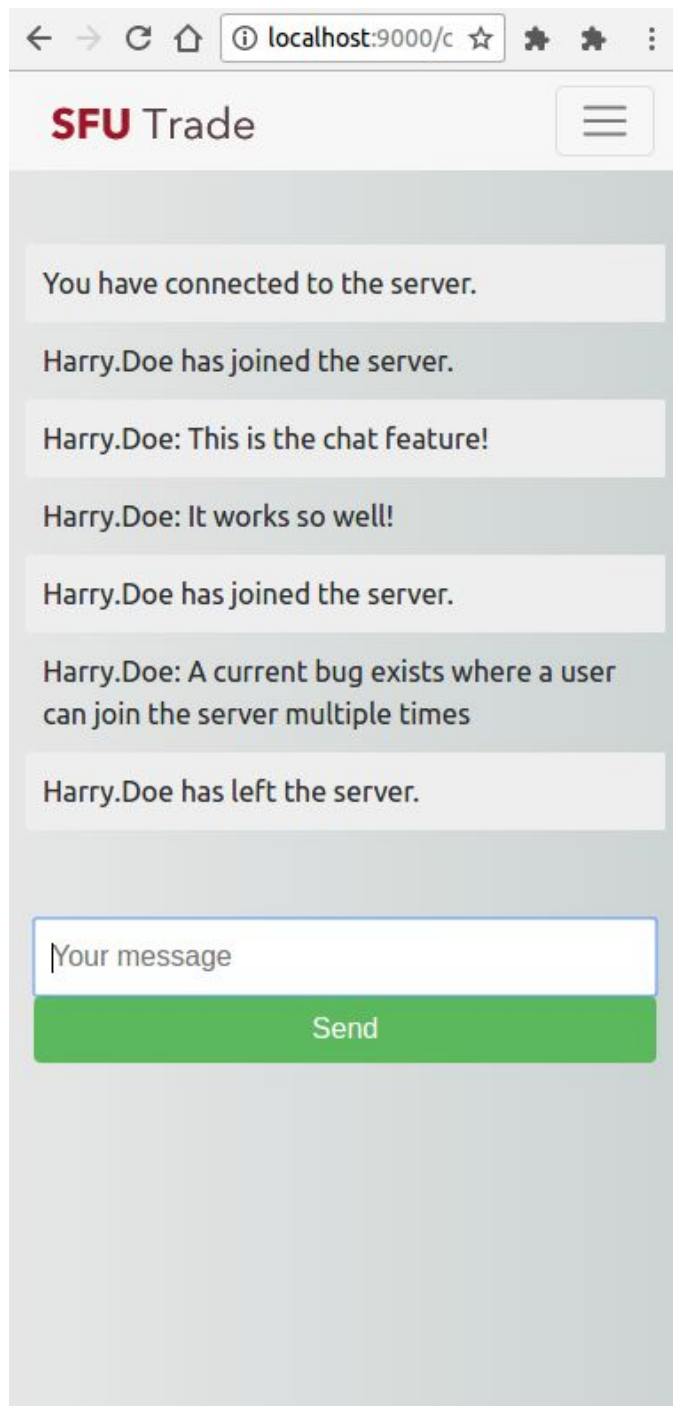
Google Maps - Geolocation

Our site can determine where in the world the user is based on their IP address. From this info our site can provide the user with items that are nearby to them, should they prefer to buy an item in person as opposed to online.

User friendly URL

Instead of using Item or Category ID, Slugs are used to provide a user-friendly URL. "mongoose-url-slugs" package is used to add a "slug" fiend to Item and Category collections, which is based on item title and category name, respectively. Also, a number might be added to slug to ensure its uniqueness.