# EE / CprE / SE 492 - Bi Weekly Report 06 Mar. 29 - Apr. 11, 2021 Group 34 Route-Constrained Family Shopping Optimization

Client: Iowa State University Faculty Advisor: Goce Trajcevski Project Contact: Ashfaq Khokhar

#### Team Members:

Colin Thurston - *Team Leader* Christian Baer - *Backend Architect* Tavion Yrjo - *Backend Developer* Colin Willenborg - *Mobile Developer* Elizabeth Strzelczyk - *Web Developer* Erich Brandt - *Web Developer* 

#### Weekly Summary:

This week we finished some touch ups on the UI and fully connected everything from the web scraper, finding the locations for the stores, and the web API. The application is now usable in both the android and web side.

### Past Week accomplishments:

The algorithm is now working for routing to stores based on distance. The map now generates with the correct route on both the web application and the android application. The android application and web application now get all the data they need from the API. This means that all data on the applications is now unique to the user.

| ≡ | Test Group 2<br>Leave Group                                     |
|---|---|
|   | Search for a product. If no results, try next search 🔹 Add bar. |
|   | Add new product to our inventory                                |
|   | Peter Pan Peanut Butter, Creamy - 16.3 oz                       |
|   | Start Shopping  |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |

Added the product search bar. If the user cannot find a product they are looking for, they can add the product to our inventory by using the input box.

| Search for a product. If no results, try next search 🔹 Add bar. |
|---|
|   |
| Peanut Butter   |
| Silly String  |
| Silly String  |
| Silly String  |
| Pickles   |
| string  |
| Jif Peanut Butter, Creamy - 40 oz                               |
| Jif Peanut Butter, Creamy - 40 oz                               |
| Quest Peanut Butter Cups - 12 pack, 1.48 oz                     |
| Quest Peanut Butter Cups - 12 pack, 1.48 oz                     |
| Pbfit All-Natural Peanut Butter Powder, 30 oz                   |
| Pbfit All-Natural Peanut Butter Powder, 30 oz                   |
| Bell Plantation PB2 Powdered Peanut Butter - 16 oz<br>iar       |

Users can now search our inventory for shopping list items.



The search bar filters out choices as the user starts typing



After clicking on the Start Shopping button, a route will be generated for the items in the given list.



New and improved shopping list interface.



Homepage and sliding navigation bar both use user specific data now instead of static data hard coded in.



This shows the route for a shopping list. The red markers normally wouldn't be shown but were used for testing.



When a user tries to add an item this screen allows them to search through all the items in the database.



Ability for the user to add new items to the database when the item is not there.

#### **Pending Issues:**

• N/A

## Individual Contributions:

| Name                 | Individual Contribution   | Hours this week | Total Hours |
|----------------------|---|-----------------|-------------|
| Colin Thurston       | Fully implemented the searching algorithm. Tested<br>and confirmed it could work on the web app.<br>Helped connect both the web scraper and the store<br>finder to both apps.   | 15              | 52          |
| Christian Baer       | API fixes as well as database management and minor changes.   | 8               | 44          |
| Tavion Yrjo          | Implemented multiple stops on the android app.<br>Added routing information from data received from<br>database.  | 10              | 36          |
| Colin Willenborg     | Did an overhaul of the layout and api that made all<br>data displayed nonstatic data and based entirely off<br>of the user that logged in. The route generating<br>was also integrated into the mobile app. Small<br>changes in the UI and navigation for the mobile<br>app. Implemented the api call for the web scraper<br>to add in new items when the user searches for an<br>item not in the database. | 25              | 68          |
| Elizabeth Strzelczyk | Connected adding new items to a list to the database, as well as calling the webscraper if the item cannot be found in the database.  | 10              | 47          |
| Erich Brandt         | Users are now able to press a "leave group" button<br>inside any group they are a part of. Start Shopping<br>will now call Mapbox to open up a route for the<br>items in the given group  | 10              | 48          |

#### Plans for upcoming week:

- Web API- Christian
  - Correct any errors in API. Errors come in as Front end works on their piece.
- Database Chrisitan
  - Encrypt the password we will use for login
- Mobile app Colin Willenborg
  - Add in settings page and functionality for the user to modify their profile/group and delete account.
  - Add in the functionality for only the group creator to modify who gets added to a shopping list.
  - Polish up other areas of the app that have small bugs that could affect the user's experience.
- Mapbox Tavion
  - Update UI to look nicer.
  - Implement web scraper on failed database requests.
  - Begin work on multiple family start locations.
- Algorithms Colin Thurston
  - Improve the timing of the store locator.
  - Refine the searching algorithm.
  - Assist with testing to make sure everything works on the apps.
- Web app Elizabeth/Erich
  - Add an input box in each group so that users can add other users to the group
  - Minor UI touchups
  - Allow users to change names of groups they own

#### Summary of bi-weekly advisor meetings:

In our meeting with our advisor we discussed strategies that we will use for creation of our final poster. We also checked up on the progress of our project and confirmed that the demo will be ready by 4/12.