EE / CprE / SE 492 - Bi Weekly Report 05
Mar. 15 - Mar. 29, 2021
Group 34
Route-Constrained Family Shopping Optimization

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:

The Web application is able to connect to the database and access data for key features. The database is complete and can connect to both apps and have a functioning Web API for calls. For the Android application, connecting the database to the application itself.

Past Week accomplishments:

We were able to connect both the web and Android application to the backend with the API with more features being added this time. The web application is able to get the list of items from the database and be able to display them. Also the user is able to make new groups and delete groups if needed. The web scraper is now fully connected between the database and a server. The user would be able to add products to the database that are not in there. A search algorithm is complete for the shortest path.

WebScraper connected to the database and able to get products and put them in the database

ec2-18-191-151-223.us-east-2.compute.amazonaws.com:3100/color?product=%22peanut%20butter%22

```
"peanut butter"
37
Product: Jif Peanut Butter, Creamy - 40 oz
Store: Target
Price: $5.89
Product: Jif Peanut Butter, Creamy - 40 oz
Store: Target
Price: $5.89
Product: Pbfit All-Natural Peanut Butter Powder, 30 oz
Store: Grocery.com Store
Price: $17.47
Product: Bell Plantation PB2 Powdered Peanut Butter - 16 oz jar
Store: Walmart
Price: $8.47
Product: Bulk Smooth Peanut Butter 5 lb. Tub
Store: WebstaurantStore.com
Price: $8.69
Product: Crazy Richards Peanut Butter, Creamy - 16 oz
Store: Walmart
Price: $2.94
Product: Smucker's Natural Peanut Butter, Creamy - 16 oz jar
Store: Target
Price: $3.29
Product: Natural Pure Smooth Peanut Butter - Salted - Pallet (36-28Lb) - By Bake
rs Authority
Store: WebstaurantStore.com
Price: $156.49
Product: Skippy Peanut Butter, Creamy - 16.3 oz
Store: Walmart
Price: $8.64
Product: REESE'S 45 lb. Pail All-Natural Smooth Pourable Peanut Butter
Store: Vitacost.com
Price: $5.00
Product: (2 Pack) Smucker's Natural Creamy Peanut Butter, 26 oz
Store: Kroger
Price: $5.88
Product: Vitacost Whole Food Certified Organic Smooth & unsalted Peanut Butter -
 18 oz (510 g)
Store: WebstaurantStore.com
Price: $8.69
Product: REESE'S 50 lb. Bag-in-Box Creamy Peanut Butter
Store: Target
Price: $1.99
```

The graph object and the ability to find the shortest path.

```java
graph.addStoreToGraph(new StoreObject( storeName: "User0",   productName: "User",   price: 0,  distance: 0));
graph.addStoreToGraph(new StoreObject( storeName: "Walmart",   productName: "Banana", price: 0.00, distance: 40));
graph.addStoreToGraph(new StoreObject( storeName: "Target",   productName: "Banana", price: 10.00, distance: 50));
graph.addStoreToGraph(new StoreObject( storeName: "Target",   productName: "Banana", price: 10.00, distance: 50));
graph.addStoreToGraph(new StoreObject( storeName: "Target",   productName: "Banana", price: 10.00, distance: 50));
graph.addStoreToGraph(new StoreObject( storeName: "Target",   productName: "Banana", price: 10.00, distance: 2));
graph.addStoreToGraph(new StoreObject( storeName: "Target",   productName: "Banana", price: 10.00, distance: 49));

graph.addStoreToGraph(new StoreObject( storeName: "Walmart",   productName: "Banana", price: 0.00, distance: 2));
graph.addStoreToGraph(new StoreObject( storeName: "Hyvee",   productName: "Banana", price: 0.00, distance: 2));
graph.addStoreToGraph(new StoreObject( storeName: "Bad",   productName: "Banana", price: 0.00, distance: 8));
graph.addStoreToGraph(new StoreObject( storeName: "User1",   productName: "User",   price: 0,  distance: 15));
```
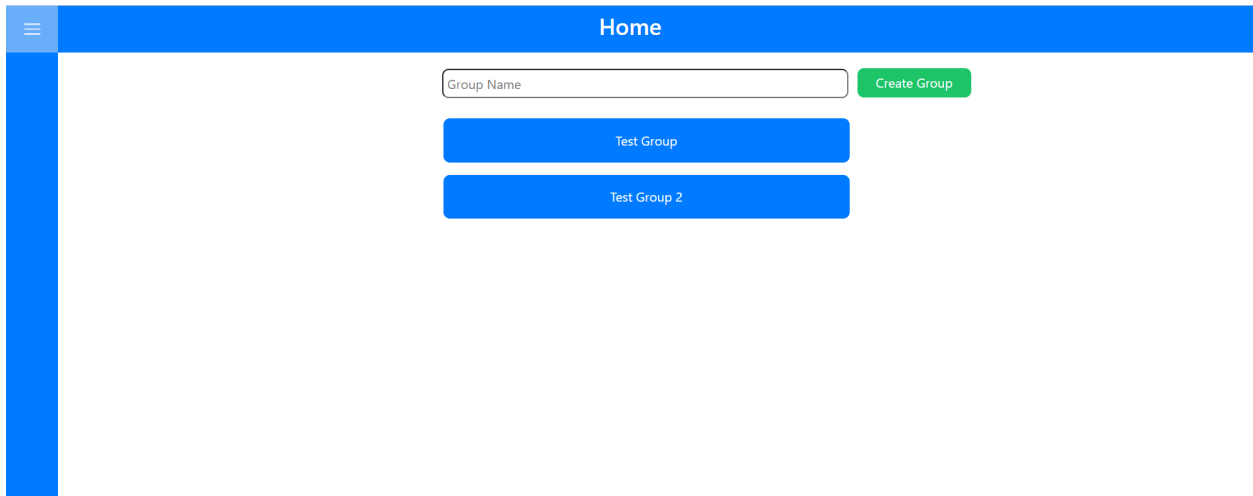
```
User0 Distance: 0.0
Hyvee Distance: 2.0
Walmart Distance: 2.0
Target Distance: 2.0
Bad Distance: 8.0
User1 Distance: 15.0
```
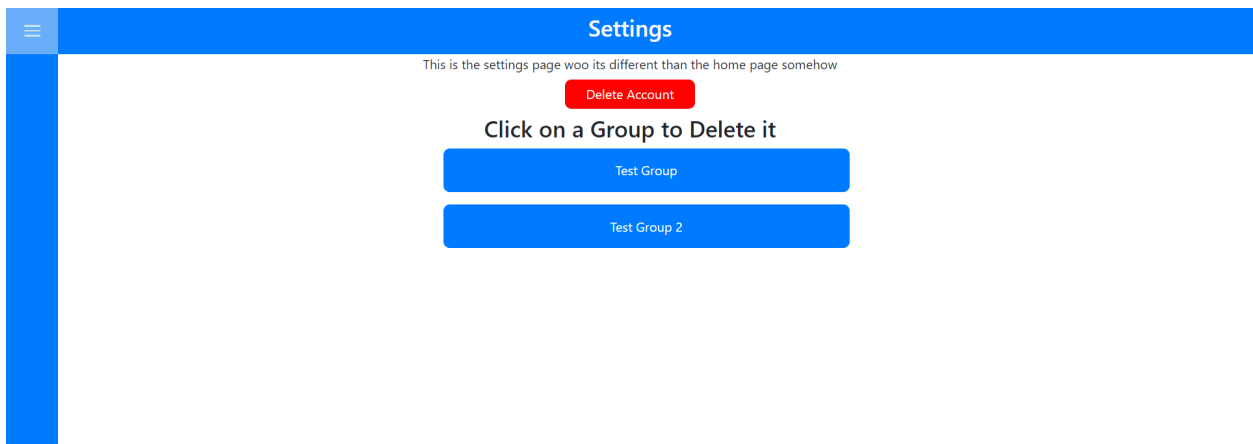
Goce	Show/Hide	List Operations	Expand Operations
Groups	Show/Hide	List Operations	Expand Operations
Prices	Show/Hide	List Operations	Expand Operations
Products	Show/Hide	List Operations	Expand Operations
ShoppingLists	Show/Hide	List Operations	Expand Operations
Users	Show/Hide	List Operations	Expand Operations
WebScraper	Show/Hide	List Operations	Expand Operations

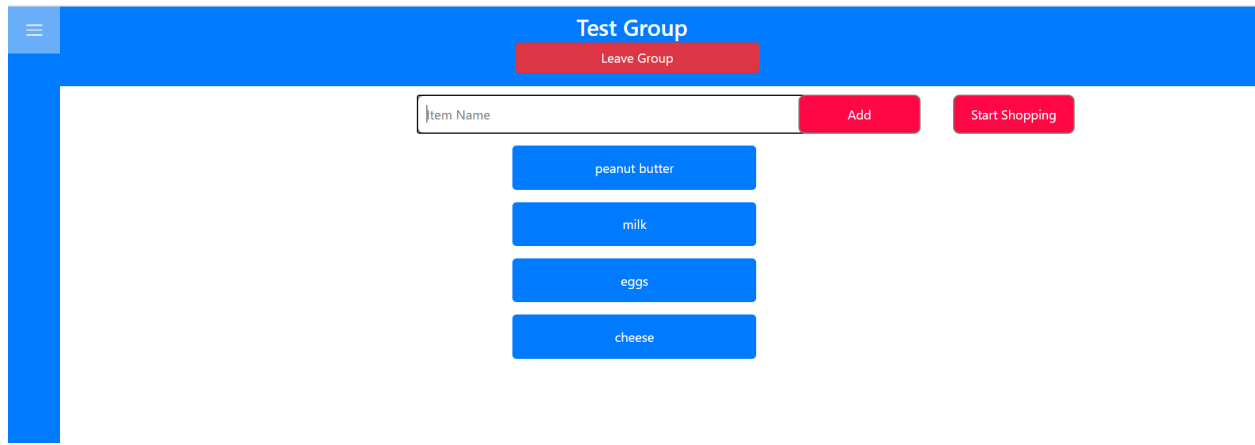New Controllers On API Full functionality for each

.

The home page now showcases the groups that a specific user is a member of. Entering the name of a group and clicking Create Group will generate a new group that the user is the owner of.
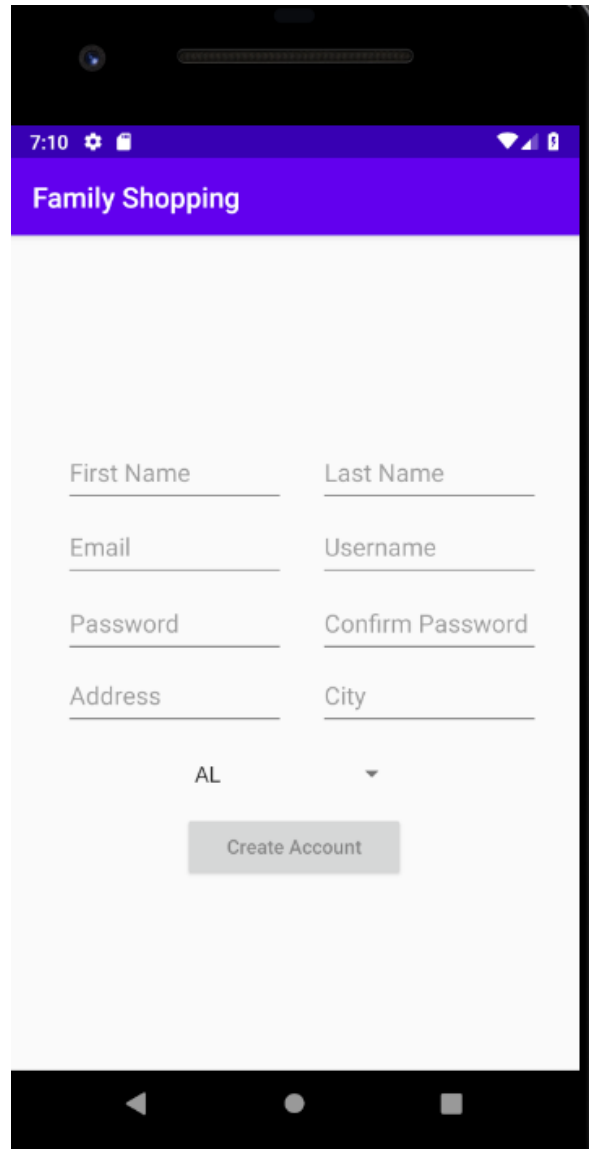

The settings page now shows the groups you are the owner of, and clicking on them will delete them.

Each shopping list can now display the items in a list. Still working on the functionality of adding new items to the list, leaving a group(but not deleting the group), and connecting MapBox to the "start shopping" button.

Test Group

Leave Group

Item Name   Add   Start Shopping

peanut butter

milk

eggs

cheese

Modified create account page to include data for the post request.

Pending Issues:
- **N/A**

Individual Contributions:

Name	Individual Contribution	Hours this week	Total Hours
Colin Thurston	Web scraper fully put onto the server and able to be accessed from the applications. Got a search algorithm that does find the shortest path.	10	37
Christian Baer	Created API controllers for all tables. Completed API Alpha. Working on error correction to the current API.	12	36
Tavion Yrjo	Working on routing to multiple places. Implementation of mapbox on web interface.	8	26
Colin Willenborg	Worked on the API service for the mobile app and adding in the necessary UI changes that came with it. Set up api calls to get data for the User's create account, login, make a list, display a list and edit a list.	12	43
Elizabeth Strzelczyk	Connected the user's groups of lists and items in that list to the database (Can display . Can additionally add new groups.	15	37
Erich Brandt	Added a delete account button to the settings page. Users can also see a list of groups they own on the settings page, and can delete any groups they own.	15	38

Plans for upcoming week:
- Web API- Christian
    - Correct any errors in API. Errors come in as Front end works on their piece.
- Database - Chrisitan
    - Create on delete for foreign keys of groupuser and shoppinglist.

- Mobile app - Colin Willenborg
    - Continue working on the API service for the mobile app and add in the necessary UI components for each of the api calls.
    - Work on supplying the necessary data for the algorithm to display the correct route to the user.
- Mapbox - Tavion
    - Adding implementation of routing based on user location and destinations.
    - Implementation of mapbox on the web interface.
    - Implementation of calls to the database to string together routes.
- Algorithms - Colin Thurston
    - Improve the algorithm to be A*
    - Integrate the algorithm into the two applications
    - Integrate the calls for the web scraper into the applications.
- Web app - Elizabeth/Erich
    - Connecting MapBox to the web app to generate a route for that group
    - Completing functionality for adding an item to a group (connecting the web scraper/db to work properly here)

Summary of bi-weekly advisor meetings:

In our meeting we went over where we are in our project in terms of the functionality of all of our pieces. We concluded that the database should be in its final stages, The API, frontend, and mapping are being worked on currently. We Told our advisor we would have a working prototype by 2 weeks from 3/29/2021.