



Team R Project: Stage 3

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— CPSC 481

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Team R Portfolio

<https://sebastienwong.github.io/cpsc481teamr/portfolio/>

Team R Repository

<https://github.com/sebastienwong/cpsc481teamr>

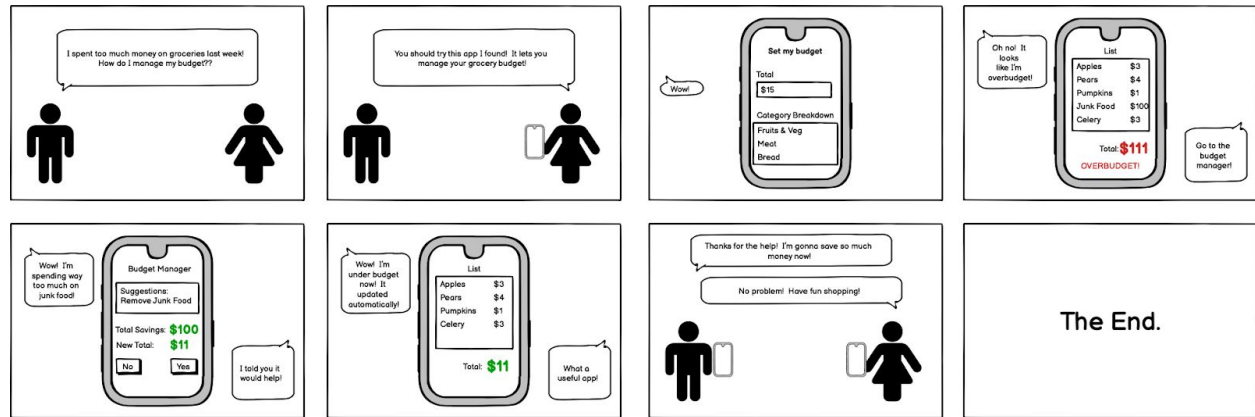
Updated Project Idea

The project we have chosen is a grocery shopping mobile app. With the app, users will be able to easily add items to their shopping list by scanning the barcode of the items or searching by name. Users can also remove items from the list and automatically tally the price of each item in order to keep track of budget. This will allow users to easily keep track of exactly what they purchase and the total cost. As the app is used over the months, it will keep track of the users spending habits, allowing them to easily track their grocery budget. The app will also provide features such as recommending coupons for frequently purchased items, reorganizing the list to group similar items, and allow users to manually add and remove items that don't have barcodes. This app will be useful for anyone who buys groceries regularly, but especially for people who buy large amounts of groceries at once, people shopping on a tight budget, and people with poor memory such as the elderly.

List of updated tasks

- User will add/remove items in their shopping list.
- User can track their purchases and change their budgets.
- User can search for and apply coupons to their list.
- User can create new shopping list templates.
- User can organize their list by aisle/store.
- User can track health and nutrients of their groceries.

Storyboard



This storyboard illustrates how someone would go about using our app. The storyboard illustrates a person going over budget during his shopping trips and is introduced to an app that will help him keep track of how much he is spending and how he can cut down on what he is spending.

Cognitive Walkthrough

We went through our three major tasks, and created a scenario related to each task. Then we stepped through each task as if we were performing it. The process helped us discover what features we were missing or might have been overlooked from our lofi. On a more high-level review, it helped us find wireframes we forgot to link and missing text. On a more task-specific-level, it shows us that removal of items from lists wasn't clear, as well as we relied a lot on people being familiar with using mobile apps. In the future, it might be useful to have multiple people run a walkthrough on the same task, so we cover more issues that only one person might not think about.

Add/Remove Items

Description of task step	Does user have training or knowledge to do this step?	Is it believable that they would do it?	are they motivated?	Comments (including possible solutions)
Go to the Shopping list screen from the menu	Yes	Yes	Yes	
To add an item, press the plus sign button at the bottom of the screen.	No	Yes	Yes	The add button is fairly intuitive, but some users may not understand it. A brief tutorial the first time the app launches could be useful for explaining it.
Search an item through the search bar and click on it to add to the list.	Yes	Yes	Yes	
Select 'scan barcode' then scan the barcode to add the item	Maybe	Yes	Yes	Self-checkouts are common in grocery stores, and so people would have experience scanning barcodes.
Click on an item to bring up details. Then select remove item.	No	Yes	Yes	Again, a brief tutorial explaining the app functions would be useful.

Reflection on Ideation Process

In our ideation phase, each team member brainstormed four to five ideas in the form of sketches. We followed this up by creating an affinity diagram and grouping the sketches into categories. Creating so many sketches really helped our team narrow down what we wanted to do and how we wanted to go about creating the interface for our app. It opened up a lot of possibilities for how we could approach our app. Our affinity diagram helped us figure out what the most important aspects of our app would be. This was the least effective part of the ideation process because it didn't really tell us anything our team already didn't know.

The next step in our ideation process was to select the most promising ideas and polish them. This step laid out the details of what the user would eventually see and was quite important for us to figure out. Finally, we took one of those polished ideas and created a storyboard in order to get a feel for the type of person that would seek an app like ours and how we could tailor our app to them. Overall we are quite happy with our ideation process, but we would approach the affinity diagram differently if our team was to do it again.

Appendix

SKETCHES

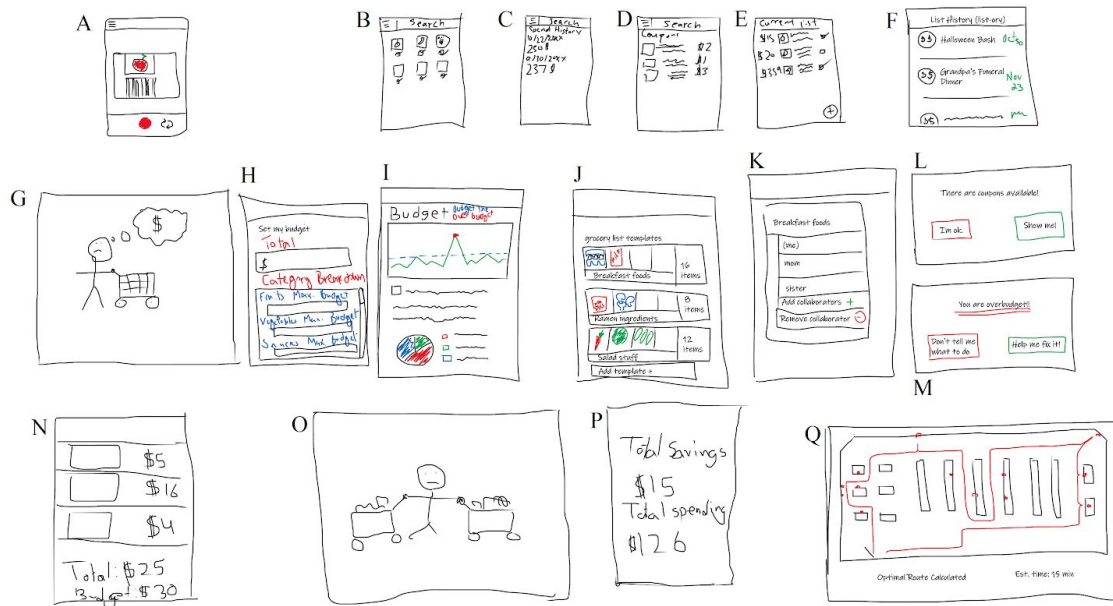


Figure A. Team R Sketches

Affinity Diagram

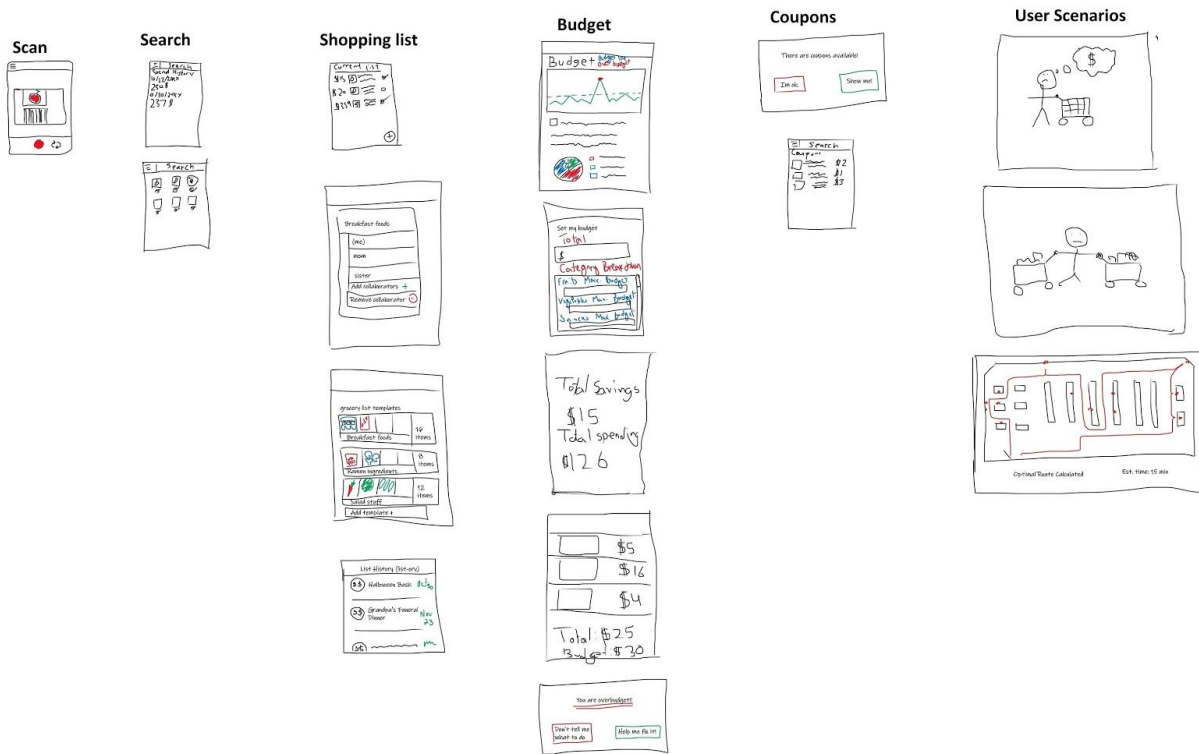


Figure B. Team R Affinity Diagram

Polishing ideas

We chose:

- Budgeting
 - A UI for viewing budget statistics
 - A UI for setting and editing budget
 - A simplified UI for basic budget and spending stats
 - An expansion of the previous UI to show details of items
 - A pop-up warning the user they are over-budget
 - **Budgeting:** A feature that allows a user to keep track of how much they have spent, what they've spent money on, and ways to save and improve on their spending.
- coupons
 - A section of the app that shows specifically coupons for all sorts of products
 - In the shopping list it will show if any of the items currently in the cart have a valid coupon for use and how much the discount is.
 - **Coupons:** A feature that allows the user to see what deals are available to them in order to help them make a purchasing decision.
- shopping list
 - The first image in the budget category shows an example of a shopping list. The list contains several items, along with their price, and a brief description.
 - The second image shows the multi-user function for a list. This allows multiple people to add and remove groceries to a communal list.
 - The third image shows several examples of list templates. These templates allow the user to quickly create a list of groceries that they frequently purchase.
 - The final image shows the list history. Allowing the user to see their previous purchases.
 - **Shopping List:** The feature allows the user to keep track of the items they want to purchase.

Figure C. Team R polishing ideas

BUDGETING: Sam wants to increase/decrease his budget, depending on what he spent last week

Description of task step	Does user have training or knowledge to do this step?	Is it believable that they would do it?	are they motivated?	Comments (including possible solutions)
Go to the budget screen from the menu	Yes	Yes	Yes	
Look at current list cost compared to budget	Yes	Yes	Yes	
Looks at budget statistics	Maybe	Yes	Yes	Sam may not know how to read a bar graph or might be confused by this section. <i>Possible Solution:</i> Simplify the presentation into text or give a small tutorial upon initial use to teach him.
Check last week's spending	Maybe	Yes	Yes	Same possible issue as before, except this info is very clear on the graph.
Go back to the main budget screen	Maybe	Yes	Yes	This assumes Sam has used a computer/browser/app that has a back button
Go to the change budget screen	Yes	Yes	Yes	
Increase the budget	Maybe	Yes	Yes	Sam may not know how to use a text field. <i>Possible Solutions:</i> Add arrows that increment/decrement by a certain amount. This could be more intuitive

Figure D. Team R Cognitive walkthrough for budgeting

CREATING TEMPLATES: Sam wants to create a template for breakfast foods so that he can add some items he will regularly buy

Description of task step	Does user have training or knowledge to do this step?	Is it believable that they would do it?	are they motivated?	Comments (including possible solutions)
Go to "Templates" screen from the menu	No	Maybe	No	Sam may not know about the Templates feature of the app and so may not be sure what the "Templates" button in the menu is referring to. Possible Solution: Give a simple tutorial or explanation for the user's initial use of this feature.
Look at current list of templates	Yes	Yes	Yes	
Tap on a template, for example, "Breakfast foods"	Yes	Yes	Maybe	Sam may want to see what is inside this template, to tell if he wants to use it or not
Look at items in template	Yes	Yes	Yes	
Tap the trash icon to delete	Yes	Yes	Maybe	This would assume Sam does not find this template useful and wants to delete it.
Look again at current list of templates	Yes	Yes	Yes	
Taps on "Add New Template +"	Yes	Yes	Yes	Realizing he needs the current templates will not serve his need, he decides to create a new one.
Looks at "Name Your Template" screen	Yes	Yes	Yes	
Types a name for new template	Yes	Yes	Yes	
Creates "+" button to make the template	Yes	Yes	Yes	
Looks at Empty Screen of new "Breakfast Foods 2" template	Yes	Yes	Yes	
Taps on "Add Items"	Yes	Yes	Yes	

Figure E. Team R Cognitive walkthrough for creating templates

Add/Remove Items

Description of task step	Does user have training or knowledge to do this step?	Is it believable that they would do it?	are they motivated?	Comments (including possible solutions)
Go to the Shopping list screen from the menu	Yes	Yes	Yes	
To add an item, press the plus sign button at the bottom of the screen.	No	Yes	Yes	The add button is fairly intuitive, but some users may not understand it. A brief tutorial the first time the app launches could be useful for explaining it.
Search an item through the search bar and click on it to add to the list.	Yes	Yes	Yes	
Select 'scan barcode' then scan the barcode to add the item	Maybe	Yes	Yes	Self-checkouts are common in grocery stores, and so people would have experience scanning barcodes.
Click on an item to bring up details. Then select remove item.	No	Yes	Yes	Again, a brief tutorial explaining the app functions would be useful.

Figure F. Team R Cognitive walkthrough for adding and removing items from the shopping list