

Assignment M2

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Abstract—This project is intended to discover, prototype, and evaluate an improved HCI design for effectively managing a grocery list while shopping. There are a handful of existing apps for this task, each of which emphasizes different capabilities and user experiences. An overall redesign of an HCI implementation for the task aims to maximize ease of use across multiple user types, while emphasizing key needs identified during the design life cycle.

1 NEEDFINDING EXECUTION 1

The first needfinding method was **naturalistic observation**.

1.1 Needfinding results

Please view Appendix 8.1: Naturalistic observation results for the full needfinding results. There were several major observations across the three sessions. First is that the type of user varied depending on the day and time, where weeknights were single adults or families, weekday mornings were older adults. Many moved quickly among sections, but often stood in one section for long periods of time seemingly making decisions across several options (e.g. an entire aisle of potato chips). Lastly, the context demands a significant amount of cognitive and physical energy - asking those shopping with you to search for other items, holding a list (whether paper or phone) open in your hand, making a phone call (many users were on their phones during their time grocery shopping), navigating a crowded aisle, or holding multiple items without a cart.

1.2 Conclusions

The primary takeaways from these sessions were that different users had substantially different needs, that decision-making for a single product took more energy than navigating different products, and that regardless of the chosen grocery list method, the context requires a substantial mental and physical commitment for task completion.

1.3 Steps for Bias Mitigation

To mitigate the confirmation bias I anticipated, I was intentional in observing aspects of the task that contradicted my assumptions. For example, I assumed many users would prefer their phone over paper. However, easily half of those I observed used paper lists.

2 NEEDFINDING EXECUTION 2

The second needfinding method was **analysis of product reviews**.

2.1 Needfinding results

The below provides quotes, themes, and topics from each of the top two of the five-star, three-star, and one-star reviews on the Apple App Store. Themes are specific to salient design concerns (e.g. quotes on subscription cost are not included). Citations for quotes from review are provided in the App column. Full quotes are provided in Appendix 8.2: Analysis of product reviews results.

Table 1—Apple App Store ratings and themes from user reviews for six grocery list apps. Source: [Apple App Store](#).

App	Avg. Rating	No. of Ratings	5-Star Themes	3-Star Themes	1-Star Themes
AnyList (Purple Cover, Inc., 2021)	4.9	49.7K	Separate lists (cleaning, packing, etc.) Syncs and shares simple lists to other phones Lists are sorted "Reliable and glitch free" Recipe section is great (included recipes, can import recipes, etc.)	No longer able to import recipes from the web (favorite function) "System for labeling items, assigning categories, stores etc. is a few steps too deep" Poor integration with Apple Watch	Not able to re-use items, so have to re-enter everything Bonuses were recipe feature, meal planning, use of Siri, what store has an item and setting layout for each store
Out of Milk (Bonial International GmbH, 2018)	4.0	2.6K	"Nice to have a basic calendar" to list meals Categories items into specific areas Keep your phone screen awake Can price each item and "choose to add sales tax" Includes pantry list and	Can create several lists Syncs while shopping Ads that promote items actually add them to your list Deleted categories keep reappearing App "will just suddenly delete an item"	App will re-sort items automatically, "forces me to re-sort my grocery list every week" Have to re-add prices to items every time New default categories are automatically added without user preference considered

			to do list		
Flipp (Flipp Corporation, 2021)	4.7	76.3K	"Gives you all the ads for stores near you" "Can clip coupons, list loyalty cards" Best app for cost-savings	Stores and coupons are missing that should be present Unable to clip some coupons Prefer to set preferences in seeing coupons	Can't clip coupon for specific stores Technical difficulties Multiple rebates denied due to image issues
Our Groceries (OurGroceries, Inc., 2021)	4.8	38.3K	Can add ingredients from recipes, integrate with shopping list Syncs "instantly and seamlessly" "Phone, iPad, and watch apps "work smoothly" Has "well-organized instructions"	"Basic grocery list" Can have several lists and store recipes Needs ability to track prices and totals	Categories aren't automatically designated Can't add multiple items at once No "favorites" list available for items "Too simple"
Cozi Family Organizer (Cozi, 2021)	4.8	233K	"Easy to transfer... ingredients" from recipe to list No ability to select multiple items when deleting	Has both meal planning and calendar Can't search for specific types of recipes (e.g. vegetarian) Poor visual display, especially with someone with low vision	No way to "secure the entries and protect them from deletion", when syncing
List Ease (inMarket Media, LLC, 2021)	4.7	34.1K	Can have multiple lists, and integrate with to-do list Price input feature that remembers prices, to track spending "Enormous database" of items Predictive text feature Identify where sales are	Categories for store layout don't stay static ("spontaneously rearrange themselves") Can't list less than "1" of an item (e.g. 1/2 a pound) Includes things that are already checked off Coupons section should suggest "based on my shopping list"	Multiple issues with syncing and re-sharing

2.2 Conclusions

The primary takeaways were that basic organizational features (categories, list sorting, etc.), syncing capabilities, and cost-saving features (rebates, coupons,

price tracking, etc.) were frequently the cause for high praise from users, whereas when users struggled to adapt the app to their unique needs, such as poor fidelity in visual display or lack of usability across multiple platforms, is when reviews expressed the most frustration over the product. One app may be too many layers deep, whereas another app may be too simple.

2.3 Steps for Bias Mitigation

To mitigate the voluntary response bias that was anticipated, conclusions from this method are compared and contrasted against other methods (e.g. small app features that reviews insist are crucial, compared to easily half of users during naturalistic observation using paper lists instead of apps). Reviews across the spectrum are reported above, to mitigate instances of social desirability bias.

3 NEEDFINDING EXECUTION 3

The third needfinding method was **surveys**.

3.1 Needfinding results

Please view Appendix 8.3: Survey results for the full needfinding results. Of the twenty-five survey respondents,

- Demographics:
 - Age groups were evenly split (36% between ages 18-29, 36% between ages 30-39, and 28% between ages 40-49)
 - 12% grocery shop only for themselves, 48% shop for two people, and 40% shop for three or more people
 - 48% grocery shop alone, and 52% shop with others
- Method:
 - 36% use paper for their grocery list (e.g. post-it notes or notepad), 52% use an electronic method (generic notes or to-do apps, **no specific apps listed in other methods**), and 12% don't use a list
 - A majority are satisfied with their method's ease of use (80%) and level of focus to ensure items aren't forgotten (56%)
 - Respondents were split on satisfaction with their method's level of physical effort required (48% dissatisfied, 12% neutral, 40% satisfied) and effort required to collaborate with other household members (20% dissatisfied, 44% neutral, 36% satisfied)

- A majority are dissatisfied with their method's assistance in cost-savings (64%)
- Priorities:
 - Every respondent valued the ease of remembering items to purchase, and a large segment also valued minimizing temptation (52%), meal planning (48%), and increased speed (44%)
 - Of those willing to rank their priorities in grocery shopping, 39% chose taste as their #1 priority, 35% chose nutrition, 17% chose convenience, and 9% chose cost
 - When asked what aspect of grocery shopping they wished they could improve, the most common response (28%) was some variant of being able to associate and group items by store layout. Other responses included creating a shared list, matching a recipe to a grocery list, or having a standing list with staples.

3.2 Conclusions

The primary takeaways for this method are that the user groups and contexts are highly diverse, and that there are several aspects of the task (namely cost-savings, efforts to collaborate, minimizing physical load, grouping items, and offering reviews for taste or information on nutritional content) may be areas where design improvements on existing platforms would be highly valued.

3.3 Steps for Bias Mitigation

To mitigate the social desirability bias that was anticipated, the survey questions avoided emphasizing any particular platform or aspect for the given task so that respondents would provide a range of answers appropriate to their perspective. Only about 20% of respondents had shopped most recently “two weeks ago”, and so concerns about recall bias are less substantial when comparing responses.

4 DATA INVENTORY

The below sections reference responses to the seven questions in the data inventory (Joyner 2021a). The problem space is that specifically of the grocery list interface, and its role in navigating grocery shopping.

4.1 Who are the users?

The users are any individual or collection of individuals that shop for groceries in-person. As the naturalistic observation demonstrated, these can be single adults, couples, families, older adults, with any range of age, genders, or other demographics. The survey demographics also highlighted that the respondents were equally split among age, household composition, and grocery shopping habits. Any interface designed for users in this problem space, will have to be mindful of the variety of needs inherent in a diverse population.

4.2 Where are the users?

The users are in a grocery store, which can have any number of layouts or characteristics depending on the building, brand, and local area. However, the users are also in whatever environment they chose to build their grocery list in - whether that's at home looking through the fridge and pantry, or in the car on a phone call with their roommate or partner asking what's needed. While the naturalistic observation allowed me to identify that the grocery store was a key location, none of my needfinding methods explored the location where the grocery list was created. That would be best explored via a survey or interview.

4.3 What is the context of the task?

From the naturalistic observation, the context is dependent on the date and time of the task. At times grocery shopping is a quieter, slower environment, whereas other times there can be a crowd to navigate. There are significant mental and physical requirements during the task - traversing the grocery store while identifying and selecting items, managing collaboration with other members of the household, physically picking up items while also balancing a phone or list, a cart, a wallet or purse, etc. The product reviews also illustrate additional facets that compete for the user's attention, such as the need to calculate total cost or how well their method integrates with their chosen platform.

4.4 What are their goals?

The user's goals are to purchase items that meet at some preferred **ranking** of priorities (taste, cost, convenience, nutrition, and others) via some **method** that best supports their needs, whether collaboration, speed, or other concern. The product reviews illuminate that many users identify the ability to seamlessly sync and update their grocery list as a crucial part of their goal, which is as an

individual to purchase items that are adequate for a multi-person household. Other components of this complex goal are highlighted in the survey, where all respondents valued using a grocery list to reduce memory load, while a majority were dissatisfied with their method's ability to reduce costs.

4.5 What do they need?

The naturalistic observation indicates that the physical objects they need are a cart and some method of remembering which objects to purchase, while the information they need may either be present on their list or require a phone call to any number of collaborators in their household. Many of the product reviews highlight a need that as the user's needs grow in complexity (meal planning, large household, budget constraints), the more they may need a one-stop-shop solution for an interface (calendar, grocery list, pantry list, coupons, and more).

4.6 What are their tasks?

As demonstrated by the naturalistic observation, the user's physical tasks are to navigate a list keeping method, a cart, oftentimes crowds, the layout of the store, and the physical retrieval of items. Some of the cognitive and social tasks as highlighted in the survey and product reviews include managing multiple collaborators, minimizing temptation of unnecessary purchases, and balancing cost with other preferences such as taste and nutrition.

4.7 What are their subtasks?

The subtasks - most clearly illustrated by the product reviews - are largely organizational concerns, such as categorizing items by store layout or checking off items as they are retrieved. The survey also shows several cognitive subtasks such as managing meal planning or mentally tracking pantry staples to purchase.

5 DEFINING REQUIREMENTS

Based on the data inventory (Joyner 2021a), the following lists data requirements across a spectrum of needs (Joyner 2021b). The functionalities that this interface would require are the ability to create multiple lists (including a pantry or to-do list), user-designated categorizing by layout or by store, suggest common items and mark completed items, sync across accounts, a calendar for meal planning, recipe import and suggestions, comparison tools for items with multiple options

(e.g. reviews and nutrition info), budgeting tools (e.g. item prices and sales tax), and ads, coupons, and loyalty cards for stores nearby and preferred stores.

Usability and accessibility features require visual and auditory cues appropriate for those with limitations, leaving the screen lit while active, ability to interact via voice or typing, and ability to lock down entries from other users. Learnability should be appropriate to the most novice user, since there is a highly diverse range, and many potential users will choose a simple interface (notepad, notes app) over something more complex. Lastly, compatibility across multiple platforms is crucial to ensuring users can remain flexible to their preferences (e.g. watch to minimize physical effort).

To evaluate the success of a prototype, my initial thoughts of evaluation would be user perception in comparing methods (e.g. interviews after shopping with their typical method, and then interacting with the prototype) as well as tests of user speed on tasks they prioritize (e.g. how long to categorize items via a paper list, versus via the interface).

6 CONTINUED NEEDFINDING

The next iteration of needfinding I might explore is interviews or think-aloud protocols. The survey was helpful in identifying demographics, but many of the questions may be better clarified via an in-person interaction. A think-aloud protocol would be a natural extension of the naturalistic observation that is currently missing, to understand each user's needs and thought process, whereas an interview can get at typical user stories, and especially the question of what occurs before the user is at the grocery store. Like mentioned above, that might include the context in which a user puts together a grocery list, the demands on their time or mental load while designing a list, and how they typically collaborate or plan meals for the future.

7 REFERENCES

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8 APPENDICES

8.1 Naturalistic observation results

Session #1: Weeknight

- Lots of people using lists on phones, and keeping their phones live in their hands, constantly referencing it (lights on?)
- General item is quick to find, but then spend time perusing all options? (e.g. “frozen dinner” = easy to find, but what do you want?)
- Lots of people making phone calls
- Not all that crowded, fairly quiet (surprising for a Weds evening?)
- If they don’t have a cart, their hands are immediately full
- Hard to find baskets due to COVID
- Common user types: single adults, adults with kids (that they send off looking for things)
- Lots of pausing and phone calls in sections with a ton of choices (e.g. not in veggie aisles, but at the entire wall of chips)

Session #2: Weekday morning

- Very quiet Friday morning

- Only a handful of people in the store
- Mainly elderly, either alone or with a spouse
- Most have lists in hands with pens
- No phone calls - very different than prior session

Session #3: Weekend afternoon

- Lots more people in store compared to other sessions
- Lots of couples, shopping together, many with a paper list in hand (sync options? Collaborate options?)
- Lots of phone calls and pauses, like in other observations
- Aisles are narrow - people have to hold lists in hand, when busy carts jostle, lots of motion required - is a paper list or phone harder to hold?
- Squatting down to lower shelves with list in hand

8.2 Analysis of product review results

The aggregate results are provided above. This appendix provides the full text of each of the top two five-star, three-star, and one-star reviews of each app, that were coded and specific topics were reported above. Citations for all reviews provided with app name.

AnyList (Purple Cover, Inc., 2021)

- Top two five-star reviews:
 - danwagner01, 08/28/2020
 - My longtime favorite app: I am rewriting and resubmitting my review of the AnyList app. I have been using it faithfully for many years and am so very impressed at how functional it is. AnyList is one of those apps that just keeps getting better and better. I have a separate list of house cleaning/yard work duties that syncs to my son's iPhone, so I just select which home maintenance items need to be completed — and he uses his view of the list as a guide to get his chores done. I have also created packing lists for everyone in my family. I check-off items and they pack from their lists. When we travel, we have essential items we always need for virtually every destination. These listed items are sorted by room so basically I go down the

list from the master bedroom... to the basement selecting the destination's essential items from each room and pack them immediately. We never forget sunglasses, flip-flops, ski goggles, iPad chargers or underwater cameras etc. Surprisingly, I've come to love the recipe section of AnyList. I've cooked many of the included recipes and have imported dozens of others and now never run out of creative dinner ideas to cook for my family. With recent updates, the developers have made the recipe section even more functional. These developers are dedicated to making AnyList as useful as possible — plus they are extremely responsive to your questions and requests for new features. This is a great app... one that you will find many, many uses for.

○ jdeangelo82, 11/11/2019

- Versatile, reliable, very helpful, user friendly: This is a terrific app. Although the free version is useful and worth trying, I liked it so much and found it so helpful that I splurged on the yearly plan. I'm not thrilled I have to pay yearly and would prefer to just pay a one time fee that is higher, but if it continues to be as helpful as it is and as reliable and glitch free as it has been so far, I will likely continue getting. The list maker is fine and similar to others. But I also like that I can share simple lists with my family even with the free version. What I really love is the recipe section. I have been uploading many of my favorite recipes which can be easily categorized. Then I just as easily send them to the meal planner section and quickly and easily add items from the recipe to my grocery list. It is quickly becoming such an integral part of my day that my only worry is the developers will tire of it and then I will be lost. Hopefully that won't happen for a long time anyway. I would definitely recommend. Try the free version, and don't be afraid of the upgrade. FYI: As of now they said they will not automatically upgrade. They will send out a reminder email so you can decide to upgrade or not. And if you decide not to, whatever recipes you have

already uploaded will remain on your app even if you go back to the free version. Maybe that will help you decide if you are commitment phobic. It's a really nice, user friendly app.

- Top two three-star reviews:
 - KQuixotiC, 10/25/2019
 - Love but needs tweaks: I've been using Any List for almost two years now and mostly love it. I first used it in order to organize family to make a giant Thanksgiving dinner and the ability to create a menu and share a grocery list worked great. I think we must have had a free month trial because I remember making a decision to pay for continuing to have all the functions. I do think it's a little pricey but I've now saved so much in it that it's worth the price. However, with iPhone's latest update I'm no longer able to import recipes from the web in the same way. I can't tell if it's just not possible anymore or is the way to do it changed. Either way, my favorite function is not functioning and it's really frustrating. Enough so that I'm now anxiously saving recipes in Epicurious. I've also always felt that the system for labeling items, assigning categories, stores, etc is a few steps too deep. I wish all of the options were available as soon as you add an item. But I can live with this.
 - Cf_, 04/14/2020
 - Solution to Reminders incompatibility: I went with this app as a workaround for the iOS 13 changes to Reminders because I'm on a device that only goes to 12.4.6. My wife just did the upgrade and messed up our synchronized shopping list. That made my Alexa and Google Home integration useless. This app checks all those boxes and even allows IFTTT to pull from Reminders. It would be a 5 star app if not for the next part. I upgraded to the family plan for Apple Watch usage, but that's why I gave this app 3 stars and not 5. The complication icon does not show up on my watch face and sometimes, it isn't even in the list of complications when I scroll through on the watch. For that issue, the app takes a hit on my review since it's for a paid

subscription app. If you use an Apple Watch and plan on upgrading to a paid plan, I would seriously think twice about that decision.

- Top two one-star reviews:
 - Pebbls42, 08/19/2019
 - Items not re-usable!!: Many features in this app grabbed my attention, but not being able to re-use items has stopped me in my tracks. I was attracted to the recipe feature. Seeing the meal plan and the use of Siri was a bonus. Even being able to tell an item what store it was at and also setting the layout (category) for each store an even bigger bonus. But you can only re-use an item in it's main list ... if it auto suggests. If you add an item from the starter list, an outdated feature, it adds a new item. If you add an item to your list from the recipes, it adds a new item. You can possible add the same item to your list ten+ times and only the item that starts in your list has the important information (store, category, price, favorite) attaches to it. There would be a lot of deleting and back tracking to have the list organized. You also can not see YOUR items list unless you add it manually to favorites, but then ALL of your items are clustered together. All items (with prices), stores, categories and starter list are not transferable between list either. So if you wanted to start a separate list with common items you would need to re-enter EVERYTHING!!! I did contact support about these issues. They were timely and nice, but the information they gave was things I'd already looked through, faq links and "our program isn't set up for that". I am looking into getting my money back!!
 - Nyx857, 10/03/2018
 - Not that special: The free version is nothing but a basic list, you have to upgrade to use any of the more noteworthy features and the upgrade isn't a 1 time cost but a yearly subscription which is silly when you take a step back and think about what this app actually is. I subscribe to music and tv apps and now I have to subscribe to list some meals

on a calendar? Uh no, I don't. The amount of convenience this provides (which is minimal) is not worth the cost especially when I can do many of the things they think are so special in the Reminders & Calendar apps that come free on my phone. You could even go way outside the box and just use a pen and paper.

Out Of Milk (Bonial International GmbH, 2018)

- Top two five-star reviews:
 - KManoukian, 02/04/2018
 - Categories appear to be fixed: Love this cleanly designed and easy-to-use grocery list that I can add items to whenever I happen to remember them. After using this app for years, I was getting very frustrated with some category issues mentioned by other reviewers. I started looking for other solutions, but this app still looks nicer and functions better for this purpose than any of the other grocery list or regular list apps I tried. I agonized over what to do, since this really affects my workflow. I finally created a new account on Out of Milk and started fresh. When I started out I had no categories, so I added my own and so far so good. It seems that the developers released an update before they really should have, but that the category issues have finally been fixed. I like having a separate app just for groceries, because I need different functions than on my regular to-do list. The only wish I have is that the to-do list section, which I'm not even using, be turned into some type of menu planning tool, which I would absolutely use. I tried another app that lets you store recipes and make menu plans, but it was cumbersome and ugly. I really don't need to store recipes because it would take too long to constantly add new ones (I like to try new things, so I'm not an "every Tuesday we have tacos" kind of cook). However, it would be nice to have a basic calendar where I could just list what I plan to cook each day.
 - MissFallout92, 07/21/2019

- Fantastic app for groceries!: I had been looking for a new app to organize and make a grocery list for awhile. I have a family a 5 so our list is huge by the time I need to go shopping. This app categorizes the foods and other household essentials into their proper areas. So when I'm at the store and in the dairy area for example I can get everything I need from that area easily. You are also able to easily check off your items or delete them from the list entirely. Also there's an option in the app where you can keep your phone screen awake while you shop. I love this because I frequently need to use my calculator to keep a total. The app does let you price each item and you also can choose to add sales tax for a total however I prefer to price in store because typically I don't know what the exact price is. Finally, this app also includes a pantry list and a to do list. I really recommend this app to definitely anyone who has a large family and that is looking for a good app to keep things organized!
- Top two three-star reviews:
 - Bill in Murrieta, 09/25/2020
 - Good App except: I've used this app for years and until recently, I have been very happy with it. It allows me to create a number of lists I can share and it updates while I'm in the store and my wife thinks of new items at home. Once I was getting items and checking them off and my wife was home adding them again thinking they were not there. Had to call her and tell her to stop. However, in spite of my liking the App, I do have some issues. First is that I've had problems with it adding items on its own. They've always run adds promoting items and now those items are automatically being added to the list. This is annoying and confusing when multiple people use the list. Second is an issue with categories. I ended up with more than one of a particular category and deleted it. It keeps coming back more than likely caused by putting in an item that I have bought previously. Anyway, these issues may may not come up for everyone and that is good. Because of

the significance of the first item to me, I'm just going to check out the other similar apps in the meantime.

- JackholeZombie, 10/29/2018
 - Used to love it but...: I've been using this app for about 3 years & it's the best app available for making grocery lists. No other apps do all that Out Of Milk does. Unfortunately, for the past 6 months or so whenever I am making a list, the app will just suddenly delete an item. Sometimes it'll even add the item to a different list that I'm not even working on. I'm a very forgetful person which is why I make lists so it's really frustrating bc if an item gets deleted, & I don't notice it, I end up not buying that item & have to make a second trip to the store. I've had to resort to writing a physical list then copying into the app... which sorta defeats the purpose of even using it. I've tried uninstalling then reinstalling, & have also tried making another acc. Don't know what else to do. I really love this app & there aren't any others like it so I'd hate to have to stop using it. If it wasn't for this problem, I'd certain give it 5 stars. Please, PLEASE fix this issue! Thank you.
- Top two one-star reviews:
 - Brownysxx, 04/01/2018
 - I love Out of Milk...: ...but recent upgrades have made it less user friendly. The problems I have seen are with sorting categories and editing items. I shop at the same grocery store every week. I walk through the store the exact same way every trip. When I create a list for that store, I should be able to pre-set the order of the categories on that list. However, no matter how many times I sort the categories on my list...every week they go back to being ordered a different way! The app forces me to re-sort my grocery list every week, which is ridiculous, because it won't save my changes to the Manage Categories list. Second- I have to add prices to my items EVERY WEEK. For example, I buy Cheerios every week. But every week when I make my list, the edited item from the previous week (where I've entered the price) is sorted to

Uncategorized. So I have to select the correctly categorized version of the item and re-enter the price EVERY WEEK. Or, I have to choose the correctly priced version of the item, and re-categorize it to Breakfast EVERY WEEK! Out of Milk is intended to make shopping easier and more organized, and it used to do that! But recently, it has more than doubled the time it takes to make a list, and increased the amount of time I have to spend in the store every week. Please, PLEASE, fix these issues because I love Out of Milk and I don't want to use a different list app!

- Rdwhitti, 01/07/2018
 - Used to Love the App, Hate the updates!: I have used Out of Milk for several years as my grocery shopping list. I have tried several others but always kept coming back to this one, that is until the latest update. My needs are relatively simple so I am sure that I don't use nearly all of the potential of this app. Unfortunately the latest update not only changed the UI to something truly awful but it (once again!) messed with my categories that I had so painstakingly setup. It seems like every time there is an update this happens. Why??? I wish that I had not updated and could go back to the old version. I would have rated the app 5 stars previously but these awful updates are getting tiresome. Please just leave well enough alone!!!! As other have mentioned, when I spend hours painstakingly creating categories exactly the way I like them and arranging them according to my store layout, PLEASE DON'T MESS WITH IT!!!! And another thing, please include an indicator so that I can differentiate between default and custom categories with the same name. I want to delete ALL of the default categories and create my own. And please don't create new default categories like the current version seems to like to do repeatedly. This is getting tiresome. LEAVE MY APP ALONE, PLEASE!!!!

Flipp (Flipp Corporation, 2021)

- Top two five-star reviews:

- LMcPH, 09/16/2020
 - A MUST have way to find sales for food: I love finding deals on food items to save money. However, unless I get the newspaper I don't get the ads every week. If you do this too this is the MUST have app. You put in your location and it gives you all the ads for stores near you. You could even use it on vacation. To save time, if your looking for one specific item, you can use the search section and know only the stores that have the item listed. You can clip coupons, list the store loyalty cards and create a shopping list. I love, love, love this app for saving money. I've even shared this with my college student son so he can save money. A must have for anyone who buys anything that is on a flyer. So that means you can view your favorite stores flyer and even use that stores online tool to set up an order. Just the very best app for every household regardless of walking into the stores, ordering items online, or placing your order to pick up. Best savings tool I know.
- edfiles, 10/12/2019
 - Great App until Update: I've use the app for 6 months and it's been great. One of the last updates introduced an annoying feature at the bottom of the ad page you choose, a continuous scrolling to " discover more deals near you," that resembles any blue colored page you are looking at, so it seems like part of the same ad. The feature is unnecessary because the home page has his info beautifully arranged. It's annoying because 1) you no longer quickly scroll to the final page, 2) Blue adds blend into it, creating confusion, and 3) there seems to option to "opt out" of seeing it. The app is awesome, and has a wonderful home page and interface, it need to offer the user an choice, but since the app is an awesome "free" service, and overall has lots of controls and works pretty good, I must give it high marks. Thanks, Ed
- Top two three-star reviews:
 - OBX Mimi, 06/15/2018

- Missing Stores & Unable to Clip/Delete Coupons: I would actually give it 3.5 stars (4 is too much as I am frustrated at the moment) but do not have that option. Loved this app to begin with...now I find it slacking more often than not. Also, requested stores be added then after months it was, only to not being there a few short weeks later!?!? At times stating the store is not in my area...which is not true! Other times, receiving the message that it there are no flyers when I was presently look at it! Consistently unable to “Clip” coupons to some stores. Incredibly frustrating when these are stores which I shop the most. Despite those issues, I constantly refer family, friends & strangers (in stores) to download the Flipp app! I am grateful for the developer as I have been able to save some money whether with the coupons or rebates, which is ALWAYS a plus! 😊
 - jjpcorona, 04/04/2019
 - Nice, But...: It is a helpful app, carrying many of the Sunday weekly specials that are regularly omitted in my local newspaper. BUT... it could use a “Settings” option that would retain the reader’s preferences in seeing circulars. For example, having Flipp to display circulars in alphabetical order always instead of “Most Popular” or another abstract organization of circulars. Also, circulars appear that are “Curated by Flipp.” Some may find that to be a nice feature, but I prefer to see solely circulars published by the retailer. It would also be nice for another “Settings” option to limit viewing of circulars to non-curated one’s (or circulars actually published by retailers as opposed to a compilation of items of sale at a retailer by a third party such as Flipp). That’s why I am giving it 3 stars instead of 5.
- Top two one-star reviews:
 - oliveraa, 08/02/2018
 - Not working: I was clipping my coupons from Sunday’s paper and there was an ad saying to download this app for additional coupons. Looked pretty easy and convenient. I saved my stores and started clipping and adding. First off,

I am not able to clip anything for Walgreens. I had no trouble putting my card number in to save the loyalty card but when I try to add a coupon it says “cannot clip to Walgreens” even though it gives me the option for it. So I thought maybe it was just a glitch so I unsaved then resaved my Walgreens card and it still won’t work. And now an hour after I finished clipping to other stores, I’m getting notifications saying there are errors on my other stores and to try clipping again. I am beyond frustrated at this point. This app has pretty good reviews so I don’t get what the issue is. Any help would be great.

- @coffeequeen, 06/27/2018
 - Denied rebates: First off, let me preface this by saying that I have used several different receipt rebate apps for the last 6 months or so. I have an iPhone X with a really nice camera, a steady hand and I take my receipt photos in well lit areas. I haven’t had a single issue with rebate apps until I got Flipp. Since I started using this app over a month ago I’ve had 4 submissions denied. They’ve claimed that the receipts are blurry or incomplete for all but one rebate. I spoke with a customer service rep the first time and they determined that the issue had been “solved,” but I have yet to see the money come into my account. I have had my receipts denied two times since then and I have contacted them each time but received no response. Super frustrating. If you’re looking for a good rebate app, try Ibotta, Fetch, Checkout 51 or Receipt Hog. I’ve gotten several hundred dollars in rebates from them now and they have never let me down. Additionally, there are tons of fake 5-Star reviews in the App Store for this app. Edit: I have replied to every ticket that has been opened with customer support and I have provided in-depth detail every time. The problem has yet to be solved.

Our Groceries (OurGroceries, Inc., 2021)

- Top two five-star reviews:
 - noname9000, 03/10/2021

- Love it, BUT please, please allow different categories per each shopping list: This is by far the most useful app I have. It is easy to use and intuitive. I love that I can add ingredients from my recipes and just click the one item that I am out of and it goes straight to my shopping list. It saves me so much time. It would be amazing if the developers could find a way to allow you to change the categories for the individual items on different lists. For example I have grocery store list and a Target list. My categories are set up for me to easily find the item at Grocery store, but they don't work for Target. For example, at Grocery store "dairy free cream cheese" would be categorized in the "Dairy" section, but at Target it would be categorized in the "fresh fruit/veggie" section of the store. The categories perfectly align to speed up my shopping at the Grocery store, but for Target it is a disorganized mess. I would love if when I got to select my item "dairy free cream cheese" it would offer the two options "Target list, fresh veggie category"" and "Grocery store, dairy section".
- Slow Twitch, 11/14/2019
 - Perhaps the best app that I use: We have Our Groceries installed on all of our devices, and it synchronizes instantly and seamlessly. I will be at the grocery store marking off items on my cell phone as I add them to the basket. My wife will be at home adding items on her iPad, and they appear instantly on my list. Until now, the only inconvenience was having to frequently take my iPhone out of my pocket as I shopped. Last week I started using an Apple Watch, and discovered that there is a "companion app" for the watch that allows me to see Our Groceries on my wrist. Just like the phone and pad versions, the watch version works smoothly. Our Groceries is a flawless app, and is probably the most under-appreciated app on the App Store. It even has detailed and well organized instructions on their web site. I'm going back now to the store to see if this developer has

any other apps that I should be enjoying. Congratulations to HeadCode on developing such a fine product.

- Top two three-star reviews:
 - NDYNAMICS, 02/01/2019
 - Nice for what it does: Basic grocery list with cross device support and ability to have multiple lists and store simple recipes to add ingredients to a shopping list. User interface is meh but I don't think it's horrible. What it really needs is the ability to store a price for each item and total up each list (with quantities) so you can track spending while shopping. Not sure how it would work as you cross things off, maybe with a resettable total that increases with each crossed off item. This is the only thing causing me to look for another app.
 - efficient mama, 03/21/2019
 - Problems since update: I had been so pleased with this app since I first began using it over a year ago. I got my mom using it too, and she recently told me how helpful it's been for her. But since the latest update I can only accomplish one task (adding or deleting an item, switching lists, etc...) before it freezes. The only thing that works then is to close the app and wait a minute to reopen it. Only to have the freeze occur again. This is a great frustration, especially when trying to move through store aisles with efficiency!
- Top two one-star reviews:
 - Jubrlu, 05/13/2018
 - Not recommended.: I got this app to share a list with my husband when he got a non-Apple phone. We used to use AnyList whist is much better. The first time you type something in you have to categorize it. You'd think it would know that an onion was produce but no, it doesn't. We had to add categories because the list was insufficient. When you add to the list you can't add multiple items without going back to the add item each time. There is no favorites that you can pick from for common items like milk and bread. I'm sure I'll find other issues as I continue to use it. If it were just me I'd delete it today

- anthro_chick, 01/08/2019
 - Too Simple: You have to click for each item you want to add. You also have to go back to each item, click the (!) to pick a category to organize your list. It doesn't recognize "steak". 😞 Annoying to use. The free app doesn't make me want to buy it when there's better choices available, like AnyList — click once and just type, type type, type. It recognizes all the regular type food I buy. If you type in a name brand or food in a different language, understandably, you have to go in and categorize it yourself. Not a big deal though

Cozi Family Organizer (Cozi, 2021)

- Top two five-star reviews:
 - BusyMomOfFourPlusAHubby, 03/10/2019
 - Mostly satisfied" The good: It successfully fulfills the purpose of having a 'family management app' and it's nice that it has the ability to notify family members of events with multiple reminders. I LOVE the recipe tab and like that it is easy to transfer those ingredients to the shopping cart. I appreciate that my husband and I can keep track of what's going on and what's needed all in one place. The bad: not entirely super user friendly, in that it's easy to do things but not as easy to undo them. Like when you transfer the ingredients to the shopping cart, you have to individually delete each item as needed rather than selecting multiple (at least on the mobile app, it sure how that part is on the desktop). You can't just select an entire recipe and delete if you accidentally add it twice. Also, I putting a ton of appointments was way easier on a desktop (at initial startup) than on the phone, but adding individual events is fine. Lastly, I added my kids as family members only to keep my husband and I in the loop of who is where, and it's frustrating to have to uncheck their names in the "notify" section because they don't have their own emails so I was getting five "notifications" since it was mine plus 4 of them until I started removing them. It could

be a little smoother in that aspect. Overall though, the price is good for what you get (I NEVER pay for apps, but was willing to for this one!!) it's been a life saver but could use some improvements.

- Fun rode, 07/07/2017
 - Cozy is AWESOME: I downloaded the Cozy app for the summer so that I could keep my children's calendar organized for myself and our summer babysitter. I actually had the babysitter input all the different activities lessons and outings so that she would have firsthand knowledge and be more in tune with their schedule, which is crazy! It's been wonderful to be able to see what everyone has going on at a glance. It's also been nice for my husband who will ask me what's going on today and I can just refer him to the calendar. Our babysitter does some tutoring on the side so she was able to plug in her tutoring hours well in advance so that I could make sure we had a plan on the times we would be without her. The reminders are also very helpful. I told my children it was their responsibility to be up and ready for all activities so that the sitter could literally just pulled in the driveway and they would be ready and amazingly it has worked! I've even plugged in a few of my business meetings into the Cozi calendar as a second reminder for myself as I have so much happening between home and work. I haven't used a lot of the other functions yet but I'm excited to explore what else this app has to offer! Thanks for creating an app that keeps families communicating well and organized :-)
- Top two three-star reviews:
 - HorribleSpider, 09/24/2017
 - Ok for basic stuff: I found this app looking for something to help with meal planning and was glad to see it had calendar features too. Unfortunately the recipe suggestions and categories are useless if you're looking for vegetarian recipes -- and the idea of being able to search just for dairy free (or vegan) options is a joke. I tried to search for "vegetarian" and got zero results even though I'd already

saved one recipe that claimed to be a veggie twist on a traditional meal... so maybe the recipes are there, they just don't make them easy to find. Lots of meat recipes though, if that's your thing. But here's the real problem: I like a lot of the features, but was disappointed that some things I'd like to be able to do require annual membership payments. I'd be willing to just pay a flat fee for the app, but considering how much they're asking for monthly or yearly memberships they'd probably ask a ridiculous amount for a one-time purchase to unlock all features. My main issue with paying monthly to unlock features is that there are only SOME that I want to use. It's expensive to pay the subscription anyway, but when you only want one or two features...? Forget it. Maybe they could make cheaper, flat-rate purchase packs that unlock only certain things? I dunno, it seems crazy expensive to me for what it is and what I'd use it for. I'd rather just stick with google calendar and a free app or two to fill in the blanks (like to do and shopping lists).

○ Annalynne, 10/30/2018

- Nice for families but...: UPDATE: with all of the free apps available these days, this one is outrageously expensive annually for the gold membership benefits. I researched for months before getting this calendar. I'm a grandmother who babysits for multiple families. It's very hard scheduling between us all over the phone and we needed a place where we could put our schedules that we could merge together and see who is available when. This one works very nicely even as the free version. But for our needs we upgraded to the paid version which I think is too expensive. The only problem I have with this app other than the high annual cost, is I find it very difficult to distinguish between the months , weeks and days. I think there needs to be a higher contrast visually as you scroll through. Sometimes I put my things in the wrong box because distinguishing between them is not that easy. The location of the date in the box is sometimes a little

confusing. I just think there needs to be a better visual display separating the months, weeks and days. Especially for anybody with low vision but even for those with good vision. Otherwise it's a nice app in the paid version offers many useful features.

- Top two one-star reviews:
 - Ipodallthetime, 06/26/2017
 - Not as good as I thought it was: When I found this calendar I was so excited. We have a really busy family and lots of moving parts. I was so happy I wouldn't have to send emails and texts as reminders anymore or field the when and where questions. It was all at our fingertips. Until I had to get a new phone. My old phone died. I got a new one and as is the usual I needed to sign back into the app. Only I can't sign back in. At all. I thought I had forgotten my password, but nope, my email address isn't recognized. I emailed customer service where I get an auto generated response telling me it will be at least 3 days before they will get back to me. If I am paying for the app (which I'm not) it will be sooner. So after waiting 3 days I receive an email suggesting that I may have typed in the wrong email address or spelled it incorrectly. This is as if I'm not intelligent enough to think of that on my own that I had to wait three days for someone to point it out. So I responded to the email letting them know what I tried and guess what...they will get back to me in 3-5 days. I will no longer be using this app. If I have to start a new account I would rather go to an app that cares about their customers and that realizes how important a family calendar is. So incredibly disappointed in this app and their level of customer service.
 - Mandapan, 06/28/2018
 - Still dislike: I tried this app several years ago in a coparenting situation and didn't care for it then. We ended up using a different, much more expensive, app/site and were happy for several years. I pulled this app back in this month because my husband and I need one calendar for

our family. The one he wanted to use required invitations to be sent, which weren't accepted, and events didn't get added. I prefer paper, which cannot be shared easily on the go with three kids. I was really really happy with it for about four days. I entered a TON of events and activities and travel information. I entered grocery lists and to-dos. I loved it for what I needed. Then I gave my husband the password to log in and join me. That's pretty much when the honeymoon ended. Day 1- my to-dos and grocery lists were deleted. Okay. No problem. Rentered it all. Day 2- every. Single. Effing. Calendar entry was DELETED. don't know what he did. But I can almost guarantee he doesn't either. I do know that, literally, hours of my time were wasted. So I deleted the app. There's no way to secure the entries and protect them from deletion. It's too risky to depend on this calendar for actual families who need this information saved.

List Ease (inMarket Media, LLC, 2021)

- Top two five-star reviews:
 - sugarfix, 08/31/2017
 - Awesome app!: I used Groceries for years, then one day I get a notification that it will no longer be supported on my phone! Huge disappointment. I had so many different lists already, some even by recipe, and I was NOT looking forward to starting all over again. I downloaded about 3 different apps to see which would work best. I decided to stick with List Ease because it really is easy to use, I can still have multiple lists (although now I just run through my recipe lists and add everything to a "Today" list). I even made a pantry staple list and can read through, check off items that I'm missing, then move them to my "Today" list. My favorite feature is the price input. This app remembers the prices of my items, so I know what I'm spending before I go, but I can also easily add in the price as I shop for new items, or if anything has changed, that way I know exactly how much money I'm spending! The tediousness of typing

in everything all over again for my main and recipe lists didn't really bother me, because the app has an enormous database, and remembers your items. If I want to make a quick list, it has a predictive text feature that allows you to type just a few letters, and then you can choose from the items that pop up. Ads have been minimal on the free version for me. I'm about to start using the pantry and coupon features, as well! I love this app more and more every time I use it!

- IrisRedhead, 12/31/2018
 - Been using for a couple years: I keep finding more uses for this app. I started out just needing a list when I go to the store. However, I shop at 4 to 10 stores depending on price & quality. Quantity comes in 3rd. I can find what is on sale where & write that out. I can keep tabs of what I am spending as I go. With storage I can take advantage of sales. I keep a running list of my pantry, my refrigerator, my car, my shed, & my storage (which is not at home). I really have to watch my pennies because I only have Spousal Social Security & I only get paid once a month. I color & cut my own hair to save money. This app has helped me to plan & follow that plan so that I don't purchase things I already have or things I do not need. I have about 100 uses for vinegar (from hair care to house cleaning to keeping bugs, ants, & critters out of places they should not be, & laundry & even wellness.) so I need to keep it on hand. There is so much more that this app has helped me with but I don't want to bore you. Thank you for creating it. I thought that was another talent I would need to spend time learning (how to make an app.) But so far there is nothing I have needed that is not incorporated into this app.
- Top two three-star reviews:
 - k-em, 11/15/2017
 - Needs some improvements: I used the Groceries app for years and when it was no longer available I switched to this one. I like the detail offered for each line item, I like

the idea of the Pantry section although I haven't found it useful yet. The reason I only gave it 3 stars is for these reasons. 1. The aisle labels are easily rearranged to match the layout of my grocery store, but they don't stay that way. They spontaneously rearrange themselves, so I'm constantly putting them back where I want them. 2. The checkbox avatar is cute but irritating when I have to wait to check off the next item until the animation is done. 3. It doesn't let me list less than one. For instance, I often buy half a pound of something at the deli counter but I can't use less than one in the item details. 4. While I like it telling me how much my whole grocery list is worth I don't like that it includes things that are checked off. I leave things I buy regularly in the checked off section as a reminder to check if I need it and to make it easier to add to my list as needed. That feature worked really well in my previous app, but needs work in this one. 5. Related to number 4, my previous app learned which items I used regularly and would suggest them without prompting in the search window. I could just go down the list and click on what I wanted. 6. I think the coupon section should suggest coupons based on my shopping list.

○ Bdclue01, 11/11/2017

- Last update. Syncing problems: Last update and drop in rating: syncing just does not work reliably. It may be because the 5s is not supported very well, but it also happens between two 7s iPhones. We have decided to try searching for another solution since my son did a number of shops for me now where the lists were not synced. I'll keep 3 stars since I like the interface, but just does not work for our family. Update: Still great, but would be nice to have an option that allows the categories to always be sorted in a list (a nit). When a new item is added to a category, it looks like the category is shifted to the top. Easy enough to move it back, but the way I use it (see below), the Master Lists are fairly big so moving takes a few minutes. Initial Entry: I keep a master grocery list and transfer items

needed from it to a next grocery run list. When a family member shops and checks off the item, we just return it to the master list. It is great that the lists synchronize live over cellular. When someone is shopping, items can be added or transferred to the list real time.

- Top two one-star reviews:
 - Onenail the cook, 01/21/2018
 - Won't synch and no developer support: My wife and I were very excited to find this app to allow us to synch our shopping lists. We have a disabled daughter on a very restrictive diet resulting in shopping at multiple stores for our grocery needs. This app seems like exactly what we needed to assist us and simplify this task. We spent over 8 hours loading our pantry with the items we use and the app was syncing our entries onto one pantry list. After one shopping trip picking up 6 to 8 items the app stopped syncing. The pantry no longer syncs between our devices. I followed the instructions on the help site for syncing issues and this did not fix the issue. I opened a ticket on their site for help where it is listed they will get back to you in 24 hours. A week later, no response and unable to use the app. This appears to no longer be supported by the developers and the advertised syncing abilities are not working. We are going to see if we can get our money spent on the app back and unfortunately look for another solution.
 - Ledz3p, 02/05/2019
 - Would be higher if it didn't stop working: Worked great for one list that was shared between me and my wife. It even updated once. Then it just stopped working it wouldn't update the list for either of us if one added something etc. the support button also doesn't load so couldn't get help there. Can't re-share our lists either, it opens up the message to send where you can invite some to share the list with but it is impossible to press send as it is Greyed out even after adding a recipient and even more to the message in case it was wanting input there outside

of what the app generated. All in all I am just using the notes app that has a different look to it that now also sends me notifications of near by stores like McDonald's and dollar tree, but won't update my list. So one star until it gets fixed

8.3 Survey results

Below, raw results from the survey are reported for the 25 responses that were accrued, for each question.

What is your age?

- 1. 40 - 49
- 2. 40 - 49
- 3. 18 - 29
- 4. 30 - 39
- 5. 18 - 29
- 6. 30 - 39
- 7. 18 - 29
- 8. 30 - 39
- 9. 40 - 49
- 10. 18 - 29
- 11. 40 - 49
- 12. 40 - 49
- 13. 30 - 39
- 14. 40 - 49
- 15. 30 - 39
- 16. 18 - 29
- 17. 18 - 29
- 18. 30 - 39
- 19. 30 - 39
- 20. 40 - 49
- 21. 18 - 29
- 22. 30 - 39
- 23. 30 - 39
- 24. 18 - 29
- 25. 18 - 29

What is the composition of your household?

- 1. Three or more people (families or roommates)
- 2. Three or more people (families or roommates)
- 3. Two people (partnership or roommate)
- 4. Single
- 5. Single
- 6. Two people (partnership or roommate)
- 7. Two people (partnership or roommate)
- 8. Three or more people (families or roommates)
- 9. Two people (partnership or roommate)
- 10. Three or more people (families or roommates)
- 11. Three or more people (families or roommates)
- 12. Three or more people (families or roommates)
- 13. Three or more people (families or roommates)
- 14. Two people (partnership or roommate)
- 15. Two people (partnership or roommate)
- 16. Two people (partnership or roommate)
- 17. Two people (partnership or roommate)
- 18. Three or more people (families or roommates)
- 19. Three or more people (families or roommates)
- 20. Two people (partnership or roommate)
- 21. Two people (partnership or roommate)
- 22. Two people (partnership or roommate)
- 23. Three or more people (families or roommates)
- 24. Single
- 25. Two people (partnership or roommate)

Do you typically grocery shop alone, or with others?

- 1. Alone
- 2. Alone
- 3. With Others
- 4. Alone
- 5. Alone
- 6. With Others
- 7. Alone
- 8. Alone

- 9. Alone
- 10. With Others
- 11. Alone
- 12. With Others
- 13. With Others
- 14. With Others
- 15. Alone
- 16. With Others
- 17. With Others
- 18. With Others
- 19. With Others
- 20. Alone
- 21. With Others
- 22. With Others
- 23. With Others
- 24. Alone
- 25. Alone

In the past month, how many times did you bring a list with you, while grocery shopping?

- 1. 3-5
- 2. 0
- 3. 5-10
- 4. 0
- 5. 1-2
- 6. 3-5
- 7. 3-5
- 8. 3-5
- 9. 1-2
- 10. 0
- 11. 1-2
- 12. 1-2
- 13. 3-5
- 14. 0
- 15. 5-10
- 16. 1-2
- 17. 1-2

- 18. 3-5
- 19. 1-2
- 20. 3-5
- 21. 1-2
- 22. 3-5
- 23. 3-5
- 24. 3-5
- 25. 10+

How many items are on your typical grocery list?

- 1. 10-15
- 2. 5-10
- 3. 5-10
- 4. 0-5
- 5. 5-10
- 6. 15-20
- 7. 5-10
- 8. 30+
- 9. 10-15
- 10. 0-5
- 11. 15-20
- 12. 15-20
- 13. 15-20
- 14. 5-10
- 15. 10-15
- 16. 10-15
- 17. 5-10
- 18. 10-15
- 19. 5-10
- 20. 10-15
- 21. 5-10
- 22. 5-10
- 23. 10-15
- 24. 5-10
- 25. 15-20

What methods do you use to track your grocery list?

- 1. Electronic
- 2. Other
- 3. Electronic
- 4. Other
- 5. Electronic
- 6. Paper
- 7. Electronic
- 8. Electronic
- 9. Electronic
- 10. Other
- 11. Electronic
- 12. Paper
- 13. Electronic
- 14. Paper
- 15. Electronic
- 16. Paper
- 17. Electronic
- 18. Paper
- 19. Paper
- 20. Electronic
- 21. Paper
- 22. Paper
- 23. Paper
- 24. Electronic

25. Electronic

For your preferred method, please describe what you use (e.g. a specific phone app if "Electronic").

- 1. I use any number of lists. Sometimes they're paper. Sometimes they're electronic. For electronic, I'll sometimes email myself a list. Sometimes, I'll take a picture of a handwritten list. Sometimes I'll use a grocery store's app (Walmart, Wegmans) to make a list of items and use that while I'm shopping. Sometimes, I'll switch to curbside pick up.
- 2. my biological memory

- 3. Microsoft To Do
- 4. I never used a grocery list
- 5. Default Notepad app on my Android phone
- 6. I mostly use a small notebook to keep track of my grocery list
- 7. Google Tasks
- 8. Notes app on iPhone
- 9. Google Shopping List
- 10. I do not
- 11. Microsoft To-do list
- 12. post it notes
- 13. I use Notes on phone
- 14. scrap paper
- 15. Google Keep Notes
- 16. I use both paper and electronic -- if I am working off of a meal plan, I typically prefer electronic as it consolidates the list for me (i.e. I sometimes use sprouted kitchen cooking club and they include a grocery list) or if I had told Alexa to add something to my grocery list then I prefer it electronic as well, but if I have not kept my electronic list updated then I prefer paper, either just a list or if I am meal planning I have a special pad of paper that includes the days of the weeks and I write what meals I will have and the ingredients list is on the side
- 17. Google keep
- 18. N/A
- 19. pencil and paper
- 20. A list in the MS To-Do App
- 21. paper and pen
- 22. We write the list on a sticky note and then take a pic of the list when going out for shopping
- 23. samsung notes
- 24. Iphone notes app
- 25. Grocery

How satisfied are you with your chosen method on: General ease of use?

- 1. Neutral
- 2. Satisfied
- 3. Extremely Satisfied
- 4. Neutral

- 5. Satisfied
- 6. Satisfied
- 7. Extremely Satisfied
- 8. Satisfied
- 9. Satisfied
- 10. Satisfied
- 11. Satisfied
- 12. Satisfied
- 13. Satisfied
- 14. Satisfied
- 15. Neutral
- 16. Satisfied
- 17. Satisfied
- 18. Satisfied
- 19. Satisfied
- 20. Satisfied
- 21. Satisfied
- 22. Neutral
- 23. Neutral
- 24. Satisfied
- 25. Satisfied

How satisfied are you with your chosen method on: Effort required to collaborate with other household members?

- 1. Neutral
- 2. Neutral
- 3. Extremely Satisfied
- 4. Neutral
- 5. Neutral
- 6. Unsatisfied
- 7. Neutral
- 8. Unsatisfied
- 9. Extremely Satisfied
- 10. Satisfied
- 11. Satisfied
- 12. Neutral
- 13. Neutral

- 14. Satisfied
- 15. Unsatisfied
- 16. Extremely Satisfied
- 17. Neutral
- 18. Satisfied
- 19. Neutral
- 20. Satisfied
- 21. Extremely Satisfied
- 22. Unsatisfied
- 23. Neutral
- 24. Neutral
- 25. Unsatisfied

How satisfied are you with your chosen method on: Level of focus required to ensure items aren't forgotten?

- 1. Satisfied
- 2. Unsatisfied
- 3. Extremely Satisfied
- 4. Neutral
- 5. Neutral
- 6. Satisfied
- 7. Extremely Satisfied
- 8. Neutral
- 9. Satisfied
- 10. Satisfied
- 11. Satisfied
- 12. Satisfied
- 13. Neutral
- 14. Neutral
- 15. Satisfied
- 16. Extremely Satisfied
- 17. Satisfied
- 18. Neutral
- 19. Satisfied
- 20. Unsatisfied
- 21. Extremely Satisfied
- 22. Extremely Unsatisfied

- 23. Neutral
- 24. Satisfied
- 25. Neutral

How satisfied are you with your chosen method on: Level of physical effort required (e.g. are items easily grouped by store layout, so you don't have to walk back and forth multiple times?)

- 1. Satisfied
- 2. Unsatisfied
- 3. Satisfied
- 4. Neutral
- 5. Unsatisfied
- 6. Neutral
- 7. Neutral
- 8. Unsatisfied
- 9. Unsatisfied
- 10. Satisfied
- 11. Unsatisfied
- 12. Satisfied
- 13. Satisfied
- 14. Unsatisfied
- 15. Unsatisfied
- 16. Unsatisfied
- 17. Satisfied
- 18. Unsatisfied
- 19. Satisfied
- 20. Extremely Unsatisfied
- 21. Extremely Satisfied
- 22. Unsatisfied
- 23. Satisfied
- 24. Unsatisfied
- 25. Satisfied

How satisfied are you with your chosen method on: Assistance in cost-savings (e.g. coupon availability)?

- 1. Unsatisfied

- 2. Unsatisfied
- 3. Extremely Unsatisfied
- 4. Neutral
- 5. Extremely Unsatisfied
- 6. Unsatisfied
- 7. Neutral
- 8. Unsatisfied
- 9. Neutral
- 10. Satisfied
- 11. Unsatisfied
- 12. Unsatisfied
- 13. Unsatisfied
- 14. Unsatisfied
- 15. Unsatisfied
- 16. Unsatisfied
- 17. Neutral
- 18. Unsatisfied
- 19. Neutral
- 20. Extremely Unsatisfied
- 21. Satisfied
- 22. Unsatisfied
- 23. Neutral
- 24. Unsatisfied
- 25. Neutral

Which of the following are reasons why you utilize a grocery list?

- 1. Ease of remembering items to purchase;Increased speed while shopping;Meal planning;Minimize temptation of unnecessary purchases;Cost-savings;Other
- 2. Ease of remembering items to purchase
- 3. Ease of remembering items to purchase;Increased speed while shopping;Meal planning;Minimize temptation of unnecessary purchases
- 4. Ease of remembering items to purchase;Minimize temptation of unnecessary purchases
- 5. Ease of remembering items to purchase;Meal planning;Minimize temptation of unnecessary purchases

- 6. Ease of remembering items to purchase;Increased speed while shopping;Cost-savings
- 7. Ease of remembering items to purchase;Meal planning;Minimize temptation of unnecessary purchases
- 8. Ease of remembering items to purchase;Increased speed while shopping;Meal planning
- 9. Ease of remembering items to purchase;Meal planning;Minimize temptation of unnecessary purchases
- 10. Ease of remembering items to purchase
- 11. Ease of remembering items to purchase;Minimize temptation of unnecessary purchases
- 12. Ease of remembering items to purchase;Increased speed while shopping;Minimize temptation of unnecessary purchases;Cost-savings
- 13. Ease of remembering items to purchase
- 14. Ease of remembering items to purchase;Increased speed while shopping;Meal planning
- 15. Ease of remembering items to purchase;Increased speed while shopping
- 16. Ease of remembering items to purchase;Meal planning;Minimize temptation of unnecessary purchases
- 17. Ease of remembering items to purchase
- 18. Ease of remembering items to purchase;Minimize temptation of unnecessary purchases;Cost-savings
- 19. Ease of remembering items to purchase
- 20. Ease of remembering items to purchase;Meal planning
- 21. Ease of remembering items to purchase;Increased speed while shopping;Meal planning;Minimize temptation of unnecessary purchases;Cost-savings
- 22. Ease of remembering items to purchase;Increased speed while shopping;Minimize temptation of unnecessary purchases
- 23. Ease of remembering items to purchase;Increased speed while shopping;Meal planning
- 24. Ease of remembering items to purchase;Increased speed while shopping
- 25. Ease of remembering items to purchase;Meal planning;Minimize temptation of unnecessary purchases

If your response was "Other", please describe further:

- 1. Minimize the number of times I need to go shopping. With the pandemic, limiting exposure by limiting the number of times I'm exposed to indoor settings was something I tried to do.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.
- 24.
- 25.

Please rank the following by how you prioritize each aspect during grocery shopping: cost, nutrition, taste, and convenience.

- 1. taste, convenience, nutrition, cost
- 2. I think this is a dynamic rank, for now, I would say convenience > nutrition > taste > cost
- 3. convenience, cost, taste, nutrition
- 4. nutrition, taste, cost, convenience,

- 5. convenience, nutrition, cost, taste
- 6. 1)Cost, 2)Convenience, 3)Nutrition, 4)Taste
- 7. Ranking implies that I'm willing to compromise one for the other.
- 8. Taste,Nutrition,Cost,Convenience
- 9. taste, nutrition, cost, convenience
- 10. cos, nutrition, convenience, taste
- 11. taste, convenience, nutrition, cost
- 12. nutricion, cost, taste, convenience
- 13. convenience
- 14. Nutrition, taste, cost, convenience
- 15. nutrition, taste, cost, convenience
- 16. Nutrition, Taste, Cost, Convenience
- 17. taste, nutrition, cost, convenience
- 18. Convenience,taste,cost,nutrition
- 19. taste, nutirtion, convenience and cost
- 20. Nutrition, Taste, Cost, Convenience
- 21. taste, cost, convenience, nutrition
- 22. taste, convenience, nutrition, cost
- 23. Nutrition, taste, convenience, cost.
- 24. taste, nutrition, cost, convenience
- 25. nutrition, taste, convenience, cost

If you could improve one aspect of your chosen grocery list method, what would you improve?

- 1. Be able to create a group list that's easy to use.
- 2. convenience
- 3. Finding the area where the items are located
- 4. n/a
- 5. Associate a specific recipe (or recipes) with my grocery list so that I know I have all ingredients or their substitutes.
- 6. The ability to remember the number of times I have bought a specific item.
- 7. Look man, I would NOT use a list that auto-sorts based on store layout or offers coupons. I do not want my grocery list to be another source of data for advertisers, and I'm willing to deal with higher inconvenience and cost to keep my privacy. Besides, the stores would inevitably muck it

up or require it only work for their store, and I'm doubly not willing to download an app for each store that I shop at.

- 8. There would be a check box that I could just click and it would strike through the text
- 9. Being able to have my items grouped into aisle within the same list would be extremely valuable.
- 10. cost optimization
- 11. adding a budget
- 12. finding food faster
- 13. Selection of items
- 14. persistent list with my staples
- 15. have it associate to store layout. I use multiple stores though, so that's why I've kept it simple and not used the "store apps" to create shopping lists since there's not a universal one that I know of. I would love that though.
- 16. Grouping items by where they are in the store and having amounts needed
- 17. None
- 18. Grouping items together based on where they would likely show up in the grocery store.
- 19. cost
- 20. item store location to optimize the time it takes.
- 21. na
- 22. The method used is too manual. Would have liked to have something that automatically gets sorted and managed.
- 23. N/A
- 24. n/a
- 25. The app learns the order you usually check things off on however it groups all the new items at the bottom, so it is easier to forget them. It'd be nice to be able to add them in if I know where they are in the store.

When was your most recent grocery shopping trip?

- 1. Today
- 2. One day ago
- 3. One day ago
- 4. Two weeks ago
- 5. This week

- 6. This week
- 7. 2-3 days ago
- 8. One day ago
- 9. Today
- 10. 2-3 days ago
- 11. Two weeks ago
- 12. Today
- 13. This week
- 14. Two weeks ago
- 15. One day ago
- 16. This week
- 17. One day ago
- 18. Two weeks ago
- 19. This week
- 20. Two weeks ago
- 21. 2-3 days ago
- 22. 2-3 days ago
- 23. This week
- 24. This week
- 25. This week