SHERPA

HELPING YOU REACH YOUR GOALS

User Interaction Design Project

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Executive Summary

Companies and brands have constantly been making great strides to keep up with modern trends and innovations. With new and different forms of transactions, Venmo, Uber, Apple Pay, Credit Card, etc it can be overwhelming trying to organize what was purchased as well as how and for what. It can also be unsettling not knowing how much money you have in your bank account and how much money you have to spend to stay financially stable. There is also the issue of banking transactions. The time it takes to show in a consumer's account is not as instant as it should be. Many banks state that transactions are "pending" but don't subtract or add the pending amount from a shopper's bank account until the transaction is fully confirmed. This makes checking your bank account overwhelming and may cause stress for the consumer. Sherpa is an app designed to give confidence and independence in the users' ability to control their money. It is an interface that combines all forms of transactions, allowing the user to keep track of what they spent money on, where they spent the money, and how that has effected their overall budget. This, consquently, trains the user into becoming more conscious and comfortable with their money and on how to spend it.

The app is meant to be a starting point for those who do not budget, because of that, our targeted audience would-be college students and those in their mid-twenties; however, we will also be reaching out to an older audience since our app can be used by the general public. Since our app is open to the general public, our extreme users would be those who are older, since they may not use smart/mobile devices as often and the college students, who are more likely to be using smart/mobile devices to manage their money.



Problem Statement

With so many ways to spend money it is hard to organize it. Budegting and money management are important skills to develop, yet many are too overwhelmed with keeping track of payments. Between receipts and electronic transactions, it's hard to organize your money correctly and effectivly.

These issues call for a product that combines all aspects of transactions and helps the user keep track of payments and budget day to month to a year. Sherpa is an app designed to give confidence and independence in the users' ability to control their money.



Related Works

Mint Budget App // https://www.mint.com

This app was designed to tackle budgeting. This is related because our design problem has to do with making budgeting as well. The app helps to track and manage money. It manages your money from banks, credit card issuers, brokerages, lenders and other financial institutions. One of the design qualities that we would like to add in our design, is the feature of receiving notifications when you're over budget. In our design, you will receive a notification when you are close to going over budget, a notification for each purchase, and the option of choosing the type of pay that you did. Once the transaction is complete and you receive a notification, connected to that notification would be the option of choosing what payment method you used. A frustrating aspect would be finding an easy way to include cash in the process.

The SAP Concur Mobile App // https://www.concur.com

This app works to eliminate receipts. You take a picture of your receipt and have your phone capture and attach a receipt to an expense report. This was it makes it easier to itemize and categorize an expense entry. This is a good feature to have on our budgeting app, because some transactions, such as cash, would not be picked up electronically since there was no withdrawal from a bank account. This allows for if the customer pays in cash they can then take a picture of the receipt, which will then be able to be read by the app.

Apple Pay // https://www.apple.com/apple-pay/

Apple Pay allows users to pay for products on their phones. No more having to search through your wallet to find your card or cash. That is a feature that we will add to our design. Much like how PocketGuard shows how much is on each card you use, in our design, before a purchase, you will be able to select the card you would like to pay with and then pay with that card. From that point, the card will instantly show how much you just spent, how much you saved, and how much you have left on that card.

Budget on the Go // https://www.everydollar.com/budget-app

This app allows one to see high-level and detailed views of their EveryDollar budget. Once can easily enter transactions and manually drag and drop with EveryDollar Plus. An inn-Sync Budgeting allows users to know their budget from your desktop or phone, EveryDollar syncs across devices making it easy for one to know where their money is at. Their goal is to guarantee a safe and secure Budgeting system with a data secure interface with passcode and a touch ID sign-in security. EveryDollar follows the zero-based budget approach of a top personal money-management expert software, creating daily and monthly budgets and tracking



FreshBooks Cloud Accounting App // https://www.freshbooks.com/mo-

bile-apps

FreshBooks Cloud Accounting App is an accounting software that has been conformed into both a website and a mobile app, helping small businesses manage their bank accounts and budget from anywhere they're located. This app includes features such as invoicing, recording expenses, time tracking, and paying or getting paid quicker. The design of our app relates to similar problems that the FreshBooks app fixes through being able to accept and send payments, keep track of receipts and expenses, and construct visual reports of the flow of money. FreshBooks Cloud Accounting allows users to attach all types of credit cards and Apple Pay to their account, but with our app, we plan to expand this and include Venmo as well. Since FreshBooks is an app made for small businesses, it has a more professional way of budgeting its time and money, while our app will allow users to manually enter how they'd like to budget their accounts and show reports of what categories the user's money is going to.



Design Process

User Research Personas Scenarios Storyboards Design Requirements

User Research

Users

Recent graduates or any individuals who is motivated to better themselves with money management. Primary: College students who are experienced in technology but not so with budgeting and keeping track with their money.

Secondary: Graduates, those in their mid 20s early 30s who have an established carreer and well versed in technology, but are looking to better budget for the future.

Teritary: Adults, those in their mid 40s early 50s who are not well versed in the new ways to transfer money. They are looking to adapt and find a new way to easily budget.

Interview Process

First, we formed a list of general questions (Appendix). These questions addressed the frusterations and complications that come with budgeting. These questions were broad and aimed to gather general information on the user as well as any emotional attitudes they have towards current budegting apps and money management in general. Before the interview, we briefed the user on what Sherpa was and what it would provide. The first set of questions were mainly about the user. Specifically, how often they budget, but things, how familiar they are with technology. The next set of questions asked about the frustrations they have with keeping track of their money. Lastly, we asked them questions on how would budgeting be made easier. The primary user was interviewed on a college campus, secondary in the users home, and teritary over the phone.



Motivations

• Our users wanted to start keeping track of money that was spent electronically and through cash

• They want to start budgeting in a smarter way

• Not feel "out of the loop" with where their money is going and how much they have in total to their accounts

Frustrations

- Not keeping track of money that is spent through Venmo and Uber
- Receipts
- Keeping track of monthly and yearly subscriptions
- Not knowing how much is on a certain card. The user use different credit cards.



Emotions

- Not confident
- Worried that money is not being acconted for
- Worried that they don't have enough money for that month/year. The user is also worried that they are spedning too much on certain things.

Goals

- Get in the habit of tracking payments
- Have a yearly budget
- Become more in control and confident with money

Experience Level

- Primary: High
- Secondary: High
- Teritary: Moderate to low



Personas

Primary Persona



Sophie Adams

20 years old

JMU Undergraduate Student

Harrisonburg, VA

"When it comes to budgeting, it tends to stress me out. Honestly, I don't have much knowledge or structure when it comes to money management."

About

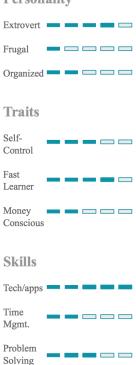
Sophie is a full-time undergraduate student at JMU. Since the flow of her money is comes from many sources, it's hard for her to track her expenses and budget. Normally, Sophie's method of budgeting is checking her bank account at least once a day to make a mental screenshot of the amount in her account. She's pretty on top of her spending habits and amounts, but bills and payments stresses her out. Sophie feels confident about her current budgeting practices, but also knows she can exponentially improve them if she had the courage to learn how.

Sophie has multiple cards, but is unsure about if they have any special rewards since her parents are the primary holders of her account. She does know one card does have some type of food and grocery rewards. Sophie's biggest issue when it comes to having multiple cards is trying to properly budget them all along with keeping up with Venmo transactions.

💙 Li	kes 🔇	D	islikes	Probl	em	Le
	Proactive Notifications Useful functions Visually appealing Stability		Overspending Pending transactions Paper receipts Stress Excessive/Random Notifications	- S - -	Lack of budgeting knowledge Constant need to check bank account Lack of confidence Losing money due	Mo Co SI
Goal	To gain confidence To have all my tra	insa	budgeting and money ctions in one place		0	Tin Mg Pro

To be able to regularly budget every day without any stress or hassle

Personality





Secondary Persona

Morgan Ford



(es, I do have confidence in myself budgeting money. do try to budget in the regard here I tend to think about what I se my money for, and not to spend on worthless things. I only try to pend money when necessary for ills, or if I am going to dinner with lende."

Age: 25

Work: medical assistant for a sleep doctor

Location: Philadelphia, PA Education

University of Pennsylvania B.S. Bio-Behavioral Health

Device of choice: Cell phone (iPhone 11), Hp Laptop Technology skills: advanced

Goals

- Be able to manage transactions confidentlyKeep tracking on how much I am spending each mo
- Figure out what I am spending my money on

Frustrations

- Random transactions I have not notice before
- . No notifications regarding recent charges/tra Receives Too many paper receipts

Bio

Morgan recently graduated from the University of Pennsylvania w ith a B.S. Bio-Behavioral Health. She already has a job lined up working full time as a medical assistant for a sleep doctor. Still living at home, she plans to save up her fund to buy a place of her home. This is why it is important for her to manage her budget. She is confident in his budgeting skills, but doesn't know of any budgeting apps. When it comes to spending, she either buys lunch, coffee, car/phone payments, groceries for her family and going out to town with her friends throughout the week.

She tracks her spending with paper receipts, emails, and credit card bills. This however can be overwhelming, cause disorganized, and transaction being lost. She is stressed about how much she should be spending or saving. Now having a steady income, Morgan wants to find an easier and simple way to manage her money.

Motivation

Incentive

Responsibility

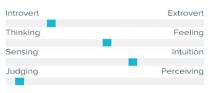


Preferred Channels

Online & Social Media

Referral Technology Experience

Personality





Tertiary Persona



About

Mark is a parent of a big family, so budgeting is a necessity for him. He is confident in his budgeting skills, but doesn't know of any budgeting apps. He continues to use Excel to manage his money, which makes it difficult to keep track of all the spending that is happening on one credit account. He checks his transactions once every week and is often surprised at some of the transactions. He finds himself feeling stressed when it comes to budgeting. "It's never a pleasant thing"

Mark also uses many different cards based on the rewards. He uses one card for gas and another for groceries. He even has a seperate Costco card for big shopping trips. He wants an app that will be able to make it easier to switch to and from a card, and will tell him how much he will save by using a certain card.

Mark Michaels

Government Worker

"I am confident in my budgeting skills, however, I still get overwhelmed. I use so many different credit cards it's hard to keep track".

🚫 Dislikes Likes Accuracy Reminders Color

- Easy to Use Useful
- Recipes Dealing with Banks Too Many Emails Complex No Notifications
 - budgeting apps Dealing with Banks Too Many Emails

Problem

- Complex
- No Notifications

Does not use

Driven **Traits** Family Man Fast Learner Money Conscious **Skills** Tech/apps Excel

Organized 📥 📥 📩 🥅

Personality

Thinker

Extrovert

Goals

- To not be stressed about budgeting
- To have all my transactions in one place
- To be able to teach others how to budget

Scenarios

Primary

Sophie is a 20-year-old undergraduate student at James Madison University. She's currently in her Junior year of college and was just offered a summer internship. Her parents are so proud of her and her accomplishments but aren't too thrilled about her spending habits. Now that Sophie is beginning her transition into the workforce, they have been actively encouraging her to improve her budgeting skills. Sophie hates when her parents get upset about how her money manages, and as much as she tries to keep a tight budget she always seems to overspend. Sophie has been noticing how irritated her parents have gotten about this issue recently, so she's been trying to acquire the knowledge and confidence in order to make her parents proud and have her be successful.



Sophie's parents claim that she doesn't even try to manage her budget but that's because she doesn't know how. As of right now, Sophie keeps a mental picture of the amount of money within her bank account. Then, she guesstimates the income and withdrawal or expenses that affect her account balance. She tends to check her account at least once a day but the structure of her bank account app is too complex for her level of knowledge about money management. Also, due to her often transferring and receiving money through apps like Venmo, she tends to have many pending transactions which catches her off-guard. Sophie uses many apps, services, and softwares like Spotify, Amazon Prime, and Adobe Illustrator, where they use automatic payments having her be forgetful as to when the money gets pulled. Sophie's parents have recently tasked her with the responsibility to pay her own bills by herself so that she gets used to the process for when she's older, but she keeps forgetting as to when they're due and it's beginning to hurt her relationships with her roommates. Sophie wants to get into the habit of being able to budget and spend appropriately but has no idea where to start.

One of Sophie's peers was having the same trouble as she did, and he ended up introducing her to the budgeting app. He was using it for quite some time now and claimed that it wasn't hard to use at all and made so much sense. He mentioned that at first, he wasn't too sure that he could get into the habit of managing his budget 24/7, but claimed that the app was creative, proactive, and gave the user tips. Once Sophie began using the app, she started to understand the process and structure behind money management and was able to keep on top of all her bills and expenses while also saving money in areas where she tended to overspend.



Secondary

Morgan recently graduated from the University of Pennsylvania with a B.S. Bio-Behavioral Health. She already has a job lined up working full time as a medical assistant for a sleep doctor. Still living at home, she plans to save up her funds to buy a place of her own. This is why it is important for her to manage her budget. She is confident in her budgeting skills but doesn't know of any budgeting apps. When it comes to spending, she either buys lunch, coffee, car/ phone payments, groceries for her family and goes out to town with her friends throughout the week. She tracks her spending with paper receipts, emails, and credit card bills. This, however, can be overwhelming, and disorganization leads to transactions being lost. She is stressed about how much she should be spending or saving. Now having a steady income, Morgan wants to find an easier and simpler way to manage her money.

After using the app, Morgan now has the ability to manage her finances. She makes a certain amount of money each month and now can track what she spends on it. Her incentive is to save a certain amount of money for her to buy her own place. In order for her to do this, she can keep track of her spending by taking pictures of her receipts and by getting notifications of her transaction through our app.



Even though she saves, there are expenses that she needs to pay off. For example, she pays her taxes, car and phone bills. After she makes these payments, Morgan plugs them into our app to keep track of her receipt/budgeting history. This app allows her to manage her bills through an organizational folder system, where she can sort through her personal finances. This app allows one to organize and sort through financial data. After each bill is paid, Morgan will get a notification and the ability to take a picture of the receipt and store it through a folder.



Storyboards

Primary Storyboard

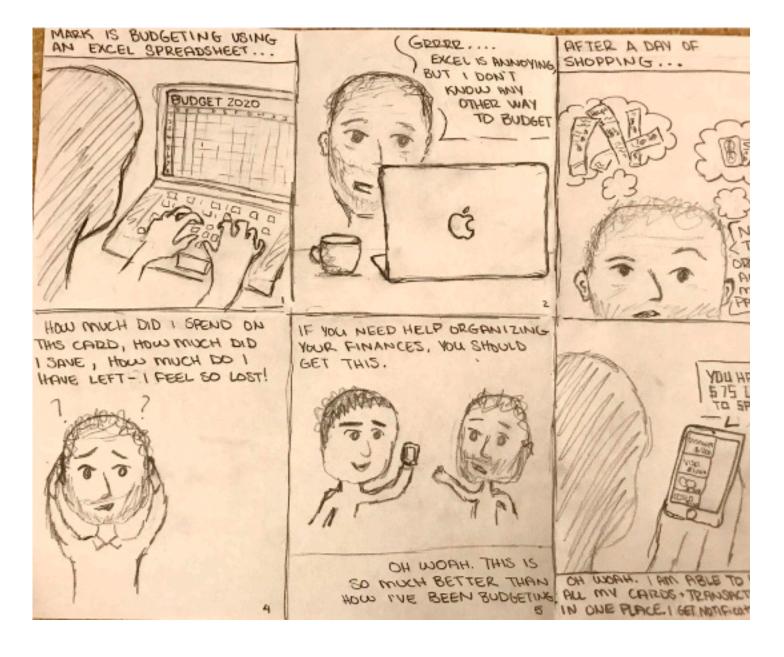


Secondary Storyboard





Tertiary Storyboard





Design Requirements

General Features

Notification

- Notifications when transactions are made.
- Receive an alert when you are close to going over budget.
- Receive a notification of how much money you saved that week/month and how much you have left to spend for that week/month.

Reciepts

• With a card payment, a receipt is automatically made and filed within the app, showing what was bought, on what card, and for how much.

• If paid with cash, you can take a picture of the receipt and the app with then show what was bought and for how much.

Interactive

- The app is meant to be a learning tool, so big fonts, bright colors, that will draw people in and make money management fun.
- It should be easy to navigate, so the Home page will have a Calendar tab, Receipt folder, Credit Card Library, Notifications, and so on.



Multiple Cards

- You can use the app to pay for things, like Apple Pay.
- The app will show the cards you have/use and the percentage of the rewards you will get back.
- You can easily choose which card you would like to use.
- Once the app will show how much money you have left on that card.
- The app will also be linked to your Venmo and Uber account, so any transactions made there will be automatically placed into the app, limiting email recipes.

Budget Help

- Every month you will plan out a budget.
- The app, through keeping track of your transactions, will be able to tell you how. much money you have spent every week and keep you within your planned budget.

• You can view a calendar and click on a specific day which will then show you how much you spent on that day, on what card, and for what.

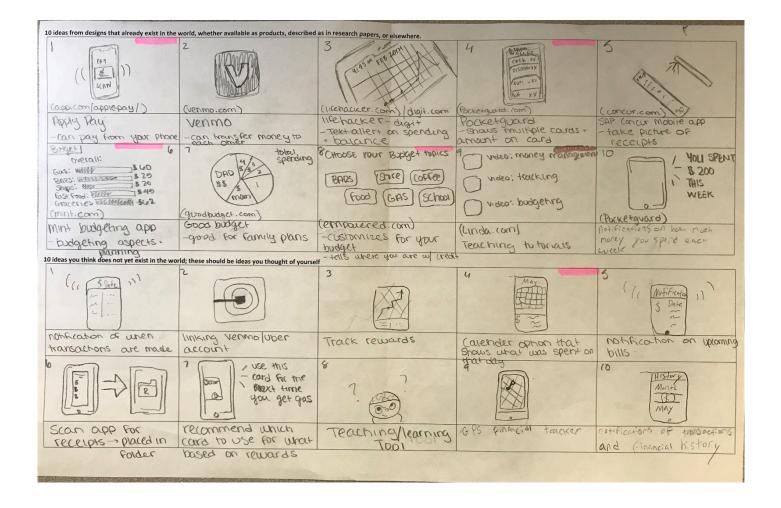


Design Solutions

Brainstorming Main Concepts Paper Prototype Low-Fidelity Prototype High-Fidelity Prototype



Brainstorming

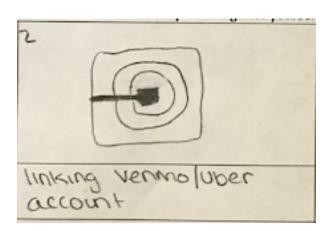


Despite having two other app ideas, we decided on Sherpa becasue we felt that it would reach a larger audience. We drew our ideas from current budgeting apps. We liked the features that included notifying the user of transactions, being able to choose what card to electronically pay with, taking pictures of reciepts, and showing the user how much money they've spent so far. Our goal was to combine all the features that would effectivly walk the user through better understanding their money and visually help with money management.



Main Concepts

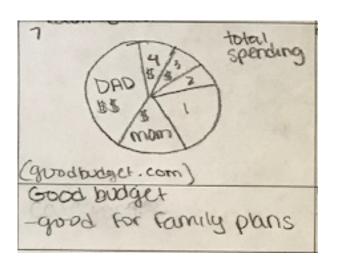
Pairing Aspect



Since a main frustrations our users had was too many ways to electronically pay, we have our pairing aspect one of our main concepts. After the user makes an account, they can go to their profile and pair their Uber, Venmo, Apple Pay, Paypal, and any other payment method they use. They also can also add all the cards they use. This was when a payment is made, not only will the app be able to register what card money is being taken out of, but also if you used the card for Uber, Venmo, or on its own. This makes keeping track of where you spent money easier.

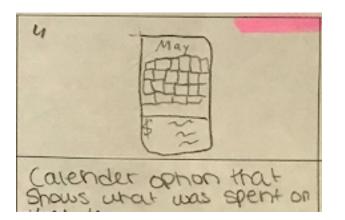


Spending Interests



Another main concerrn from our users was not knowing how much they spend on certain products. With the spending interests wheel, a user can choose up to 6 products they feel they spend the most money on. The wheel can visually show the user how much they spend on that interest. It will also show how those payments are effecting the overall budget for that month.

Calendar



The Calendar feature is where all spending is kept track. The user can go to the Calendar, choose a month and day and find there spending history for that day. The Calendar will show what was spent that day, on what card, for how much, and where. The Calendar will also give notifications for monthly or yearly discriptions that are taken out from a card. This way the user won't forget about either rent, bills, or a subscription they didn't know they had. This is also a helpful tool for the user to keep track of spending by day.



Paper Prototype



For testing, we first asked the user to do one of three tasks; make an account, go to spedning interests, or go to your calendar and check your spending on Feburary 2nd.

The testing went well with our paper prototype. The users were able to understand the concept of the app and how to navigate. The only aspect that we had to change was adding "Enter" buttons as well as a mini tutorial blurb that explained what the user is supposed to do on each function. We found that after the user signed up for the app, they were lost while looking at the spending interests wheel. To make this clearer, in our low-fidelity prototype we added a window that had text explaining the next step for the user. This way the user has a guide instead of having to assume what they are to do next. We also added a settings page. At first, we had notifications, but realized that the user is more used to settings than notifications. We added notifications within the settings.



Task 1: Make an Account



Task 2: Spending Interests



Task 3: Go To Calendar

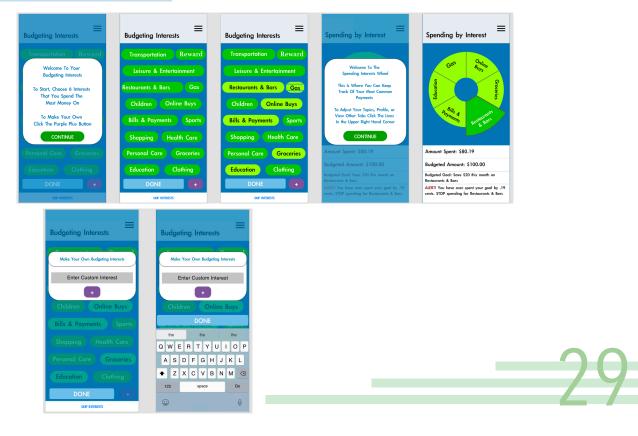


Low-Fidelity Prototype

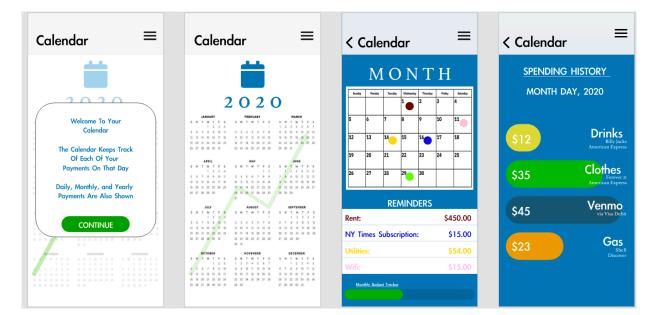
Task 1: Sign Up



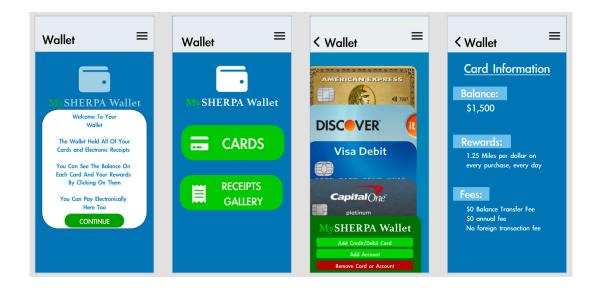
Task 2: Spending Interests



Task 3: Calendar



Task 4: Wallet

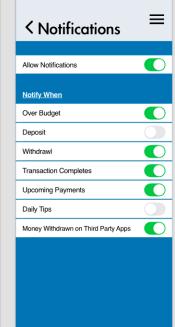




Task 5: Check on Settings



< Settings	=
Account Information	
Username	>
Password	> > > >
Email	>
Bank Account	>
Other Accounts	>
Manage Credit and Debit Cards	>
Edit Interests	>
Notifications	>
MySHERPA Alerts	>
Transaction History	>
<u>Support</u>	
Budget Tutorials	>
Report a Problem	>
Privacy Policy	>





Low-Fidelity: Feedback

Our low-fidelity prototype feedback was very helpful. After the paper prototype feedback, we added windows that explained what the user should do next as well as a home button to a homepage that featured the calendar, wallet, settings, profile, and spending interests. Our feedback exposed some features that were still a little confusing and aspects that we should add. We realized that we didn't have a logout button and added one on the homepage. We also added a home menu bar that would also feature the functions on the homepage. We decided to keep both the home menu bar and home page, so the user doesn't feel trapped on one page. We also added a logout button on the home menu and also added back arrows on each page so the user can go back to the page they were previously on. We also added a mini tutorial that shows what each page does as well as what their icons are, so the user isn't left guessing. For our wallet function, the user is able to add their credit cards and view how much each card has. To make this feature better, we added being able to view how much is in their bank account. Lastly, we fixed the colors of our app. We kept the blue but changed most of the green to appeal to a wider audience.



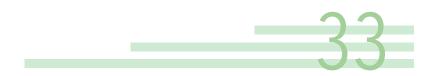
High-Fidelity Prototype

Task 1: Sign In



Task 2: Spending Interest Wheel





Task 3: Calendar



Task 4: Wallet: Upload a Receipt



Task 5: Go to Profile and Log Off



High-Fidelity Feedback

For our high-fidelity prototype we linked the pages as though a new user would be using the app. This means that if the user clicks on the home button and then decides to view the calendar function, they would first be met with a window that explains what the calendar is and what the user can do with this function. Overall, our app ran smoothly, there were minor corrections regarding the visual layout. We made sure that each button was placed in the same position and that each element on the app had the correct padding and spacing.

Some more findings included the fact that people do not read the notifications. One user was confused, after completing the Spending Interest section, on how to get to the Homepage, this was because she didn't read the pop-up notification that explained it. It was recommended to make the notifications explanations smaller and to put the important information in a different color. That way there won't be confusion about how to navigate the app.

Another finding was that the explanation of the Spending Wheel was a little confusing and a recommendation was to not have the user go directly to that section. It was suggested to rather start at the Homepage instead. The main findings and recommendations were minor ones, which meant that overall, our users were able to navigate the app easily and trusted the app.



Conclusion

Our team feels that Sherpa is a great idea that can help a wide range of individuals. Being college students ourselves, we face the difficulty of trying to handle money and become more independent. It becomes difficult when you find yourself having to keep track of cash payments, Uber reciepts in your email, Venmo requests and payments, as well as pending bank records. We feel that, with Sherpa's ability to combine everything to make keeping track of money easier, it will create more confidence and independence in young adults. We also feel that we have made an interface that is easy for anyone to use. If you are an older adult wanting to become for independent, the app would be a great service. Money doesn't have to be a stressful concept, it can be easy and it can be controlled. Sherpa allows for effective control and easy access to your spending.

Let Sherpa guide you to better money management.





References

Related Works

https://www.mint.com https://www.concur.com https://www.apple.com/apple-pay/ https://www.everydollar.com/budget-app https://www.freshbooks.com/mobile-apps



Appendix

Intro/General Info

- Do you budget on a regular basis?
- Do you use any budgeting apps or know any budgeting apps?
- How often do you buy, shop, or transfer money?
- The occupation of the user?
- Are you a college student? High school student? In the workforce? Etc.
- Do you prefer getting receipts, through text messages, emails, or any other method?
- When given a paper receipts, what does the user use with it?

Frustrations

- Do you ever get caught off guard from different transactions?
- Are you stressed out when you have to bill and manage your budgeting?
- How often do you look at your transactions?
- Do you have confidence in yourself for budgeting your money, or does the
- lack of it keep you from managing your finances?
- Are you confident in your money management skills?
- How many credit cards do you have based on rewards?
- How are users getting notifications of their finances?

Ideas/Desires

- What would make budgeting easier?
- What makes it hard to keep track of money?
- What are features you enjoy from other budgeting apps?

James Madison University 2020 UX/IT User Interaction Design Project

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