PRD Report for HelpMeBuy Application

TEAM 2

students who actively worked on this Report (on Title page).

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PRD: HelpMeBuy

Vision

For "**college students**"
Who "**face the problem of buying their groceries and utilities as they stay in college dormitories and do not have their own vehicle**"
Our "**HelpMeBuy application is a one stop solution**"
That provides "**students with a single portal to connect with other students who live in the same community to help them buy groceries and utilities, pay for the service and also provide review making it reliable**"
Unlike "**existing social media groups**"
We offer an "**amazing user experience, synchronized timeline for tracking the entire process and a mandatory review from both the sender and receiver to ensure smooth, intelligent and reliable shopping process**"

Motivation

Customer Segments

We assume that our customers will be college students across Northeastern University Boston, Seattle and Silicon Valley campuses living in the college dorms or hostels who are facing the problem of buying groceries and utilities.

The early adopters will be more student centric and small in numbers since we are targeting only college students. These students are different from mainstream users as students mostly have financial and time constraints, and no own vehicle.

Unmet Needs

Every year lots of students enrol into the university and they have one common issue which is the problem of buying groceries and utilities as they stay in college dormitories and do not have their own vehicle. Sometimes, they get so busy in their college stuff that they don't have time for shopping, our app helps them to address these challenges.

We had customer development interview of 25 college students across 3 campuses from different backgrounds. We gathered information based on whether students had vehicle or not, how frequently they go to the market for grocery shopping, what their usual travel and grocery costs. In addition to this, we questioned them about the situation where they needed help to buy groceries.

The unmet needs discovered in these interviews were there is no single channel to help users buy grocery, make payments and write reviews. Users are accustomed to use multiple apps for this purpose or they go in-person to buy groceries. Our app is designed as one stop shop to reach out people for buying grocery, make online payments and review each other.

Existing Solutions

Currently there is no other application in market that provides an end to end service, wherein students can help each other buy utilities and earn some rewards, in return.

People rely on social media applications like WhatsApp and Facebook that allow customers to create group and chat casually. Since someone is helping you during your grocery run, they need a money for their effort and we need payment option which both the apps don't provide. On WhatsApp we can take pictures, video calls, and audio calls and have group chat but if we want to send money to our friend, we can't send it. Our app helps to overcome this issue. Since somebody who is going for grocery run need money and since our app is chargeable, we have a payment option integrated, to facilitate the payment. In addition to this, we have review system where grocery buyer and person who got grocery can review each other based on the service they get.

Although, Instacart, Amazon delivers grocery online but their delivery charges or minimum shopping amount turns out to be very expensive for students. It is not community based and there are no reviews about the person delivering groceries, hence reliability cannot be guaranteed.

Differentiation

We are right now better equipped since we have the technology and resources to address these challenges. Many apps example: Facebook and WhatsApp, right now don't have payment options though the people can chat and create group but our app have the facility of payment and creating a group options which is quite helpful for all the students who need quick resolution of their grocery issue. In addition to this, there are no identity verification in these apps. Since we as students, have faced these challenges, our app is specifically for grocery shopping. We do have the notable feature which is $10 Referral Bonus if the people sign up.

Why Now?

We think that this is the right time to address these issues because due to globalization many students travel from one country to another country for education purpose with limited fund and limited resources. Right now, we can see the issues faced by students and this needs to be resolved immediately.

Verbal/Visual Walkthrough of Use Cases

Use Case – John, Ana, Emily and James

- John, Ana, Emily and James are all Northeastern college students from Boston campus.
- John and Ana are international fresher students, who are new to Boston whereas Emily and James are seniors, who have been staying in Boston for around 2 years now. James also owns his own vehicle.
- They have registered for the HelpMeBuy application using the their phone's app store.It is mandatory to have a collegeid and mobile number, both of which is verified to be able to use this application.
- After registering, they can access the application by simply logging in with their college id and password.

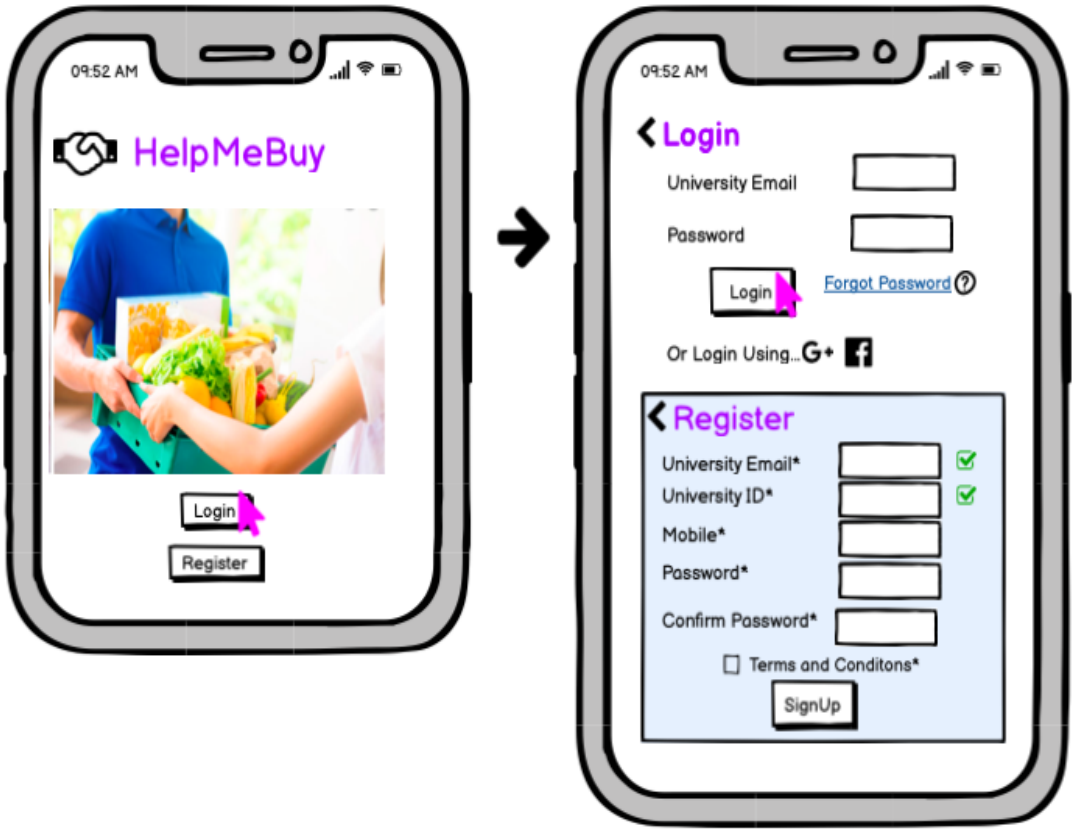


Figure 1 Login and Register Screen

- After successful registration, the application takes all the users to the wall page (home page) which has all the posts from different members of the application. Users can only post about their shopping trips.
- James, who is now a registered user hits on "Create a Post" wherein he has to fill in fields like "name of the store", "purpose of visit", "time" when he would be heading out, "pick up time" when he wants the items to be picked up from him and any "additional notes" like if he doesn't want to bring more than five items or he would only prefer lightweight items and so on.
- Similarly, Emily also hits "Create a Post" notifying that she would be going to buy

medicines at CVS around 12 in the noon and would like the shopped items to be picked up from her by 3pm.

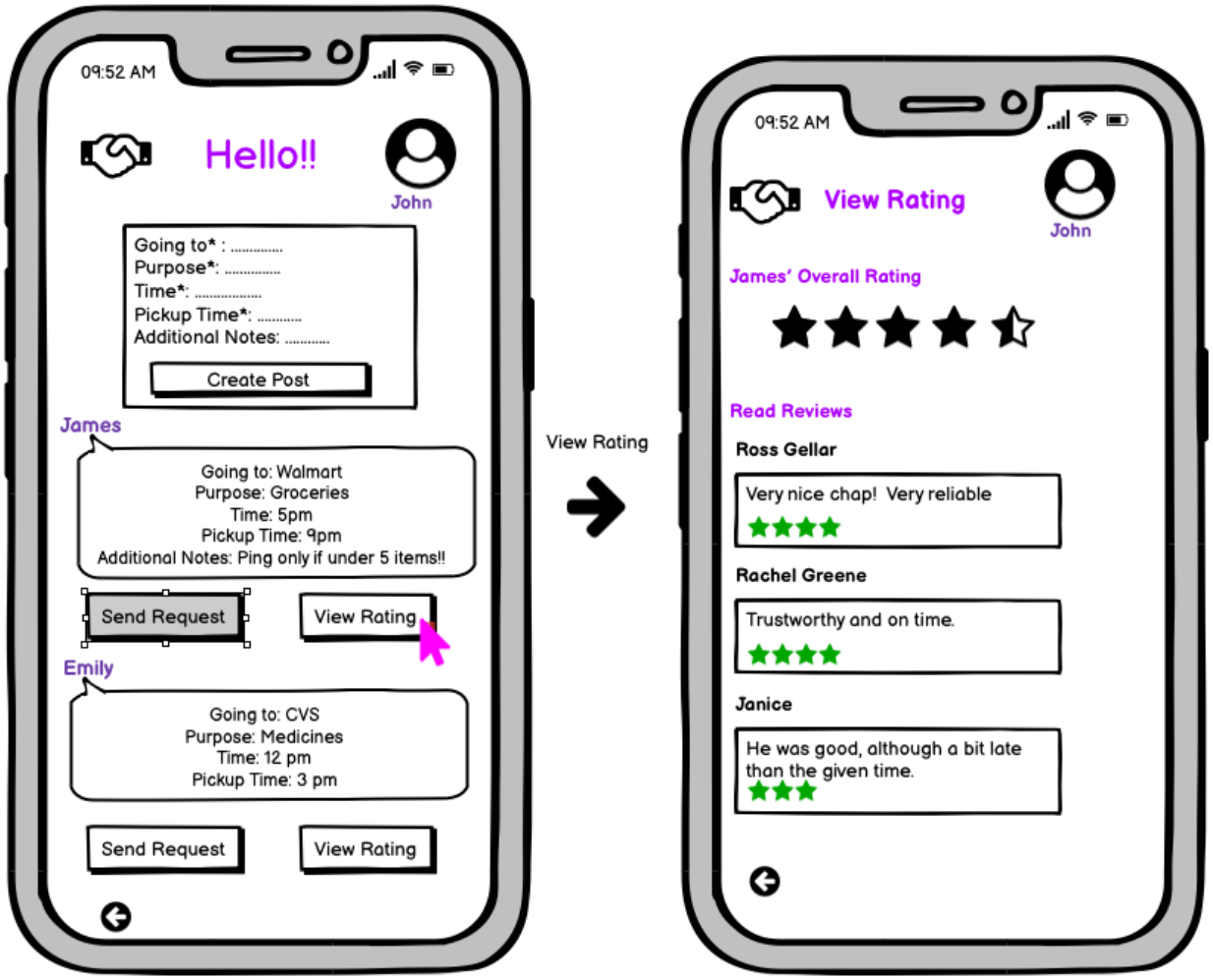


Figure 2 Landing Screen(L) and View Rating(R)

- Now John who is looking for someone to buy some items that got left off their grocery list and scrolls through the posts on the wall page of the application.
- John realizes that James could help them buy the items that they need as he is heading out to Walmart for groceries.
- John quickly hits the "View Rating" button below James' post and verifies that he has a good rating of 4.5 stars out of 5 and also has good reviews written about him.
- So he sends request to James. The application takes John to the "Request Page", where he can search for the items that he wants James to go out and buy for him from Walmart.
- James enters the items, with their quantity and unit and hits the "send" button.
- Ana also follows a similar path and sends her grocery list to James.

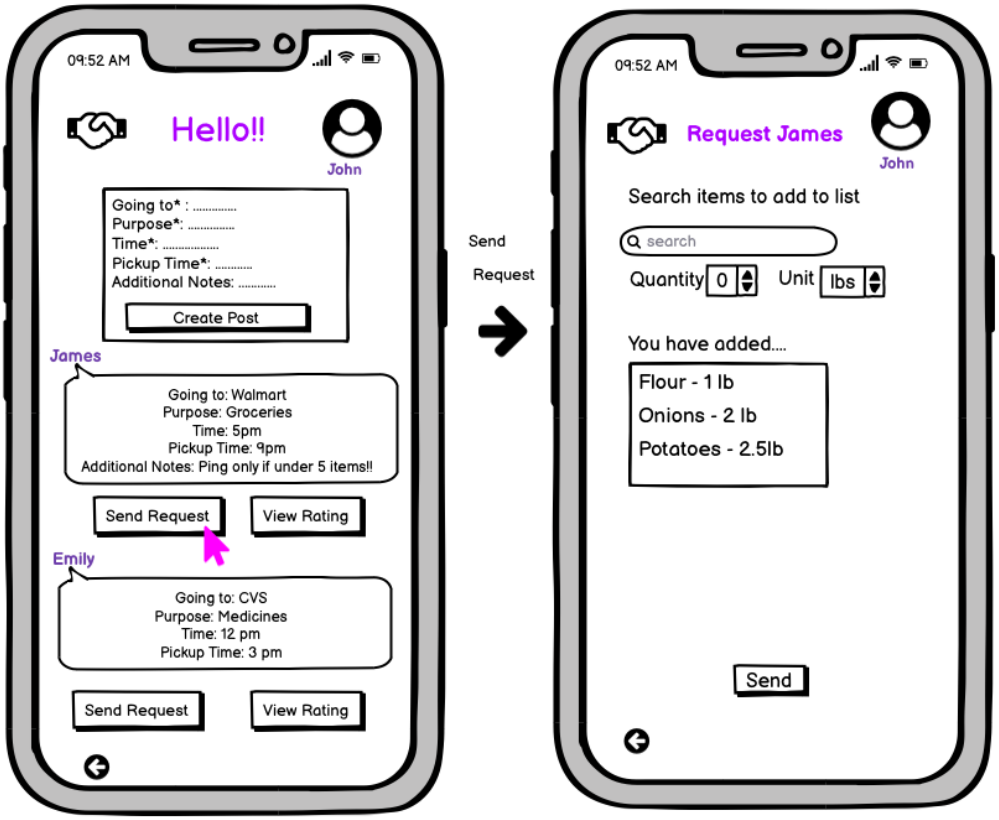


Figure 3 Create Post and Request Items Screen

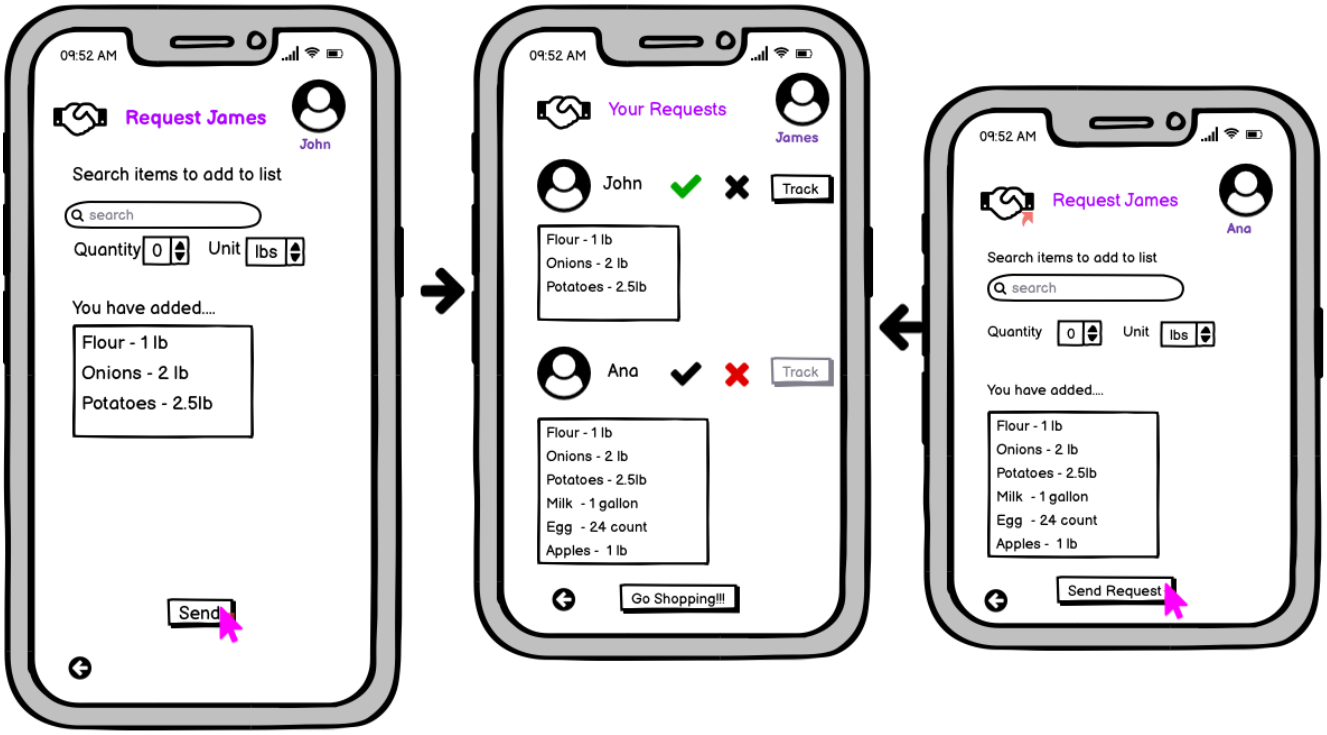


Figure 4 Send Request(L,R) and Request Screen(M)

- James has now recieved request from both John and Ana. It is up to James to accept or reject the request. This request gets auto rejected after 30 minutes from when the request was made. Since James indicated that grocery items have to be under 5, he decides to "Accept ✔" John's request and "Decline ✘" request from Ana.
- John gets notified on the "Request Accepted" screen, which displays the chat screen, wherein he can chat with James and also has the link to take him to the shopping tracking page.
- Ana also gets notified that her request has been declined and gets prompted to go back to the wall page to search for more posts that could be of her interest.

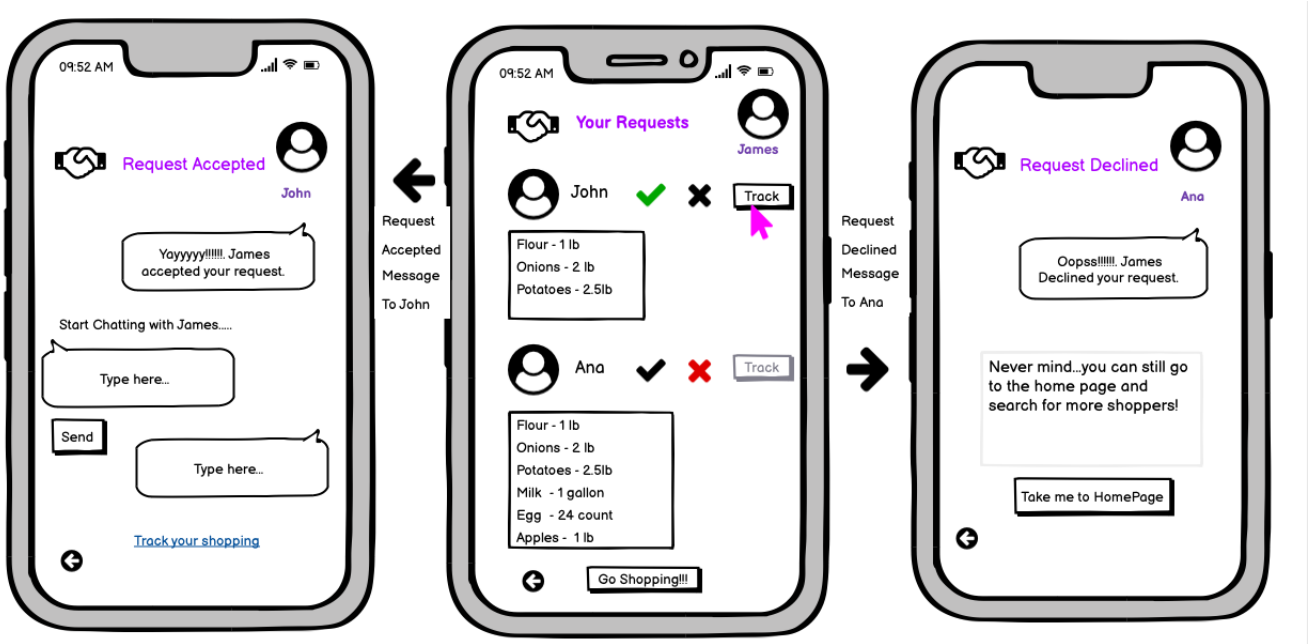


Figure 5 Accept/Decline Request Screens

- James can now notify John with his every step as he takes towards shopping. James' tracking screen has options like "left for shopping", "reached mart", "items shopped", "payment received", "pickup complete" ,"review complete" and "trip complete".
- There is a black tick mark beside each of these steps that when clicked turns green. And when it turns green, John is notified about the completion of that respective step.
- Now James has left for shopping and reached the mart. He clicks on "Go To List" button that takes him to John's Item List.
- He will use the scanner to scan each and every item and the total price gets auto calculated. He can tick the checkbox for each item that he bought.

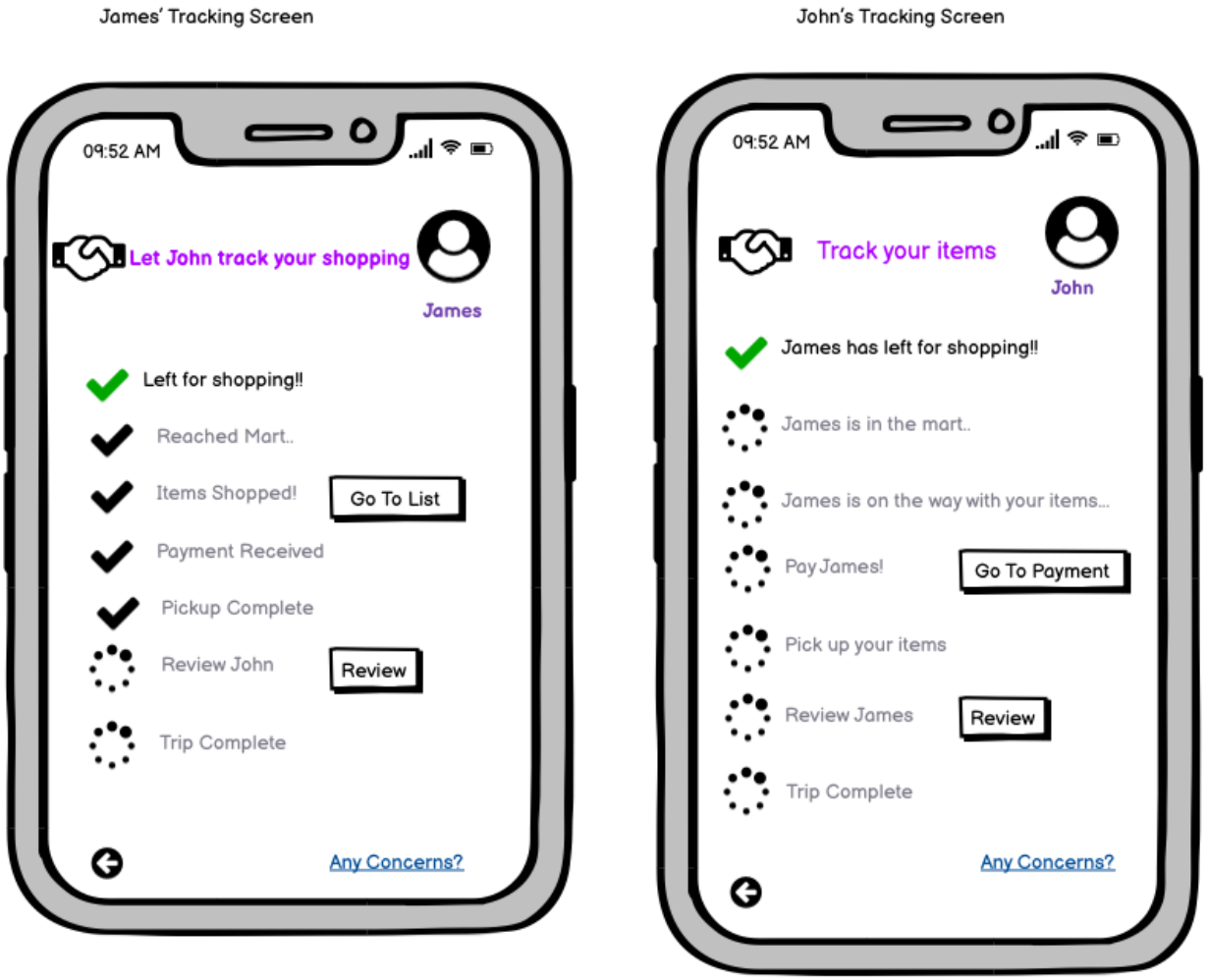


Figure 6 Shopper's Tracking Screen(L) and Requestor's Shopping Screen(R)

Figure 7 Scan Items Screen(L)

- John's tracking screen has options like "James has left for shopping", "James has reached mart", "James is on the way with your items", "Pay James", "pickup complete" ,"Pick up your items" and "trip complete". There is an in progress icon beside each of the steps that changes to a green coloured tick mark every time the step is completed.
- In case of the tracking page of both the parties, one cannot move to the next step unless the previous step is completed, in order to ensure that the entire process is transparent and impartial.
- Also, unless your trip is complete for the previous process, the application will not let you schedule or request for any other trip.
- Now James has picked up his items for John and it is time for John to make payment. If the make payment step is not completed within the time frame of 15 minutes from when the notification to pay has been sent, the application rejects the process and charges penalty to the person who has requested.
- Bill is generated for John and the application takes him to the payment page. He can either make payment through his credit card or record a cash payment.
- After the payment is done, James notifies John that his items have been shopped and he can have them picked up.
- Since John and James can start chatting on the application's chat window, they can chat and exchange address for pickup or contact details, etc.

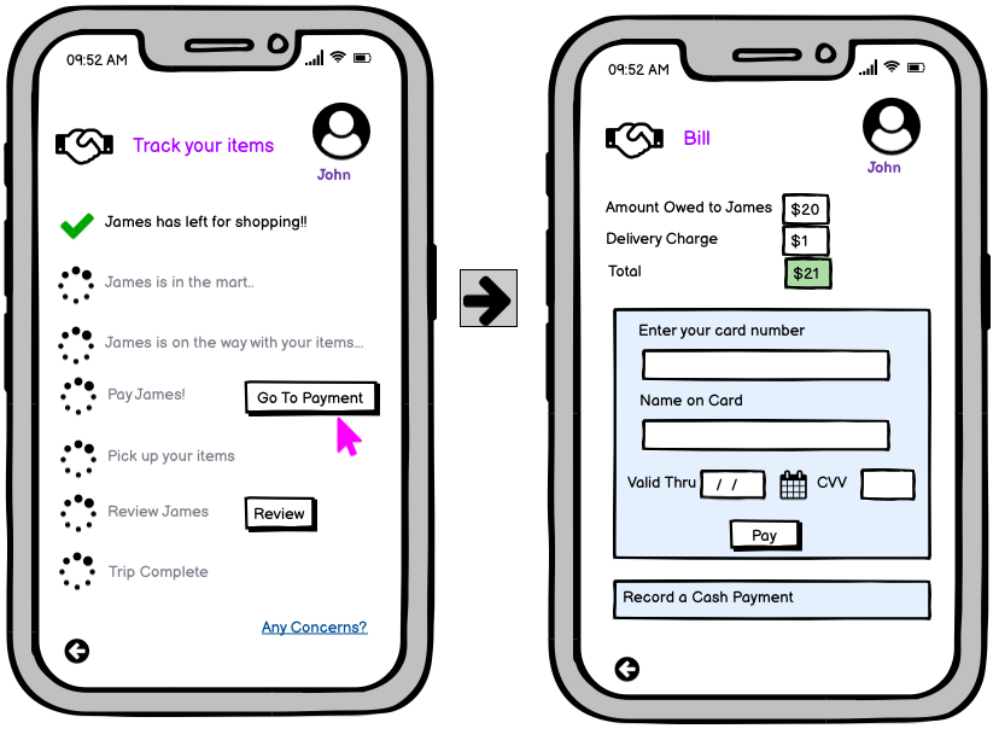


Figure 8 Make Payments Screen(R)

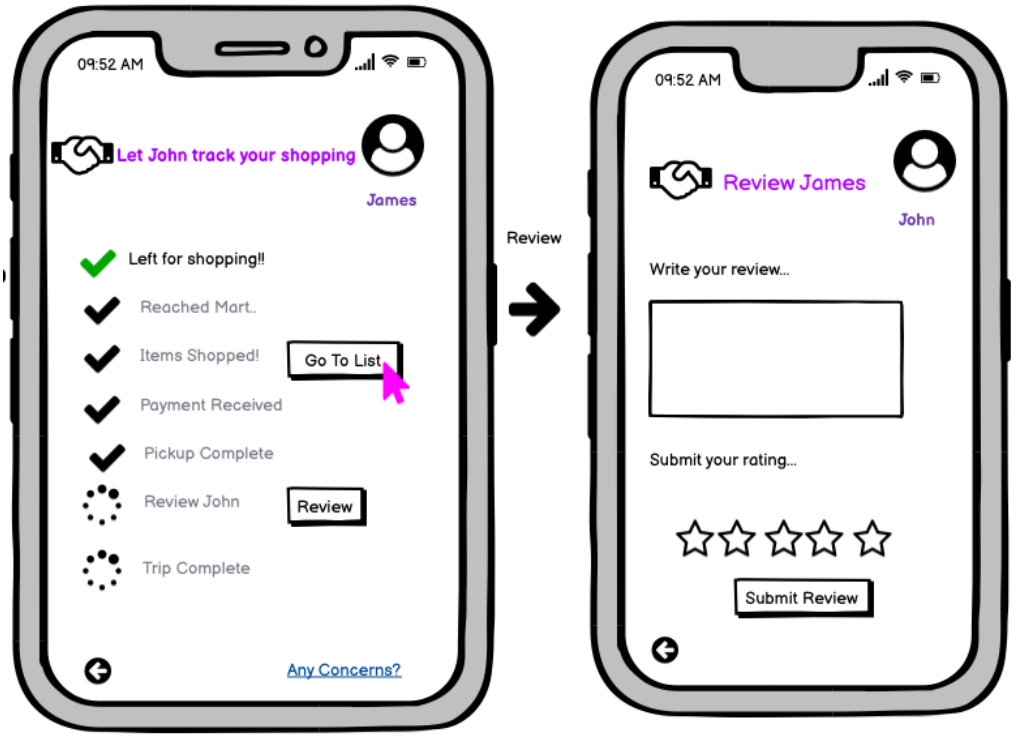


Figure 9 Submit Review/Rating Screen(R)

- John picks up his groceries. Now John will have to review James based on the service that he received. His review could be on the basis of punctuality, the quality of items that were shopped, if James was prompt in replying to John's concerns and so on.
- Similarly James would also submit review and rate John. His review could be based on how quick was John to make payment or pick up the items shopped or was he understanding in case James couldn't find an item he requested and so on.
- Reviewing is mandatory step for our application. Not only does it ensure that the transaction was completed successfully or not, but it also helps the future users of the application decide on which user to transact with based on his previous ratings.
- For instance, if John has an option to choose between James who has 4.5 rating and Isabella who has 3.5 rating with reviews that she has bailed on people or cancelled trips halfway against positive reviews about James that is very humble and punctual, James would be an obvious choice for John.

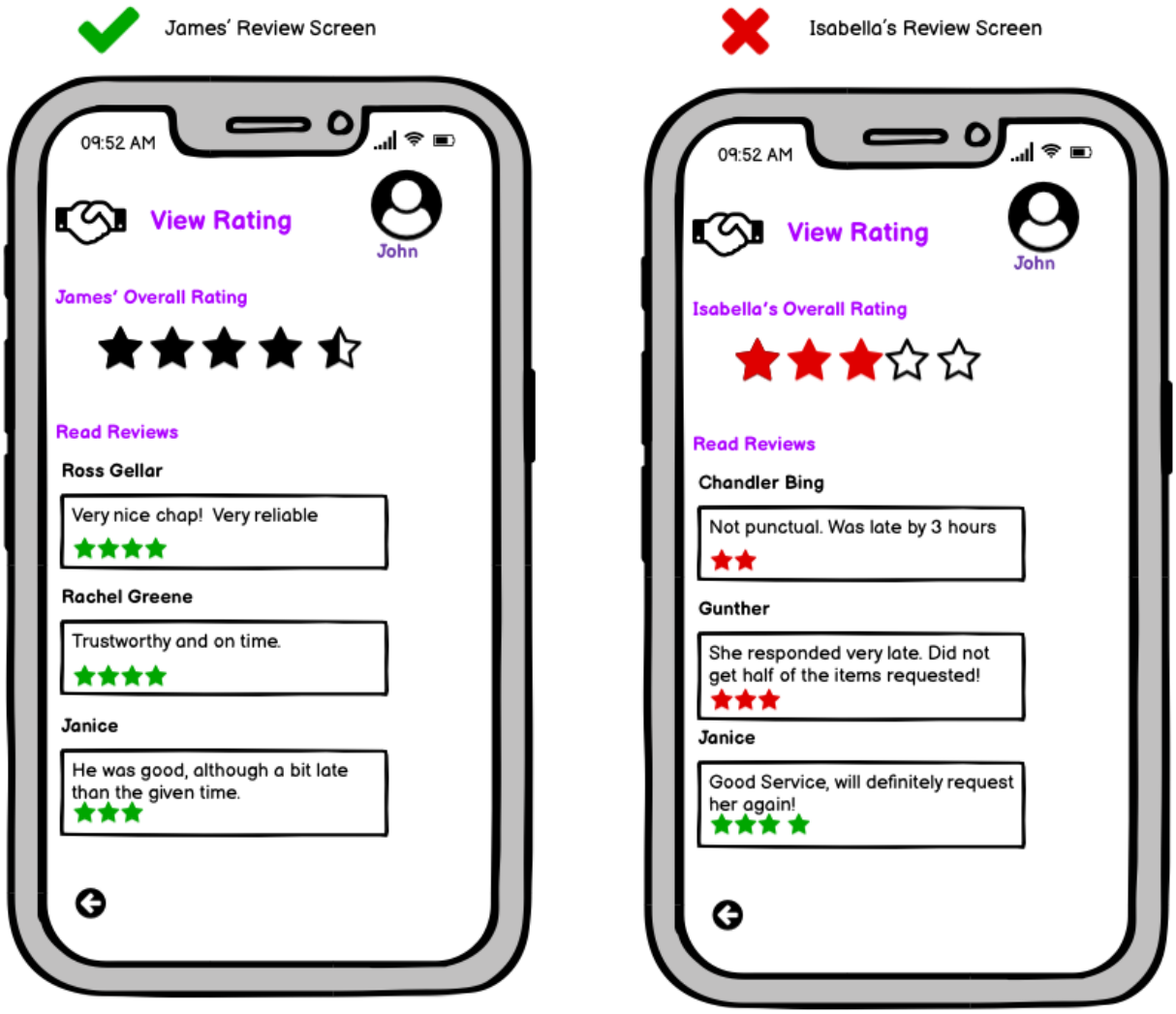


Figure 10 View Rating Screen

Figure 11 Any Concerns Screen

- On the tracking page of both the parties, there is a "Any Concerns" link that takes the user to the concerns page where both the parties can choose their concerns like if the items are overdue for pickup or the payment is not yet received or if there is any issue with the application and so on.
- So, if user selects any of the option, a message is displayed notified the user to wait for the customer care representative to call them and address their concerns.
- Future updates of this application would have more options to address more concerns that users are probable to face while using our application.
- James can also view his profile by clicking the profile icon on the upper right corner of the application.
- His profile will display his "overall rating", "trip score" (which is number of times he has shopped for someone), "shopping score"(which is number of times someone has shopped for him) , the total "reward points" that he has earned for each trip and a link that would show all his past shopping details or update contact.
- Registered User can click on the "Forgot Password" link on the login page. A verification link will be sent to the registered email Id. User will have to click the link and reset the password.

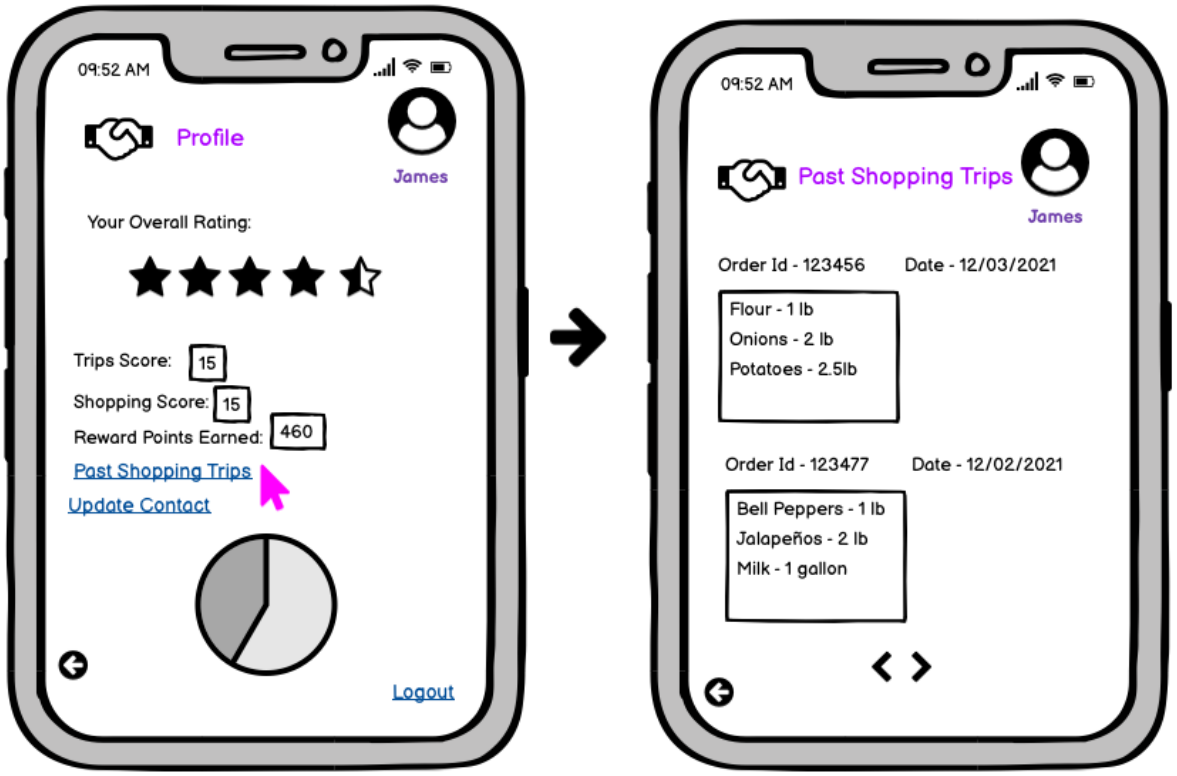


Figure 12 View Profile(L) and Past Shopping Trips Screen(R)

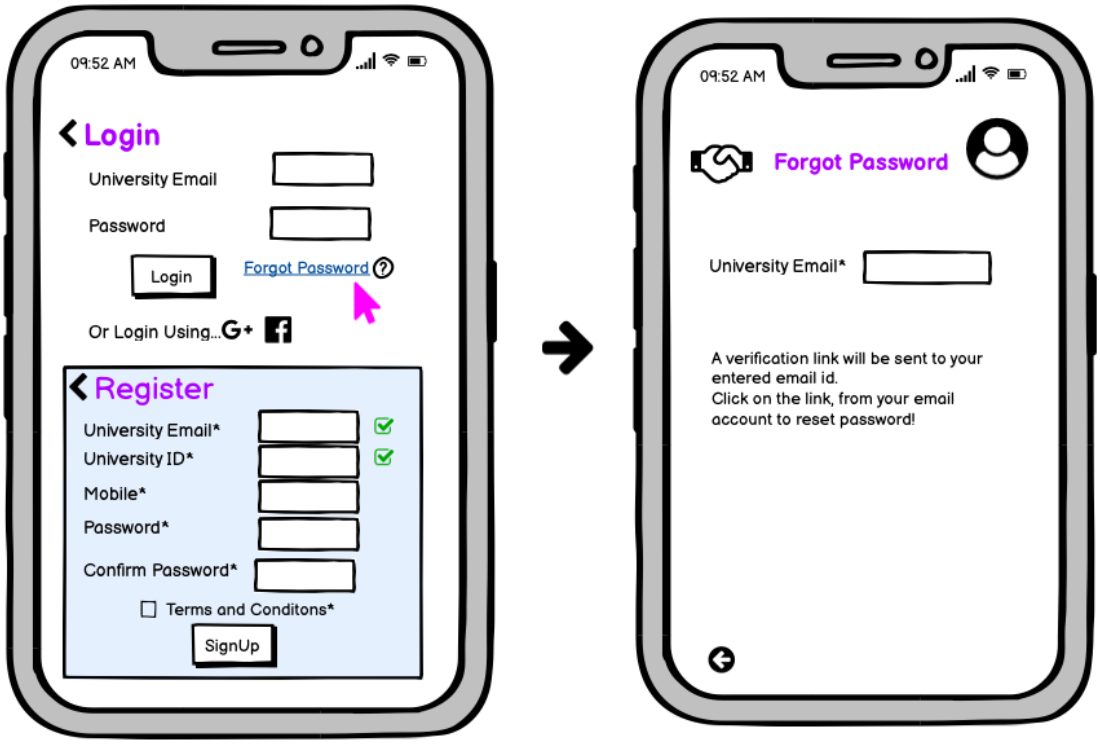


Figure 13 Forgot Password Screen

- User can also Update Contact by visiting the “User Profile” and clicking on the “Update Contact” tab.
- After user enters the updated contact, a verification OTP will be sent to the updated number and the contact will be updated on successful verification.

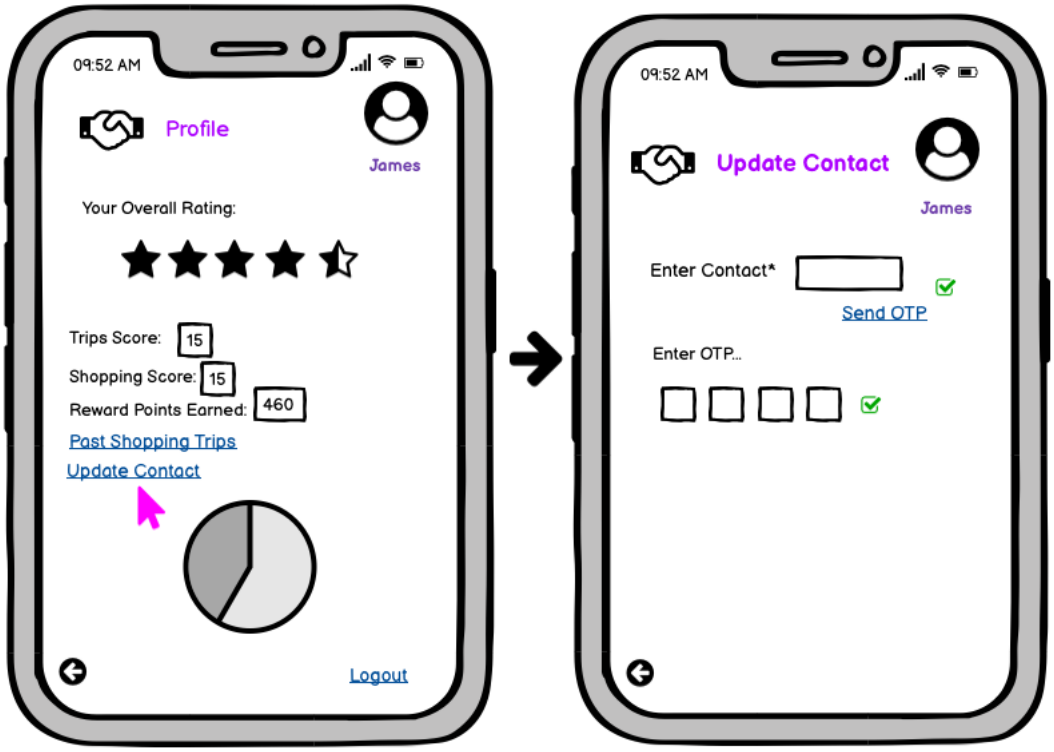


Figure 14 Update Contact Screen

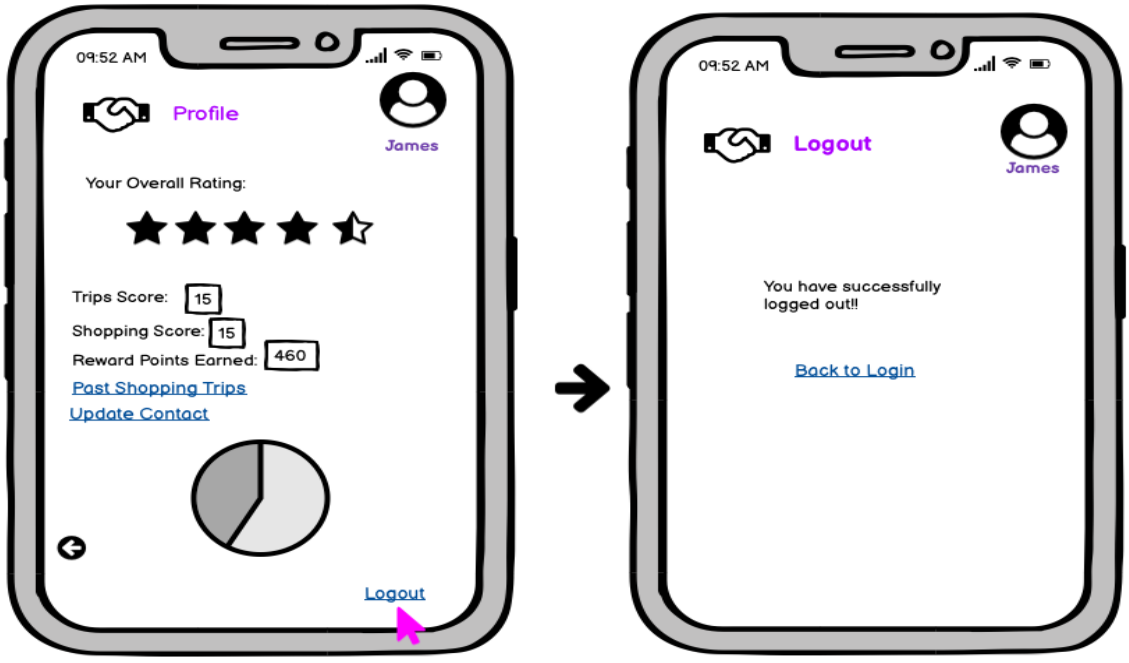


Figure 15 Logout Screen

- User can logout by clicking on the logout link on the lower right corner, on the View Profile screen.

Detailed Design & Features Description

Design Principles

Our principal aim is to make the HelpMeBuy application simple, efficient and effective for the students. Based on this, following are our design principles:

- Ease of usability, simplicity, and efficiency for students across all the campuses of Northeastern University.
- Ensure that the application follows the basic norms of ecommerce application and is easy to adapt.
- Data privacy and security.
- Availability and scalability to have more colleges and communities to adopt our platform.

Infrastructure and Analytics	**User Interface**
To begin with, the application will be running on public cloud platform such as AWS or Azure. We will be using the storage services available on public cloud platforms to store our application data.	Application compatible across: ● Android ● IOS

Features/information architecture

Features	**Details**	**Dependencies/Mockups**	**Priorities**
Register	Users will be able to register on website by providing following details and agreeing to the terms and conditions: • University Email id • University ID • Password • Mobile No	The dependency is to get the terms and conditions and getting legal approvals from university to store users' information. *Refer to - Fig 1 Login and Register Screen*	1
Verify Email and Id	Users would have to get their university email id and university Id verified before being able to register with HelpMeBuy	The dependency is to get the records of the students from the university and the	1

		permission to store them.	
Login	Users will be able to login to the HelpMeBuy application with the university email id and password set up by them while registering. The user name and password will be validated	*Refer to - Fig 1 Login and Register Screen*	1
Login using Google or Facebook	Users will be able to login using their Google or Facebook account, but they will not be able to use the application unless their university id and email is verified	*Refer to - Fig 1 Login and Register Screen*	3
Forgot Password	Users will be able to reset their password in case they forget by using the registered email address.	*Refer to - Fig 13 Forgot Password Screen*	3
Home Screen	Once the users successfully login to the HelpMeBuy application, they will land up on home screen. Following details will be displayed on the home screen – Posts – This would have a display of multiple posts from all the other registered students. Create Post – This would enable user to create post View Rating – This would enable user to view rating of the users whose posts can be seen on the home screen	*Refer to - Fig 2 Landing Screen(L) and View Rating(R)*	1
Create Post	Users will be able to create post by entering information in following fields – • Going to • Purpose	*Refer to - Fig 3 Create Post and Request Items Screen*	1

	• Time • Pickup Time • Additional Notes		
Send Request	Users will be able to send request to other users who have posted on the HelpMeBuy home screen, with the list of items that they want.	*Refer to - Fig 3 Create Post and Request Items Screen*	1
Accept Request	Users who have received request from other users will be able to accept the request to start the shopping process.	*Refer to - Fig 5 Accept/Decline Request Screens*	1
Deny Request	Users who have received request from other users will be able to decline the request to terminate the shopping process.	*Refer to - Fig 5 Accept/Decline Request Screens*	1
Tracking Feature	Users involved in the transaction (user who requested) can track the shopper. User will be able to track the following steps – • Shopper left for shopping • Shopper reached the mart • Shopper is on the way • Pay Shopper • Pickup items • Review Shopper • Mark as Complete User can proceed to next step only after successful completion of the previous step.	*Refer to Fig 6 Shopper's Tracking Screen(L) and Requestor's Shopping Screen(R)*	1
Send Notifications	User involved in the transaction (user who will shop for another user) can notify the requestor/s. User will be able to notify about the following steps –	*Refer to Fig 6 Shopper's Tracking Screen(L) and Requestor's Shopping Screen(R)*	1

	• Left for shopping • Reached the mart • Items shopped • Payment received • Pickup complete • Review Requestor/s • Mark as Complete User can proceed to next step only after successful completion of the previous step.		
View Rating	Users will be able to View Rating of another registered user, who has created a post on the application. The View Rating screen would display the following items – • Person's overall rating • Reviews and ratings submitted by other users, for the person	*Refer to - Fig 15 View Rating Screen*	1
Chatting	Users will be able to send and receive messages from another registered user, via the application once the receiver has accepted the sender's request	*Refer to - Fig 5 Accept/Decline Request Screens*	1
Search for items	User will be able to search for items by typing in the auto complete search bar that would populate his items and display it as a list with item name, item quantity and unit of measure.	*Refer to - Fig 4 Send Request(L,R) and Request Screen(M)*	1
Barcode Scanner	User will be able to scan the item using the barcode scanner available in the application to auto record the quantity and price of the scanned item.	*Refer to - Fig 7 Scan Items Screen(L)*	2
View Profile	Users will be able to view the following components on their profile – • Overall Rating • Trips Score	*Refer to - Fig 12 View Profile(L) and Past Shopping Trips Screen(R)*	2

	• Shopping Score • Link to Past Shopping Trips		
View History	Users will be able to view their previous trips recorded in the application, with details like – • Date of shopping • Shopping Amount • Shopping Items	*Refer to - Fig 12 View Profile(L) and Past Shopping Trips Screen(R)*	3
Update Contact	Users will be able to update their contact details on the View Profile screen		2
Rating System	All the users involved in a transaction(the shopper and the people who requested for items) have to submit rating out of 5 stars, at the end of the transaction	*Refer to - Fig 9 Submit Review/Rating Screen(R)*	1
Review System	All the users involved in a transaction(the shopper and the people who requested for items) have to write review of 30 characters or more, at the end of the transaction	*Refer to - Fig 9 Submit Review/Rating Screen(R)*	1
Customer Care Facility	Users will be able to contact customer care in case of any concerns, regarding the ongoing transaction.	*Refer to - Fig 11 Any Concerns Screen*	1
Make Payment	Users will be able to make payments based on the amount of bill generated. Users will have option to either pay using credit card or record a cash payment.	The dependency is to get approvals to redirect payment to respective bank payment gateway. *Refer to - Fig 8 Make Payments Screen(R)*	1
Rewards	Users can earn rewards at the end of each successful transaction of shopping for other registered users	*Refer to - Fig 12 View Profile(L) and Past Shopping Trips Screen(R)*	2
Logout	The logout link will be available on all the pages. Once the users click on the	*Refer to - Fig 15 Logout Screen*	1

	logout link and if they are in middle of a process, the confirmation will be displayed to save all the information.		

v1 aka Minimum Viable Product (MVP)

Minimum Viable Product Features

1) Landing Page: It is absolutely essential as it provides a platform to highlight the value of the product/service and how different it is compared to competitors
2) Sign Up: Users sign up or login to continue using the app
3) Build application home screen with basic features: Allow grocery buyer and student requesting help to interact with each other by creating a post, sending a request, updating grocery list, viewing rating.
4) Manual approach to update shopping list, payment at the time of launch, automation will be implemented later.

vNext

- We will also be focusing on improving search functionality across the pages to provide more flexibility to the users.
- Focus more on security and privacy of users in our app.
- Add social login services from Google and Facebook.
- Add Barcode scanning functionality for users to scan the product and save the product and the quantity.
- Create a robust customer support team to address users' concerns and provide faster response.
- Integrate the app with 3rd party payment gateway for users to pay with credit/debit card and Paypal accounts.

v longterm

Currently, this app is limited to the Northeastern University students, but in the future, we are planning to expand this app and make it available to other university students. Eventually, we plan to expand this community app and launch into the customer segments such as old-age groups, disabled groups and etc.

Roadmap / Timing

Milestone	Timing	Notes
Create Sign-In with Landing page	Q1, 2021	Launch a beta app with Sign-In and a landing page explaining the purpose of the app with a demo video
Provide a demo user interface, collect feedback	Q1, 2021	Launch a dummy user interface for the users to play around (post, accept, pay and review) and get accustomed to the app. Collect feedback from users.
Incorporate feedback	Q2, 2021	Incorporate feedback collected from users and make improvements to the app
Feature enhancements such as tracking and search list predictions	Q2, 2021	Provide users a way of automatically tracking the status of the delivery and add features such a search list prediction based on data collected from the users
Establish a support team	Q3, 2021	Create a support team to address customer concerns and resolve their issues
Add electronic payment functionality	Q3, 2021	Provide users with the option to make payments using credit/debit cards and digital wallets
Offer rewards and cashback	Q3, 2021	Provide referral rewards and cashback to the users to help drive more users to the platform
Optimize application to more testing	Q4, 2021	Optimize the app by more testing and making it more efficient
Reduce time to resolution	Q4, 2021	Increase support team base for faster response and to decrease time to resolution
Application analysis	Q4, 2021	To analyze activity of daily users and gain more insights
Review order history and rewards	Q4, 2021	Provide a convenient way for users to check their past orders

		and interactions, and track their rewards

Metrics

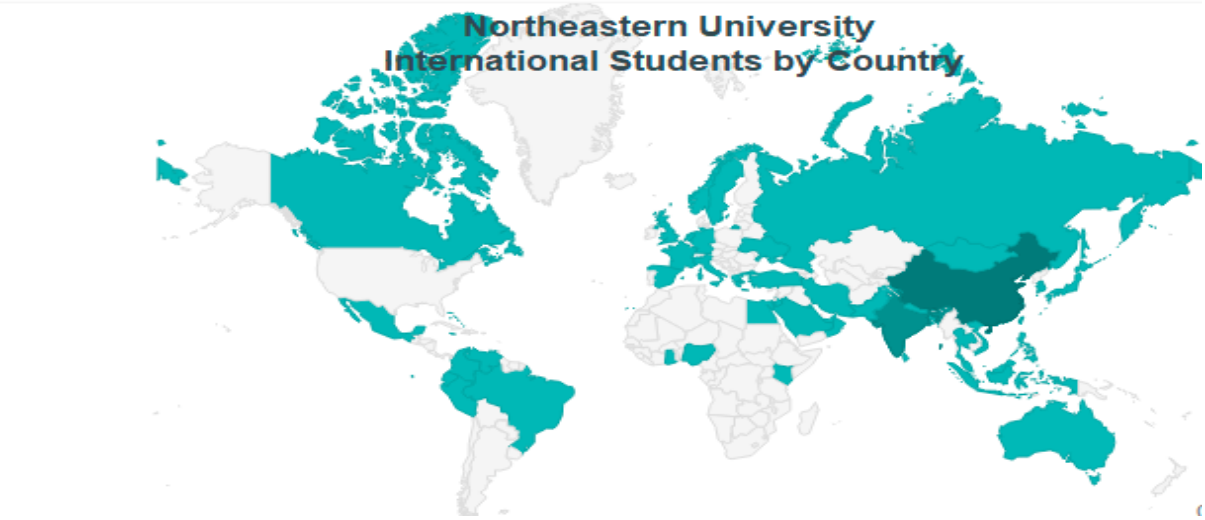
Quantitative Metrics
Number of total visits on the app
Number of unique visits on the app
Ave. number unique visitors per day on the app
Number of new accounts created on the app
Number of visits per user per week on the app
Average time spent on the app per user
Number of messages sent per day/per week on the app
Number of posts per week on the app
Request Cancellation Rate on the app
Successful Transaction Rate on the app
Number of posts per week on the app
App rating/reviews by the people
Retention and Churn Rate per month for the app
Customer Acquisition Cost on the app
Customer Satisfaction Score while using the app
Total % of visitors that turned into leads on the app
Total % of leads that turned into business on the app

Qualitative metrics
Top landing pages for the app
Top exit pages of the app
Different types of Traffic sources
Different Visitors' browsers on the app
Location of all visitors who are using the app
Different types of Network properties
Top content for the app

Various URLs used for the app
Monitoring the traffic patterns on the app

International

Northeastern University has many international campuses around the world like in Toronto, London, and Vancouver etc. So, we can easily scale our product for international market. But initially, we will launch our product and focus in all the USA campus and once we succeed and are able to sustain in the market for a brief period of time, than we will think of scaling our product for international campuses. The toughest part of launching the product in the international market is knowing the culture and needs. We are currently are researching on it.



Projected Costs:

The cost breakdown for the development (assumption):

- Time required for the development = 2 person per months (2 professional Developers front end and back end)
- Total efforts in developing, quality assurance and design = 4 persons month
- Virtual machine = 1 machine per month
- Cloud Storage = 1 TB per month
- Operational Cost:
  → Cost per engineer = $4K (Total: $4K * 5 = $20K)
  → Infrastructure cost = $36 K
  → Total = $56 K

Note:
All the values are assumptions -

- *$25 - Engineer cost per hour*
- *12 application functionalities to develop in 6 months.*
- *2 engineers would have to work for a month (front end and back end)*
- *1 person for quality assurance and 1 for Designing the application.*
- *1 person would have to manage (Total team of 5 members).*
- *Virtual machine - $0.07 per hour[3] & Storage - $0.03 per GB[4]. For our application we will use Amazon Web Services (AWS) for infrastructure.*

Operational Needs

For HelpMeBuy application to be fully functional, support is needed from many areas, including:

Development Team

- Application Development: In order to develop the HelpMeBuy application on smartphones, a talented pool of developers/engineers is needed.
- Testing: After the HelpMeBuy app is completely developed, it needs to be tested thoroughly. A team of testers would be required to do the end-to-end testing for the app.
- Web Development: A dedicated website should be created for HelpMeBuy, and should be designed for both mobile and desktop viewing. The website will be valuable for building user awareness and mobile app would serve for easy access.

Marketing Team

- Market Research: Surveys, in depth interviews, and focus groups will allow the team to tailor HelpMeBuy's features to the most prevalent use cases. This market research maybe done in house, or may be outsourced.
- Marketing/Promotion: After the HelpMeBuy application is fully functional, marketing efforts will build product awareness. We plan to hire someone to handle the overall marketing strategy, and expect social media to make critical contributions by allowing us to reach networks of students.

Operations related to Finance

- As with any business, we will also need to manage finance and operations, which will require software and infrastructure.

Legal advice and approval

- We would need to partner with 3rd party legal teams to get legal advice and approval for the terms and conditions. We would also need to learn about the privacy protection acts, which we need to comply with for storing student information in our database.

User Feedback

- For our application's success its important that all the students give us the feedback once they use our app, so that we can improve our app UI or quality or any issue they are facing which will eventually help in improving app profitability .

Partnerships with various campuses for obtaining student Database.
HelpMeBuy application would have to obtain permissions from the university to retrieve and store the student email id and university id in their database.

Caveats/Risks:

Risk	Description	Solution
Security	Although we have reviews/ratings to determine the person but what if the review is made for someone not trustworthy enough to trust and get the requested items. Plus, with more number of users using the application, storing personal data like address or the apartment number or phone number there might be the possibility of data privacy infringement.	Proper cloud infrastructure to secure user data and prevent them from falling into wrong hands. Enabling encryption at rest a nd during transit of data.
Brand Reputation	If the customer is unhappy with the app or the p roduct does not fulfil the any requirement a bad review can lead to application's reputation, which can further lead to losing more customer. So, we are focusing on prioritizing the user needs and make the application easy to use, to make it more comfortable for the customer.	Prioritizing the user needs and taking customer reviews very seriously. Build a robust application with easy to navigate features, intuitive user exper ience can improve the brand reputation.
User Base	There could be possibility that the number of us ers using this app is comparatively lower than t he expected number of users. Because many pe ople own vehicle, a lot of them prefer walking, some people live close to the stores or some people just don't like reliance on outsiders, to sho on their behalf. Such scenarios may impact the usage of app.	Monetary benefits for affected customers Appropriate concessions should be issued to the custo merfor any losses (prioritizin g customer loss)
Damaged product(s)	There is a possibility that product ordered gets damaged/lost either during transit or at the shop while buying. The end user who receives such product would lose trust in using the application and might stop using it or discourage others from using it too. To handle such scenarios, the app can give them compensation for the user who received damaged products and re able to prove it, in order to retain customers and have better custo mer experience	Monetary compensation to affected customers Appropriate concessions should be issued to the custo merfor any losses (prioritizing customer loss)

High Cost	If the operating cost of the app is higher than expected.	We can start building our app considering the lean business model which identified as the operational excellence or continuous improvement strategies.
Legal compliance	Ensure compliance with all laws governing the use of private personal data and e-commerce. Reduce number of lawsuits arising from negligence or misuse of user data.	Contract with law firm to ensure compliance with all federal laws and regulations.