Project Title:
Happy Tracking

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Link to Initial Prototype: Here

Picked Project Description:
Improve UPS tracking number system by creating an app that will give real time notifications of where a package is based off of tracking number and where it arrives. This app will allow the company to notify when a package is in the state, and when attempted deliveries were made.

Brainstormed Functions for Prototype:

- **Where is my package:** Use this to locate where your different packages are at at the current time
- **Estimated Time and Date for delivery:** This will show the user when their packages will arrive with more detail including: If a signature is required, date, and time of each package.
- **Updated and more efficient notifications:** Use a menu to give the user notifications instead of the old and outdated method of leaving a piece of paper on the front door. Ex: Time ; Type of Notification ; Package nickname
- **Add a package:** Add packages to track on the app, and you can add a name, notes and other pieces of information that pertains to that package.
- **Help:** Will give the user more information about the application.

Study Tasks:

- Start tracking a package
- Locate your package
- Resolve a notification of a missed delivery

Our User Study Descriptions:

Reminder: For the testing, remind the user to talk out their thought process. And write that down for every user. Do not talk after giving them their task, let them figure out a way to complete the tasks.

Study 1:

Number of participants in session: 1

How long did this test take? 45 minutes
Where did the testing take place? Living room
Participant information:

- Age: 72
- Gender: Female
- Academic Background: High School

Description: The participant was asked to perform the task "Find your list of packages, add a new package to the list, and check your email." The participant was able to find the list of packages after inspecting the home screen for a few minutes, at which point she very easily was able to add a new package. She did struggle with clicking packages on the Estimated Delivery Times page, which she found by exploring the prototype. What she expected to be clickable was not clickable and vice versa.

The participant had no issues finding the email and interacting with the email portion of the prototype. Questions posed included, "What would make this app easier to navigate for you?" and "What was the most confusing part of the app?"

She stated that the most confusing part of the app was occasionally not knowing where to click on a few of the pages of the prototype, and that the most confusing part was knowing for sure where each button would lead. However, she also stated that she was able to learn the app quickly and was satisfied with her experience with it.

Study 2

Number of participants in session: 1
How long did this test take? 30 minutes
Where did the testing take place? CU Engineering Center
Participant information:

- Age: 24
- Gender: Male
- Academic Background: College educated

Description: The participant was asked to perform the task "add a package, and check your inbox, archiving a message." The participant did not struggle to get to the add a package screen, but did end up following a different path to get there than anticipated. The participant played around with the email screen for a few minutes before finishing the task.

When asked to give feedback, the participant pointed out that a few of the buttons weren't working properly. However, the most important feedback we received was that the navigation

buttons weren't clear as to where they would lead, and that adding more buttons might help clarify how to get to important tasks. Furthermore, the mail was not clear when in archive mode or inbox mode, and that it wasn't obvious when a package had been added successfully.

Study 3

Number of participants in session: 1
How long did this test take? 30 minutes
Where did the testing take place? CU Engineering Center
Participant information:

- Age: 28
- Gender: Male
- Academic Background: College Educated

Description: The participant was tasked with first adding a package, second checking the inbox, and third looking at old packages. The participant was able to navigate the app easily enough. After finishing the tasks, the participant surfed through the app and looked at most of the possible screens.

When asked to give feedback, the participant provided helpful information that the back button from 'Track Packages' was not currently working and that the buttons move between a couple of the screens. It was also suggested that the ability to add a package is moved to the main menu, instead of the 'Manage Packages' window.

Study 4

Number of participants in session: 1
How long did this test take? 30 minutes
Where did the testing take place? CU Engineering Center
Participant information:

- Age: 21
- Gender: Female
- Academic Background: College Educated

Description: The tester was asked to perform the task "add a package, check your inbox, and archive a message." The participant did not struggle with any aspects of the app, but they did need guidance to leave the manage packages menu. After finishing the tasks, they also went through the steps of looking at the map and clicking on the multiple packages.

The tester wanted the ability to add text, but that was due to the prototype tool used. She enjoys the sleek look and the ability to see the information displayed in multiple ways. The feedback included adding back buttons that go back to the main menu, and removing shadows from text that makes the manage package menus unusable (her words). Another great functionality improvement provided by the tester was adding the ability to connect an Amazon account to the application and automatically detect new orders. They also wanted the ability to choose which packages appear on the map before showing the map.

Intention to improve:
After getting feedback from 4 participants, we realized that we definitely needed to make the buttons clearer. It was difficult to navigate to where everyone wanted to go. We also need to make sure that everything is readable and that the accessibility is made better, especially with having buttons back to the main menu and making it clear when packages were added. For future implementation possibilities, we could add an option to connect shopping accounts such as Amazon. We'll work on streamlining and fixing the prototype for future testing.

For GPS locating: We plan to attach a GPS device to the transmit vehicle body to track package.The major idea is basing on using following components:
1*Arduino UNO
1*Micro SD Card Shield
1*GPS Module
1*Micro SD Card
1*Battery Set
This GPS device will enable us to track location and store location data into micro SD card, and then we can export out the data file into other software tool to make visible tracking google map.

For future testing:
Hardware Test:
We are going to have a physical object that signifies the package progressing through time and moving. Especially test whether GPS device can generate real-time location data to achieve our goal.We'll see if it's possible to monitor visible tracking google map in Figma, if Figma is not that functional, we'll intent to demonstrate GPS device separately.

Software Test:
Basically focus on interface design using Figma, after get feedback and realize intention about how to improve. We'll update Figma prototype in next milestone.

Summary:

We consider ourselves a third-party company aiming to provide a real-time tracking system compatible with any postal service. Differing from traditional tracking systems where customers can only check the delivery status of their package with plain text from what the postal service carriers provided, our project aims to create a real-time tracking system to evolve user experience.The major technical approach would be applying GPS tech to track dynamic location and then send feedback to customers' mobile terminal. It will also let customers be able to track with various postal service carriers in our mobile app. The reason why we think this is one good improvement is that updates on dynamic real-time packages location can eliminate incorrect information and mitigate customer's anxieties while they're waiting for delivery.

Individual Contributions:

We came together on Sunday to discuss our prototype plans. The entire prototype was created at that time, with all of us working on individual portions (Mac with the package tracking, adding packages and my package portions of the prototype, Chelsea with the main pages and the mail system, Munta with the feedback and help system and Aiden with the estimated delivery times page), but working on the entire prototype creation and planning all together. Mac, Chelsea and Munta all worked on the user feedback and testing, and Aiden began researching and putting together the GPS system for future testing, as well as future improvements we need to work on. The entire team feels like everyone contributed equally.