Bus Commuting Interaction Analysis and Design

Name: COMMies

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Purpose

This document presents design ideas and implemented changes for a bus-commuter app, developed by the "COMMies" group. Scenarios are visualized to best identify solutions for the problem at hand (using public transportation). The purpose of this document is to layout the app design in a cohesive, structured fashion that would be accessible for users.

Content Outline

- **Executive Summary** – An overview of the results from our ideation and requirements analysis, summarizing key insights and the new app concepts.
- **Storyboards -** Step-by-step depictions of user scenarios as personas interaction with their daily life and the app applied to those scenarios
- **Generalized Transition Network (GTN)** - A flow chart framework visualization of the process of navigating through the app
- **Reflection** - Conclusion and analysis of the logic used to design the user interface as well as design processes that were utilized
- **Appendix** - Additional visuals of all wireframes

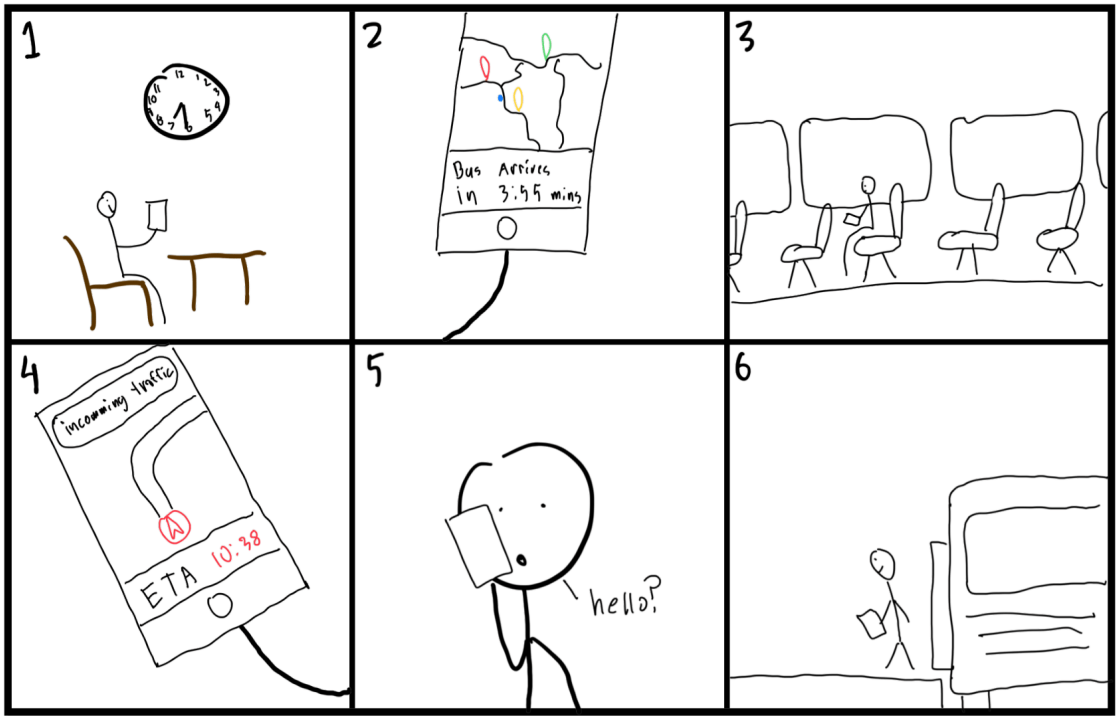
Executive summary

During this process we developed comic-like storyboards to visualize the scenarios and emotions that lead to and occur while using the app we develop. These depictions allowed us to more easily comprehend the purpose of our app in real-time usage situations with a potential user. Based on these scenarios and storyboards, as a group we generated a Generalized Transition Network (GTN). The GTN provides an easy-to-follow guide of the general functions of our app. Beginning from the home page, the main pages that a user can navigate to are settings, alerts, routes, and the

information page. From there we considered where other potential features could nest and came up with a GTN that we easily follow. Collaborating on the GTN enabled us to gather our ideas together into a logical flow, and we found areas where individuals were imagining a different process from others. So the GTN brought together a united vision of the app. After that we began creating wireframes based on our scenarios. Following the flow of the GTN and perspective of the storyboards, allowed us to smoothly create the wireframes. Through the creation of the wireframe, we familiarize ourselves with figma and prototyping. Each individual wireframe showcases our creativity in problem solving and approaching screens defined in the GTN.

Storyboards

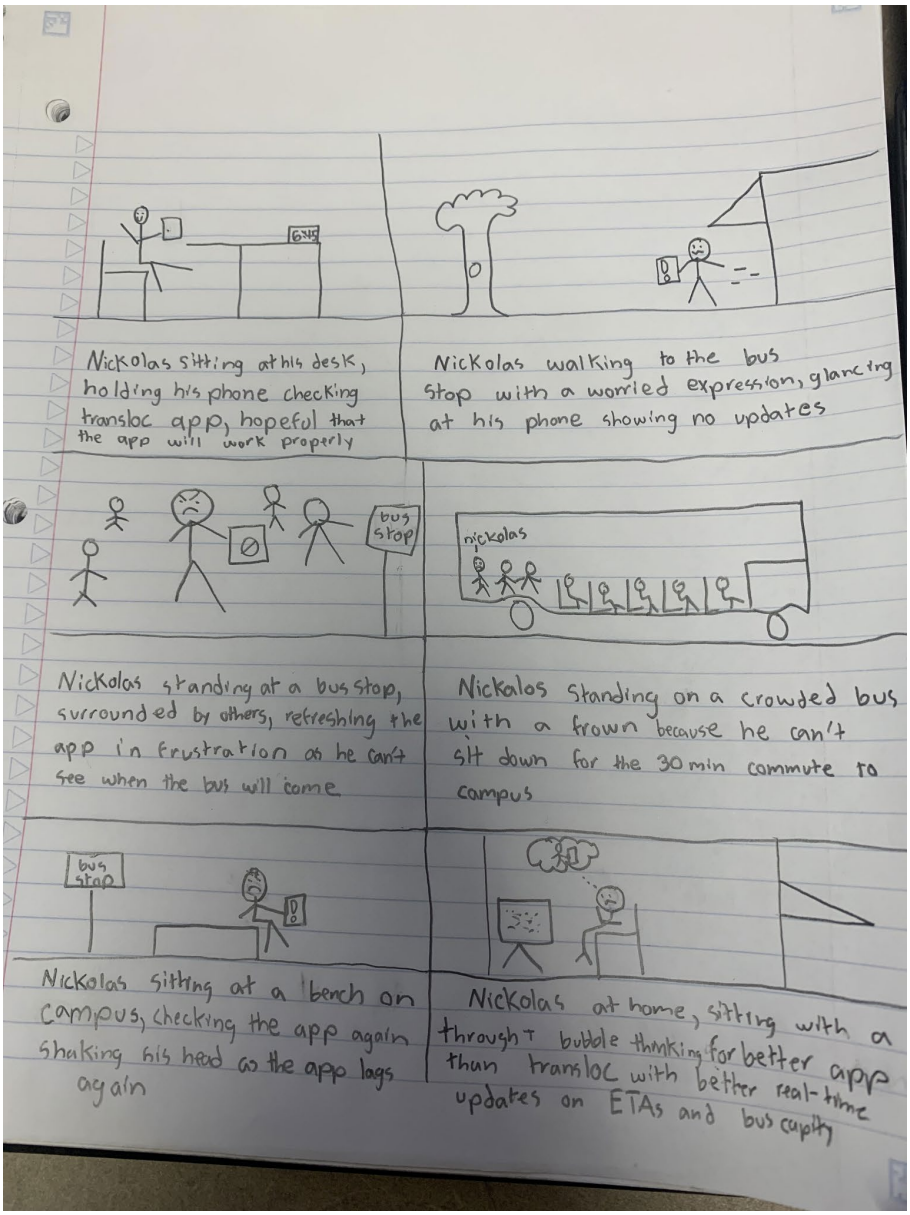
Jack Meyer



1. James starts his day by checking the bus schedule on the commuting app to plan his first meeting arrival.
2. The app displays precise arrival times and alerts him to delays.
3. James monitors his route and evaluates the quickest way to get to his next location.
4. With real-time notifications, he can adapt to delays by finding alternative routes.

5. The app's quick ETA feature allows him to respond to last-minute needs seamlessly.
6. The commuting app helps James stay on schedule, simplifying his workload.

Harrison Holt



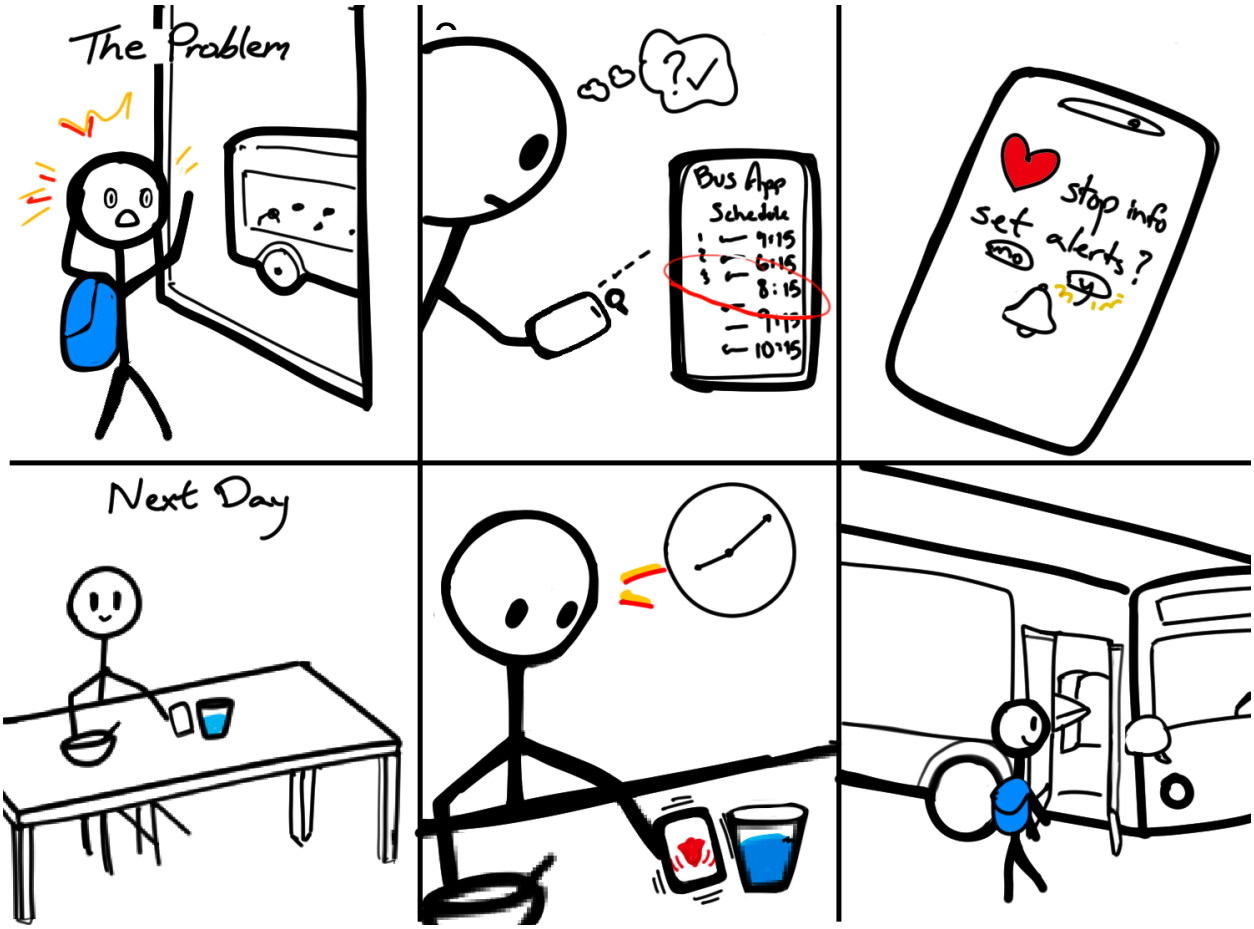
Joshua Swanier

1. Kevin wakes up in the morning checks his phone and opens the Transloc app
2. After opening the app he checks to see the bus routes, how far the bus is, the closest stop, and the bus capacity
3. Knowing the information of the bus route and what time he should leave. Kevin heads to the bus stop to get on the bus
4. Kevin got on the correct bus on time due to Transloc having the proper features to ensure he gets to work on time.
5. After Kevin's shift is over, he has to wait to catch the bus due to there being only a limited number of buses running by the time he gets off. He checks to see how long he will have to wait until the bus comes to the closest stop near him

6. Kevin makes it home after successfully relying on the Transloc app to get him from point a to point b.

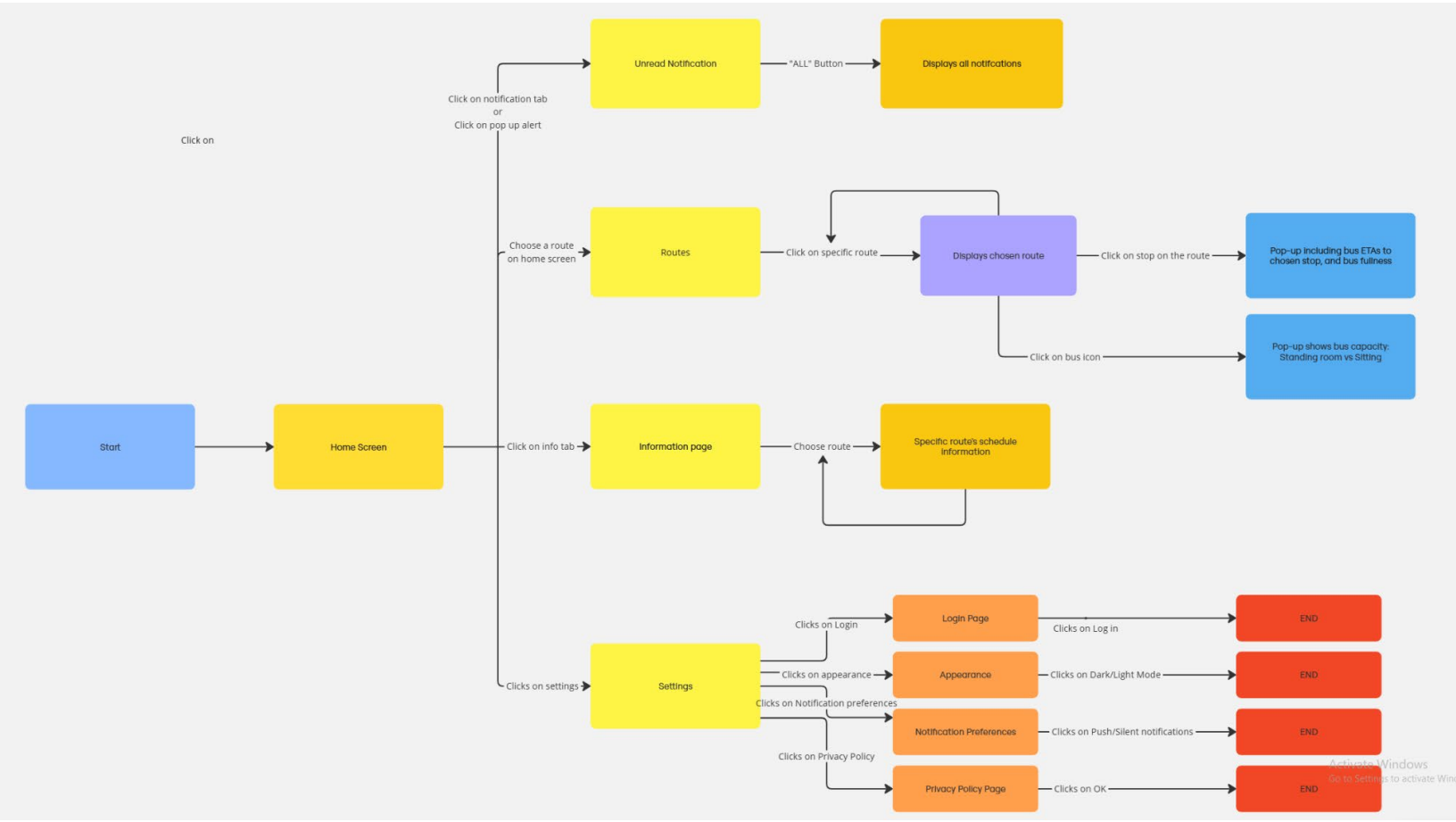
Dev Shah

Amelia Hall



1. Katarina ends up missing the bus
2. So she looks for solutions including a bus commuter app available, where she finds the listed schedule for the stop she is closest to
3. She finds the time that works best for her, saves it, and sets up an alert to her phone when the bus is nearby
4. The next day, Katarina is able to relax, knowing she knows when the bus will arrive
5. Katarina's phone buzzes when the bus is near and is arriving shortly
6. Katarina successfully makes it onto the bus with ease

Generalized Transition Network (GTN)



Reflection

Our design approach centered on taking the strengths of the TransLoc app and making it better for users. We started with a strong foundation, TransLoc already handles route tracking, bus capacity, and alerts reasonably well. However, we saw significant opportunities to improve these features by making them more intuitive, user-friendly, and effective. Our goal was to create a smoother, more reliable commuter experience. To do this, we used design tools like storyboards and wireframes to visualize how our proposed changes would look and feel for different users.

A key focus was improving the alerts and notifications system. In the current app, notifications disappear once clicked, with no easy way to revisit them. We aimed to change that. Our design includes a history of notifications so users can access previous, read, and unread messages at any time. This ensures that important updates aren't lost and can be checked whenever needed, making commuting less stressful and more manageable.

We also focused on enhancing bus capacity displays and route visuals. Currently, capacity data can be inconsistent and difficult to interpret, which can make planning a trip frustrating. Our redesign addresses this by providing clearer, more reliable capacity indicators and improved route visuals. The goal is straightforward: to give users a more dependable, stress-free commuting experience with an app they can trust for accurate, helpful information.

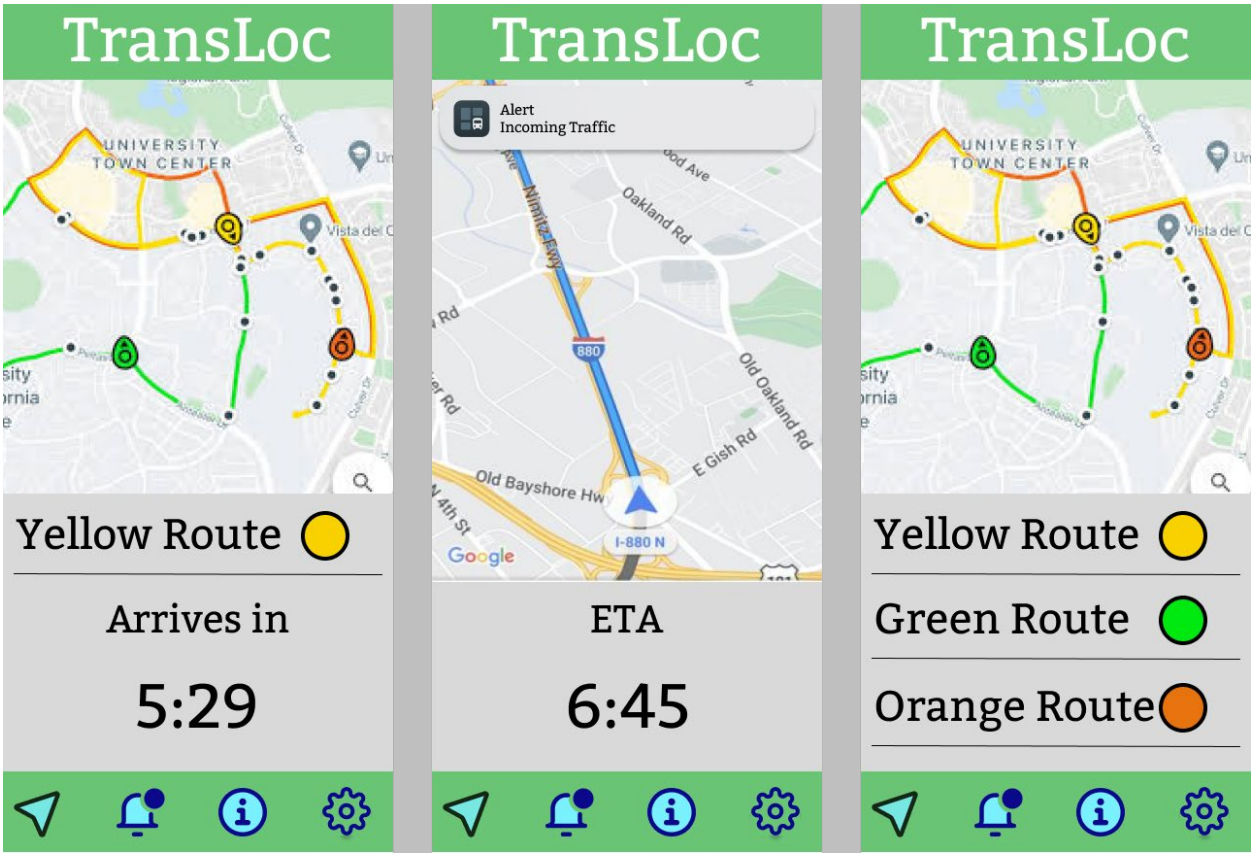
Reflecting on the design process, we found that building upon the existing TransLoc interface provided both a foundation and a challenge. On one hand, it gave us a clear starting point with established functionalities, like route tracking and notifications, to improve upon. On the other hand, integrating our user-driven enhancements, such as persistent notifications and accurate bus capacity displays, required significant adjustments to the established design patterns. Our goal was to preserve what worked well in TransLoc while addressing pain points raised during user research.

One of the trickiest parts of the design process was figuring out how to make real-time updates more consistently accurate and easy for users to understand. Since commuters depend on this information, even minor inaccuracies or delays can throw off their entire schedule. Our focus was on designing solutions that would deliver updates more seamlessly, even when there might be connectivity issues or unexpected changes. Another challenge was redesigning the notification system to ensure users could easily access past and current alerts without feeling overwhelmed by too much information. We wanted to strike a balance where notifications would be helpful, persistent, and easy to manage.

Translating our user research into actionable design improvements was both rewarding and challenging. Users consistently expressed a desire for more accurate, real-time updates and better communication about route changes, and we wanted to make those needs the cornerstone of our redesign. While coming up with features like color-coded routes and a persistent notification history tab seemed straightforward on paper, it required thought to ensure they addressed users' frustrations without complicating the app further. Our goal was to make the app feel intuitive and genuinely useful, turning user feedback into designs that would improve their daily commutes and reduce stress.

Appendix

Jack Meyer

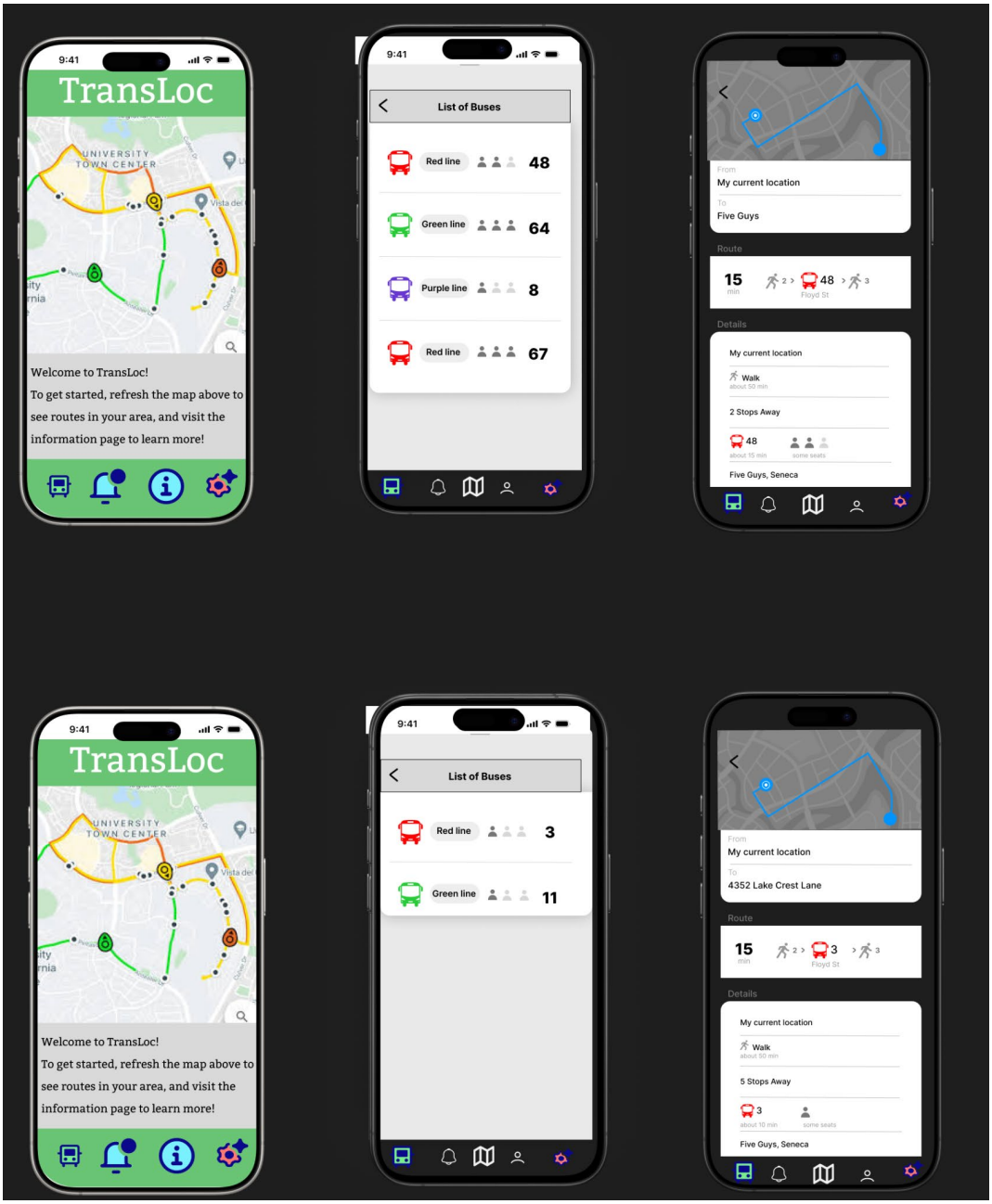


Current route selection information

On bus and en route/traffic notification

Select from available routes

Joshua Swanier

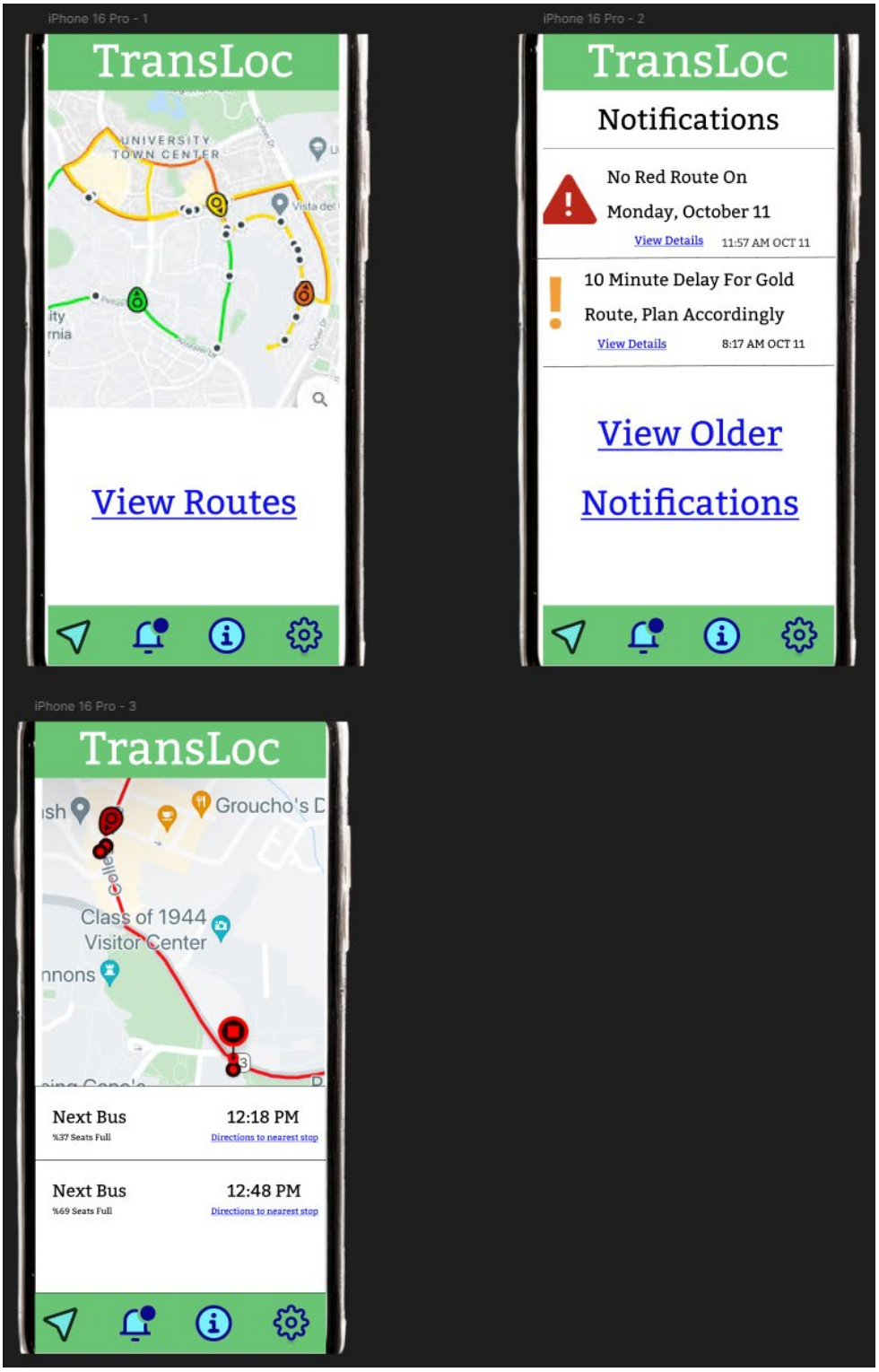


1. Displays list of buses along with eta, and bus capacity
2. When a route is clicked upon, information regarding the line's eta, walking distance to the bus stop, the capacity of the bus, the map showing you the route that will be taken, and how many stops away it is

Amelia Hall


Homescreen
TransLoc
UNIVERSITY TOWN CENTER
Welcome to TransLoc!
To get started, look around the map above to see routes in your area, and visit the information page to learn more!
Home
Unread Notification
Unread Alert
[Title] (Example) Unexpected Route Changes
Routes Affected
red route
gold route
Date Posted
October 22, 2024
Due to accident that occurred on [street name] at [time]. Buses will NOT pass through the area between [street intersection] and [street intersection]. Instead buses will take a detour on [street name].
[Bus stop name] will be skipped during this time.
Buses will return to regular schedule ASAP, and users will be notified upon doing so.
See All Previous Alerts
Clicking on alert
Information Page
Information
Choose which route you want to look into:
Click here to see options
Introduction to info page.
Red Route Info Page
Information
Choose which route you want to look into:
Click here to see options
Stop #
Stop Name:
1 REC CTR/LIBRARY
2 UNIVERSITY VILLAGE APTS
3 THE RESERVE APTS
4 HERITAGE POINTE APTS
5 ESAQUEENA TRAIL @ CAMBRIDGE DR.
6 INGLES— HWY 93
7 CLEMSON EDGE APTS
8 BOJANGLES—HWY 93
9 ** KELLY RD. @ HWY 93
10 ** CRAWFORD FALLS APTS
11 DOUTHIT HILLS
12 COLLEGE OF BUSINESS
13 DOWNTOWN CLEMSON/TTT
14 VICTORIA SQUARE
15 CLEMSON VILLAGE
16 COCHRAN RD @ THE LOFTS
17 THE ENCLAVE IN-TOWN
18 LINDSAY RD @ THE LOFTS
19 OLD CENTRAL RD. @ CREEKSIDE DR.
20 THE ENCLAVE APTS
21 CATbus HEADQUARTERS
22 THE ENCLAVE APTS.
Page of route
All Notifications
All Alerts
Unexpected Route Changes
10/22/2024
Scheduled Route Changes
10/15/24
Unexpected Changes Resolved
10/10/24
Unexpected Route Changes
10/10/24
See all alerts, scroll for more, click on an alert
Route selection overlay
red route
gold route
blue route
Drop down
Tip Overlay
Tip
Like a stop to get alerts when the bus is approaching
Close
Pop-up that

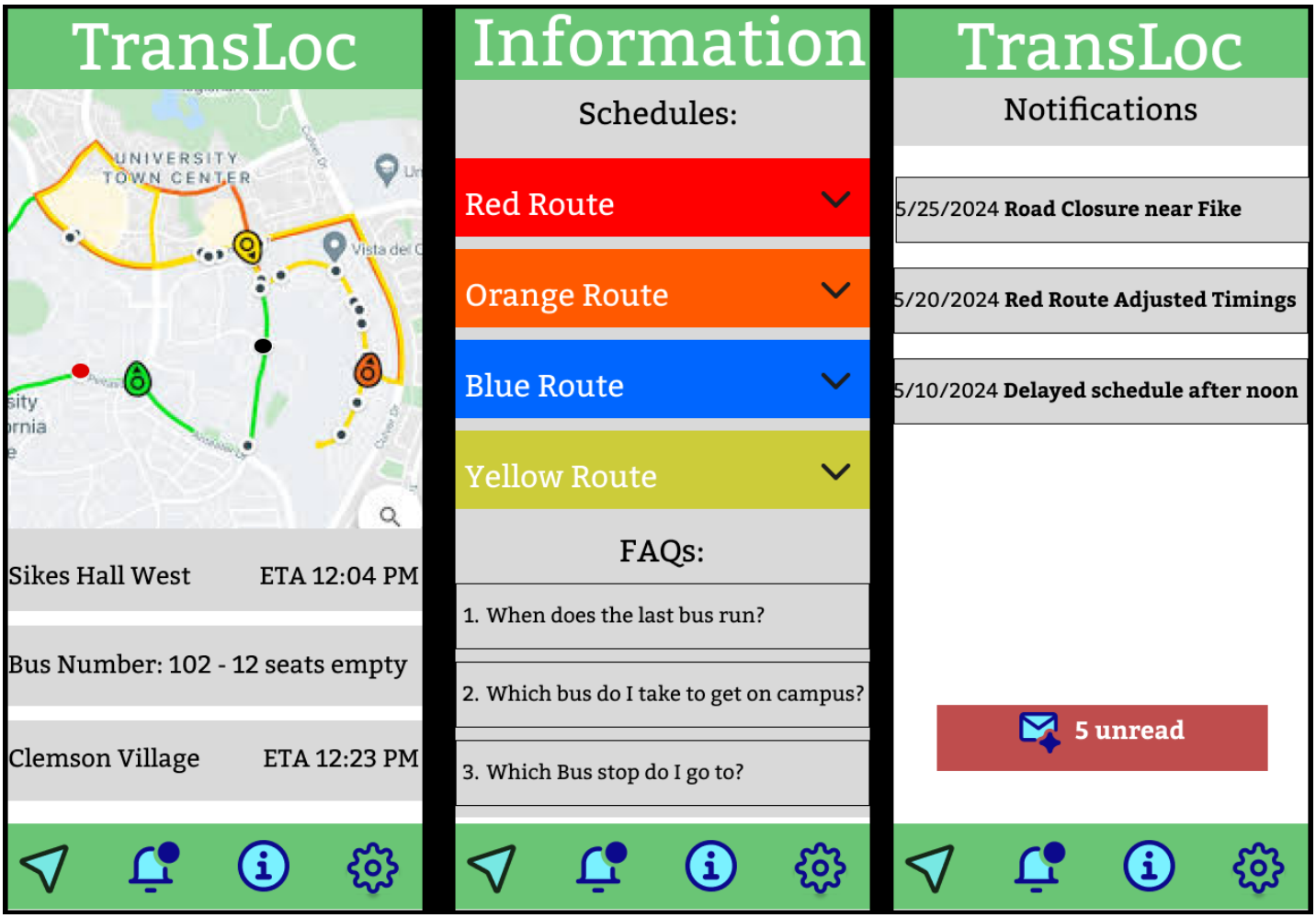
Harrison Holt



1. Homescreen
2. Notifications

3. Bus ETAs and capacity

Dev Shah



1. Home screen showing stop name & ETA, bus number & capacity, and destination & ETA
2. Information screen with drop down menus to show route schedules along with a FAQ
3. Notification screen of chronological ordered alerts