



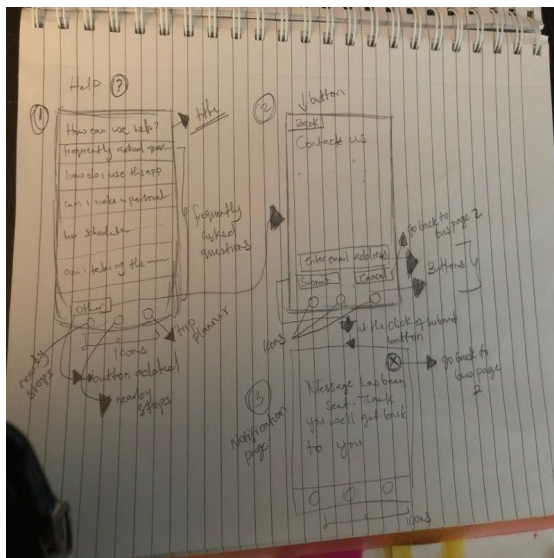
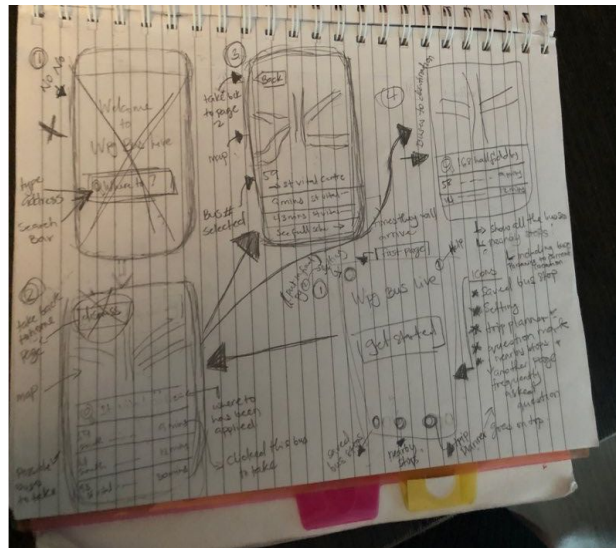
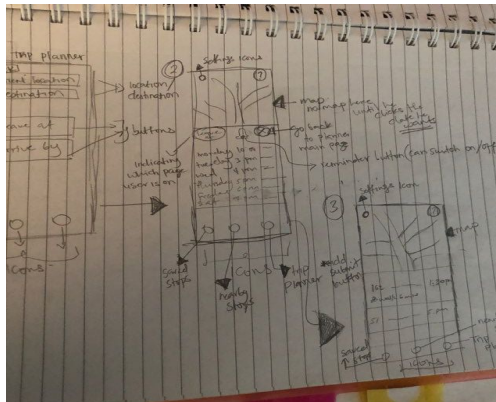
Milestone II

Winnipeg Bus Live

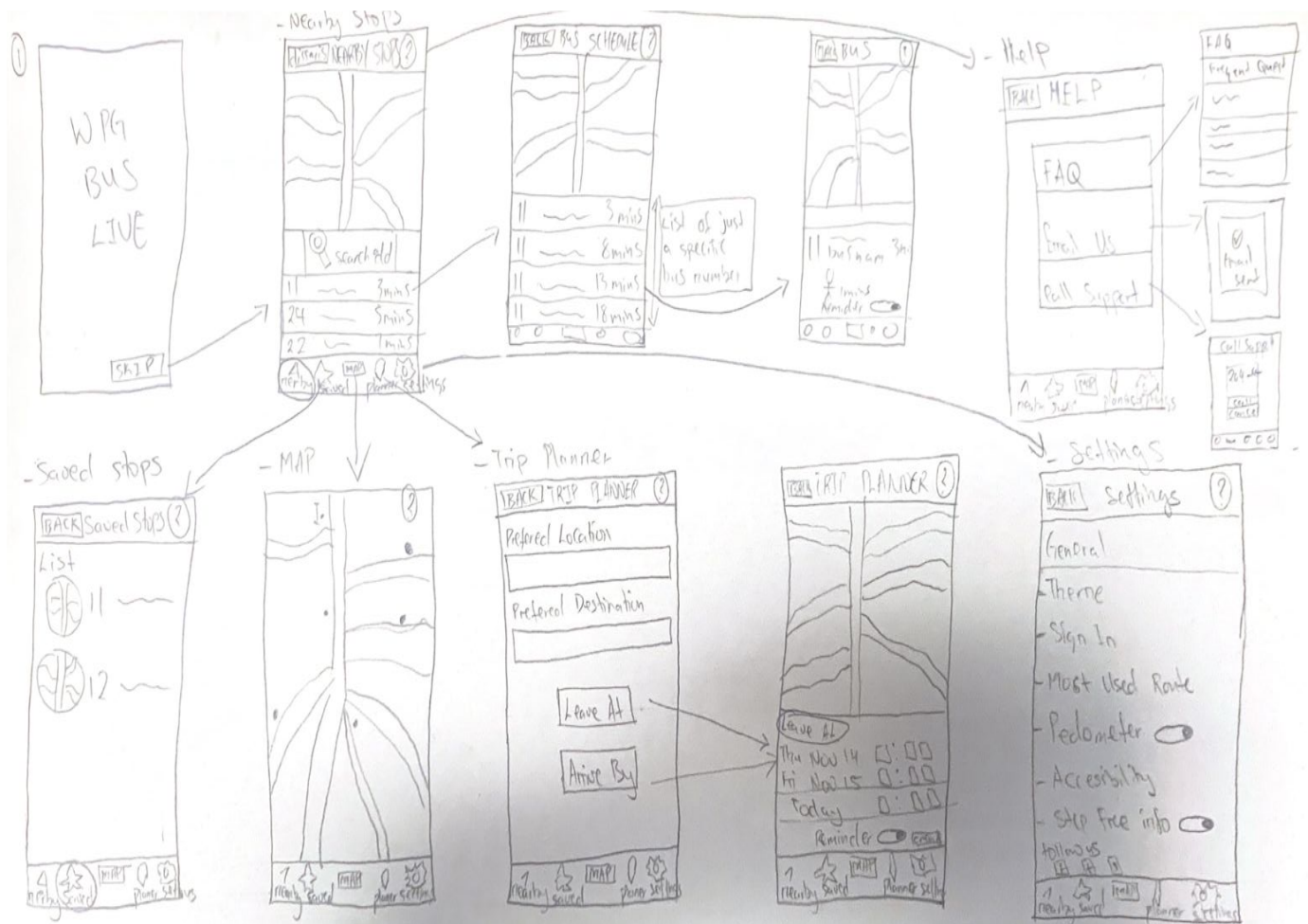
Human Computer Interaction
Milestone 2 Project

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Brainstorming session sketches (version 1)

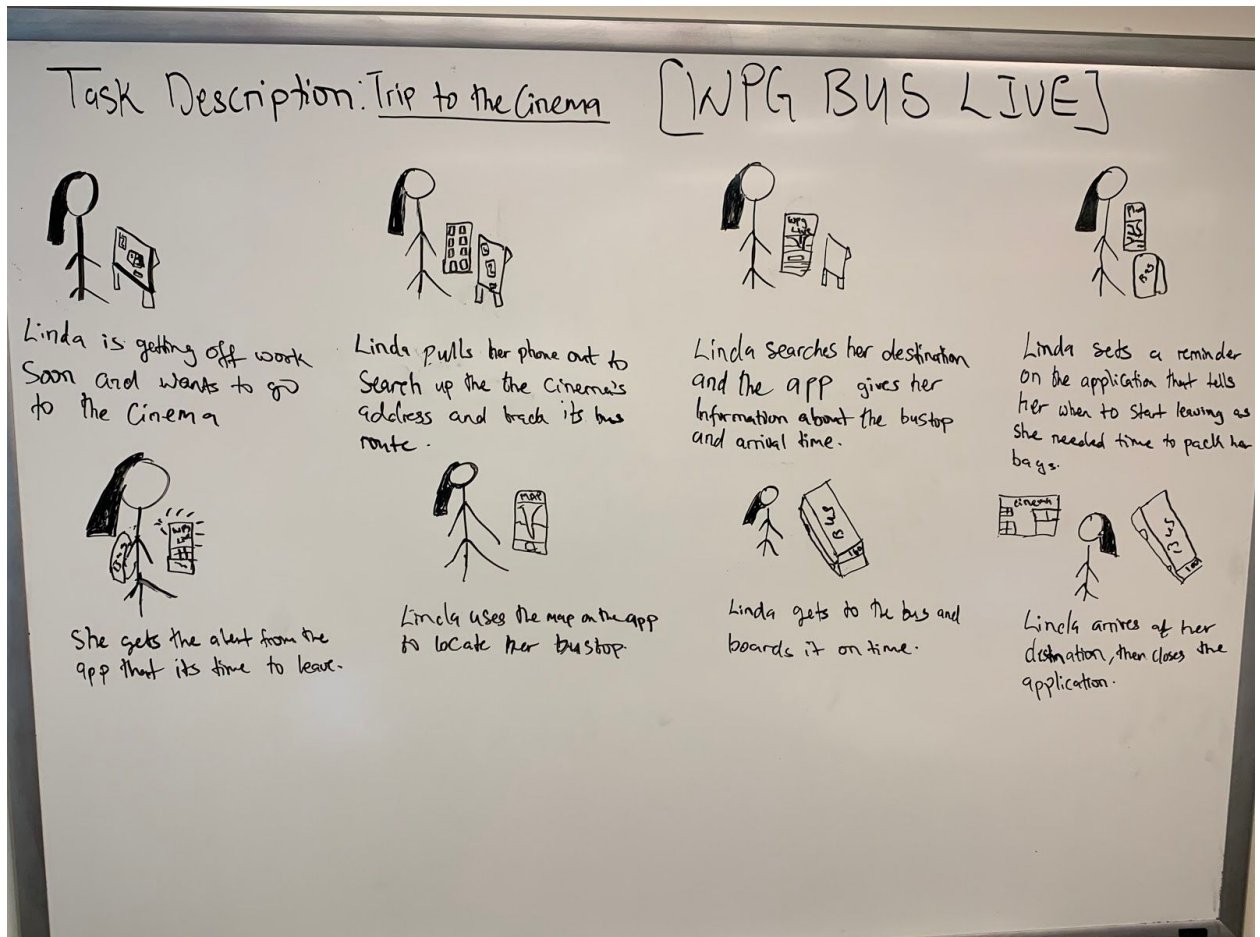


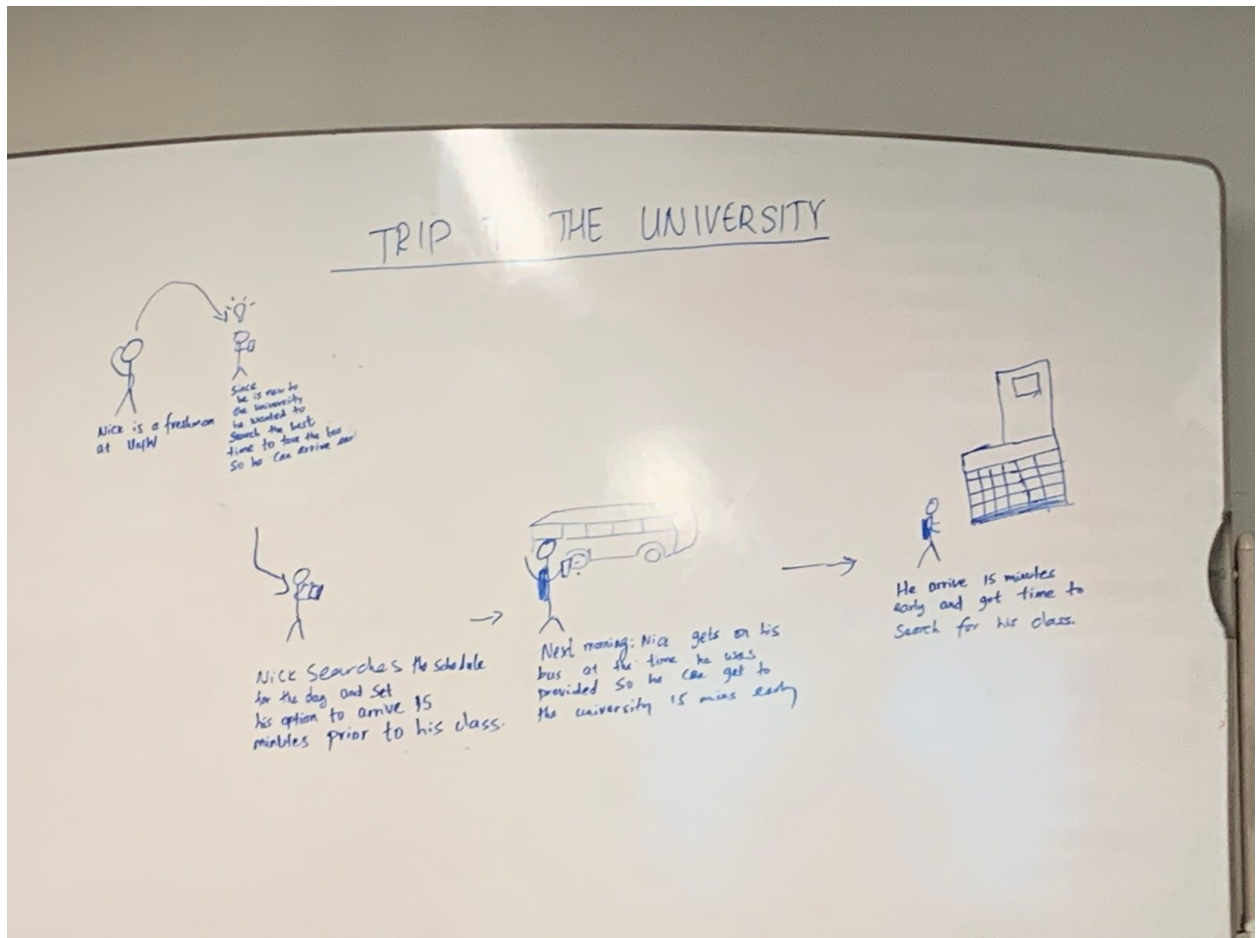
Initial Design(Final brainstorming Sketch)



HCI: Winnipeg Bus Live

Storyboards





We had our brainstorming sessions and came up with a few sketches which we have included above. The brainstorming sessions opened our minds to various ideas and a few more features that we did not include previously in our designs. In arriving at this final initial design, we took into consideration a few new features that we did not have in mind before i.e this can be noticed in our settings feature. We previously did not have a settings feature but after our brainstorming sessions, we had to create a settings feature that could information the user needs in order to make preferred changes to the application. Also, the placement of a few icons had to be rearranged in order to arrive at our final design e.g the setting button was previously at the top left, but we considered that the “Back” button is naturally at the top left as it signifies previous page in general sense and move the “setting” button to the list of more frequently used icons at the bottom of every screen. And also, in arriving at our final design, the sessions help us in realizing that the “? help” button should appear on every page as it is the “go to” button every user that is lost on any page. Also, the restructure of the “Help” button to not only include FAQ section but also include an option to email and also give a phone call to the support department on the same page rather than have the user click other and then they select either email or phone.

Task Descriptions.

Linda's Trip to the cinema

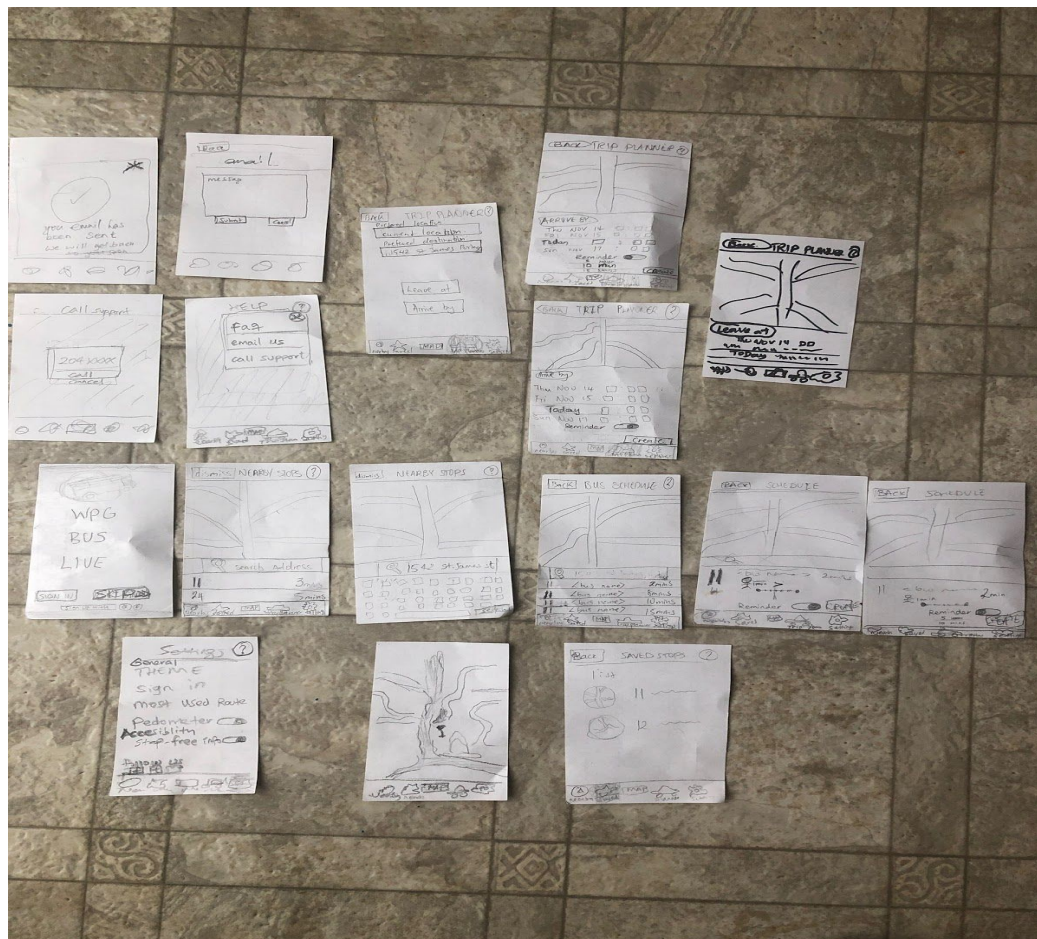
Say Linda wants to go to the movies after a long day at work. She doesn't know what bus gets her to the cinema. Therefore, She has no idea what road or which area the cinema is located, luckily she uses the Winnipeg bus live app. She decides to search for the place. She then gets information about the route such as available bus route to take her to the cinema. She will then check the schedule from the list of search results. She picks her preferred departure time from the list of bus routes to align with her time off work schedule in order for her to get her bags packed.

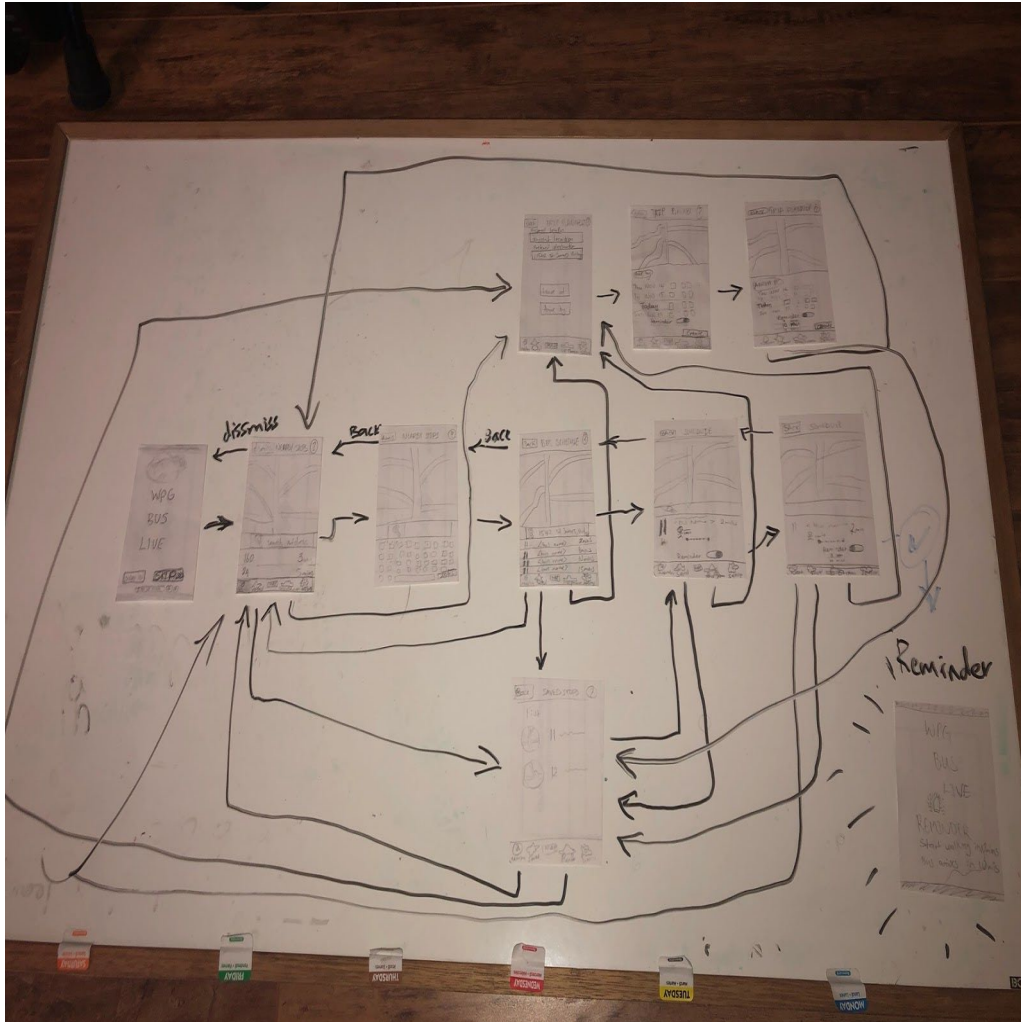
Scenario for saved stops

Nick is an international student at the University of Winnipeg. He is quite new in Winnipeg so he is trying to adjust to the lifestyle. It's Monday morning and he has to be in class by 8:45 for his test but he ends up missing the early express bus he usually takes to school in the morning. Unfortunately, the express bus he takes is now inactive and won't be coming back to his area until during rush hour which is in the afternoon, Nick doesn't want to miss his test so he has to find another bus that can take him to school as fast as possible. He remembers that he saved his frequent bus stops on the bus app so he opens up the Winnipeg bus live app and clicks on the "saved stops" icon. Nick sees that the University of Winnipeg's name is listed. He clicks on the name and is taken to a page where he can see all the buses he can take to school with the times. He chooses the next bus that is coming. Now he's on his way to school.

Arrive to an interview

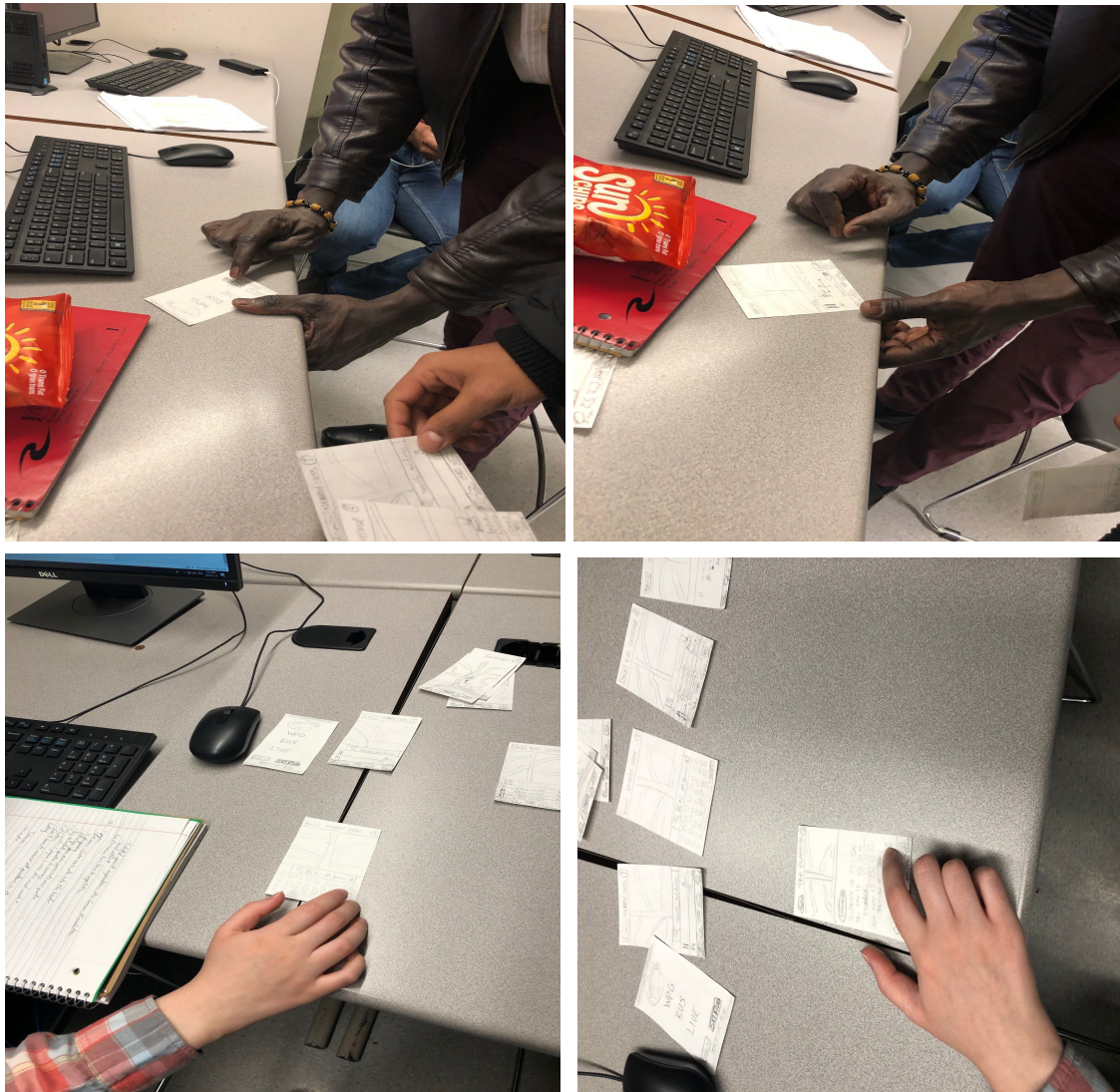
John lands an interview with a harvesting company. He is expected to meet with the managing director and other associates of the company on Monday, November 18th by 9:00 am sharp. He realizes that he has no way of getting to his interview as his car is at the mechanic. Since he's on a tight budget, he doesn't want to use a taxi. He has a bus pass so he reaches out to his phone, opens the Winnipeg bus live app and clicks on the trip planner icon. He uses his current location and types his destination then clicks on the button "Arrive by". The "Arrive by" button takes John to a second page where he is given an option to choose his desired date and time. John picks Monday, November 18th, 8:50 am. After picking his desired date and time John can now see an overview of his planned trip from his location to his destination on the map and the bus he would take to get to his interview by 8:50 am. He clicks the reminder button to remind him of





Video illustrating usage: Clips19-11-16_06-22.mov

Quick-and-dirty evaluation of your prototype on 2 people



Summary of our findings and experience with paper prototyping and quick evaluation

Our paper prototype is based on the ideas we came up with during our brainstorming session. As a group the prototypes were made to be low/medium fidelity. We decided to build the prototype in paper form because it was easy to build and alter changes. Before the users actively started testing out our paper prototype we presented the purpose of our project to them so they could get an understanding of what they were meant to do. We informed them about winnipeg bus live app and the troubles that come

with the interface such as not having trip planner and lack of organization with bus routes and numbers and how our intention is to create a better interface for better interaction that will allow bus users have an easier experience. We told them the purpose of them testing our paper prototype is to get their response and feedback of how they would walk through the process of using the app. We were looking for efficiency and effectiveness.

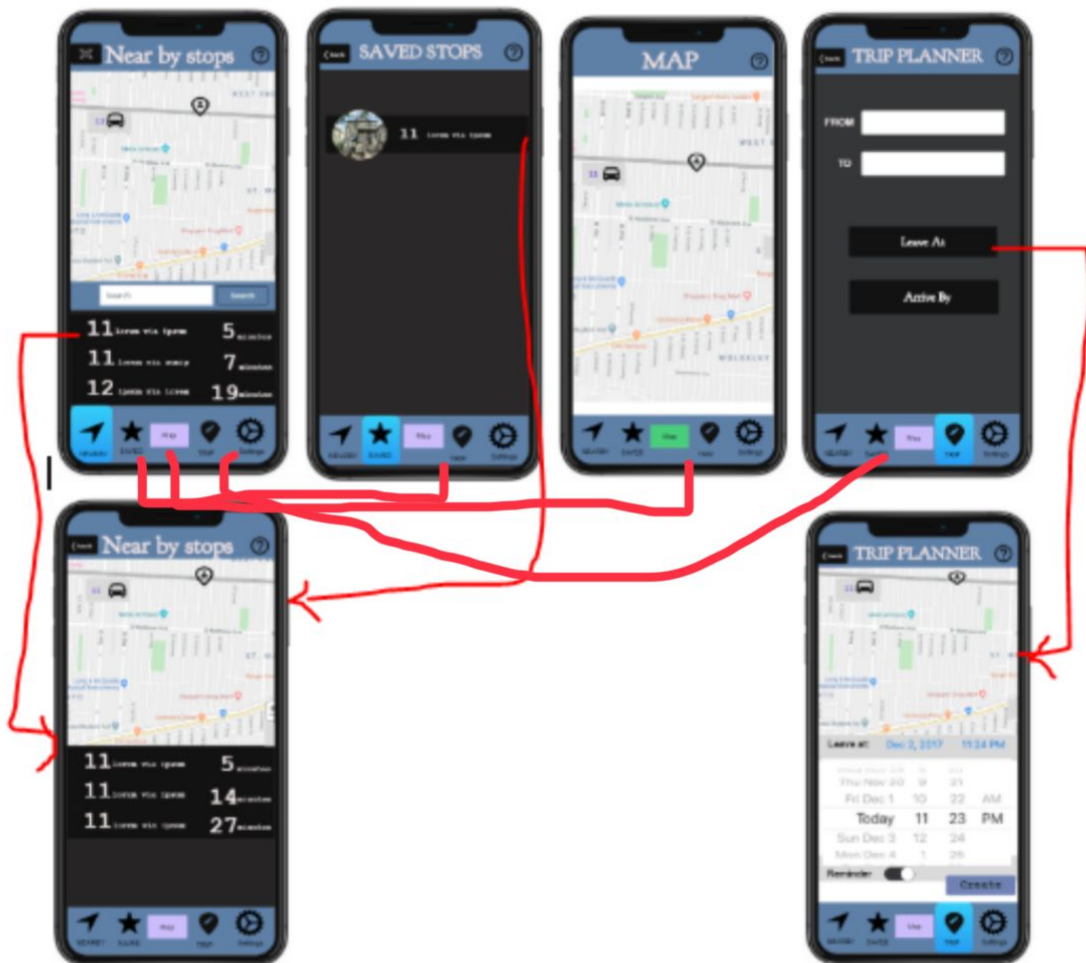
During testing, the paper prototypes were arranged in the order of how a user would operate the prototype if it were to be implemented. Users were then given a paper prototype one after the other to observe which buttons they would click. The buttons they clicked determined the next feedback. For example, our second user clicked search on the “nearby stops” prototype page after typing an address on the keyboard and the feedback she got on the next page was a list of buses she could take to her destination. She then proceeded to click a bus of her choice and got another feedback which showed specific details of how far she would have to walk to her stop, when the bus would arrive and a map which gives her an overview of her trip. We first tested the main task which was to get the users to apply a function either by clicking a bus number which was allocated in a nearby stop page or typing the address of their desired destination and receiving a feed-back. Other sub tasks which the users also tested out included trip planner and asking for help. Users were tested separately.

After the testing was done we asked our users about their experience. The first user stated that the paper prototype made sense to him but he had some difficulties with the map page and was trying to understand it. He didn’t know that it was a map. Our second user said that the paper prototype was easy to use and that she had no difficulties in trying to walk her way through it. Other than the map which will be taken into consideration for the final design, we received no negative feedback about the overall usability of the paper prototype. As a group we observed that the first user was a bit puzzled about. Getting users to test our paper prototype allowed our group to observe how users worked their way through each step. We noticed that the first user was a bit puzzled by the interface and sometimes had to pause to process what was in-front of him before making a decision.

UXPin Screens and URL:

<https://preview.uxpin.com/4c700da3e0444461072362b39c316d07938be238#/pages/119958681>





Cognitive walkthrough

Q1 Will the correct action be sufficiently evident to the user?

Q2 Will the user notice that the correct action is available?

Q3 Will the user associate and interpret the response from the action correctly?

Q4 Will the user be able to progress towards the goal?

Evaluator 1

Action sequence	Q1	Q2	Q3	Q4	Notes
1. Skip/Sign in to Winnipeg Bus Live	Yes	Yes	Yes	Yes	The user will be able to achieve their goal if they use the Skip option. The sign in button is yet to be implemented.
2. Choose Trip	Yes	Yes	Yes	Yes	
3. Enter From location	Yes	Yes	Yes	Yes	
4. Enter preferred destination	Yes	Yes	Yes	Yes	
5. Choose "Leave At" or "Arrive By"	Yes	Yes	Yes	Yes	
6. Select preferred date and time.	Yes	Yes	No	No	Our current interface includes just images of how it should look, we are yet to implement the date and time to be entered

					manually.
7. Turn on/off reminder	Yes	Yes	Yes	Yes	A vibrate tone can be added to the reminder when turned on to improve action response.
8. Create Trip	Yes	Yes	No	No	The current interface has the create button, but it lacks good response to the user after creating the trip as it goes back the the “nearby page” instead of a list of created trips or alert notifying the creation of a new trip.
9. Sign Out of Winnipeg Bus Live.	No	No	No	No	The user will not be able to perform this action as the interface is yet to have a sign out function.

Evaluator 2

Action sequence	Q1	Q2	Q3	Q4	Notes
1. Skip/Sign in to Winnipeg Bus Live	Yes	Yes	Yes	Yes	Sign in not implemented but skip will have able to proceed to the next screen
2. Choose Trip	Yes	Yes	Yes	Yes	
3. Choose the preferred number/time	Yes	Yes	Yes	Yes	
4. Enter preferred destination	Yes	Yes	Yes	Yes	
5. Choose "Leave At" or "Arrive By"	Yes	Yes	Yes	Yes	Preferred choice will take to a page to get more detailed info
6. Select preferred date and time.	Yes	Yes	Yes	Yes	Straight forward since that is the main goal of the previous step leading to this page
7. Turn on/off reminder	Yes	Yes	Yes	Yes	Not implemented

8. Create Trip	No	No	No	Yes	Confusion might happen weather the person created the trip or not as it has no feedback
9. Sign Out of Winnipeg Bus Live.	No	No	No	No	N/A

Evaluator 3

Action sequence	Q1	Q2	Q3	Q4	Notes
1. Skip/Sign in to Winnipeg Bus Live	Yes	Yes	Yes	Yes	.
2. Choose Trip	Yes	Yes	Yes	Yes	
3. Enter From location	Yes	Yes	Yes	Yes	
4. Enter preferred destination	Yes	Yes	Yes	Yes	
5. Choose "Leave At" or "Arrive By"	Yes	Yes	Yes	Yes	
6. Select preferred date and time.	Yes	Yes	Yes	Yes	

7. Turn on/off reminder	Yes	Yes	Yes	Yes	
8. Create Trip	Yes	No	Yes	Yes	Error may occur as the user will not get a feedback after clicking the “create” button.
9. Sign Out of Winnipeg Bus Live.	No	No	No	No	Sign out will be implemented in the next iteration.

Summary

After performing a Cognitive Walkthrough of the Trip planner task, we noted a few changes and features to be implemented in the next iteration. First and main problem we noticed after the CW evaluation is the lack of a “sign out” button that logs the user out or exit the application. This creates confusion with users as they might not know the next action to perform. We plan on resolving this problem by adding a sign out feature in the settings page in order to allow users to have control over their account. The Sign in page needs to be clickable/accessible. We plan on resolving this problem by creating a login/signup page in our next iteration. Also, clicking the “create” on the trip plan page, there is no response action that notifies the user of the trip being created which is a problem we plan on rectifying by adding either a list of previously planned trips or a notification that gives the user feedback that their trip has been planned. The task/buttons will be consistent on each page to improve the visibility so that it will provide the user with full control. Users can also access help and documentation which will be implemented in the next phase. It will be added to the settings in the next phase as with the signoff button. All in all, the app should be easy to learn because it matches an already existing system that functions and failed in some way.