

UTM FOOD PLANNER APP

A8- Final Usability Report

CCT380

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UTM FOOD PLANNER APP

Assignment 8: Usability Report - Hi-Fi Prototype

INTRODUCTION

Our team has identified a problem among UTM students, and have observed that students spend a lot of time in the task of buying lunch, as they fail to incorporate waiting in line into their schedules. Instead of getting coursework done, attending meetings, studying, and spending time in a productive way, students spend most of their time walking through campus to buy food and wait in long lines. Not only does this situation create stress and pressure for students because they have so much work to do, it also leads to a lot of unproductivity. We have conducted observations, lo-fidelity, and mid-fidelity user testing to reach a final design for our prototype.

EXECUTIVE SUMMARY

Our team has so far conducted user observations at the University of Toronto Mississauga, and observed four different campus restaurants during traditional breakfast, lunch, and dinner hours, and collected observations on the average wait time for a person to order and receive their food, any qualitative behaviors observed, as well as the average abandonment in each of these lines. Based off of the patterns observed, we were able to identify the user pain points, the main pain being the inability of the user to schedule and plan ahead of time when to buy food. Students are unable to predict from where and at what time would be the best to purchase food during their busy schedules. Based off this synthesis of observations, we created low fidelity mockups for our first user testing session, where through our analysis modified our prototype to better fit the users' needs and understanding of the app. After our second user testing session with Med-Fi prototypes, the user testing session flowed with significant improvement and the users claimed and showed more comfort and understanding to the app. Based off of that analysis, we have created hi-fidelity mock-ups for the final testing stage, and expect little user errors or confusion.

The following document contains the updated, methodology, final screen mockups, the result of the final testing session, and an analysis of the prototype.

METHODOLOGY

Updated Protocol: There were only minor changes made to the scenarios to match the logistics in the prototypes.

Scenario 1:

You are a 3rd year Life Science student and have a final test for your biology course at 5PM. It is 9AM and you are already on campus. Since you will be spending quite some time on campus, you also decide that you will buy lunch from Subway. Plan out what would be the best time for you to buy your lunch before your test and add it to your schedule.

Scenario 2:

You are a 2nd year DEM student. Today is Thursday, and it's your busiest day of classes. You have a class from 9AM and then 11:00AM-12:00PM. You only have an hour break between classes to go buy and eat lunch. You don't have a specific restaurant in mind, you just want to get the food within your break and not be late for class. The current time is 10AM.

Scenario 3:

You have a scheduled exam on March 28th, 2019 at 6pm in Davis, room number 430. You will be in the library from 8:00am-3:00pm studying and would like to get food at 5:00pm, add this event onto your calendar and set a reminder.

Updated Screening Questions

Exit questions:

What did you like the best?

What did you like the least?

When using this app did you feel that something was missing?

Did you feel comfortable with using this app?
Do you have any other final comments or questions?

Instructions/Script:

The name of the app you are using is a UTM food planner app, it tells you what the best times are to buy food and from which restaurant, and allows you to schedule it in.

Go through each scenario and try to complete the task being asked, there are 3 scenarios in total.

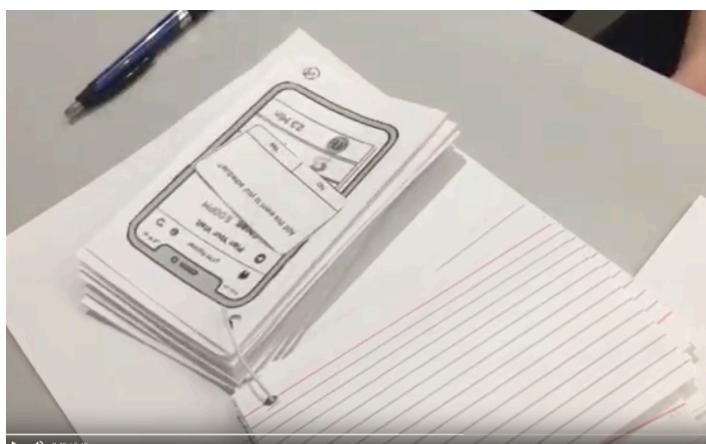
If you decide to use the time option, you may only do hour intervals for this prototype.

For example, 1:00PM or 2:00PM, not 1:30PM or 2:15PM etc.

If possible think aloud. Talk about what problems you are facing, what solutions you are considering, why you are having trouble, and insights or wishes that you have.

Do you have any questions before you start?

Studio Session Set Up



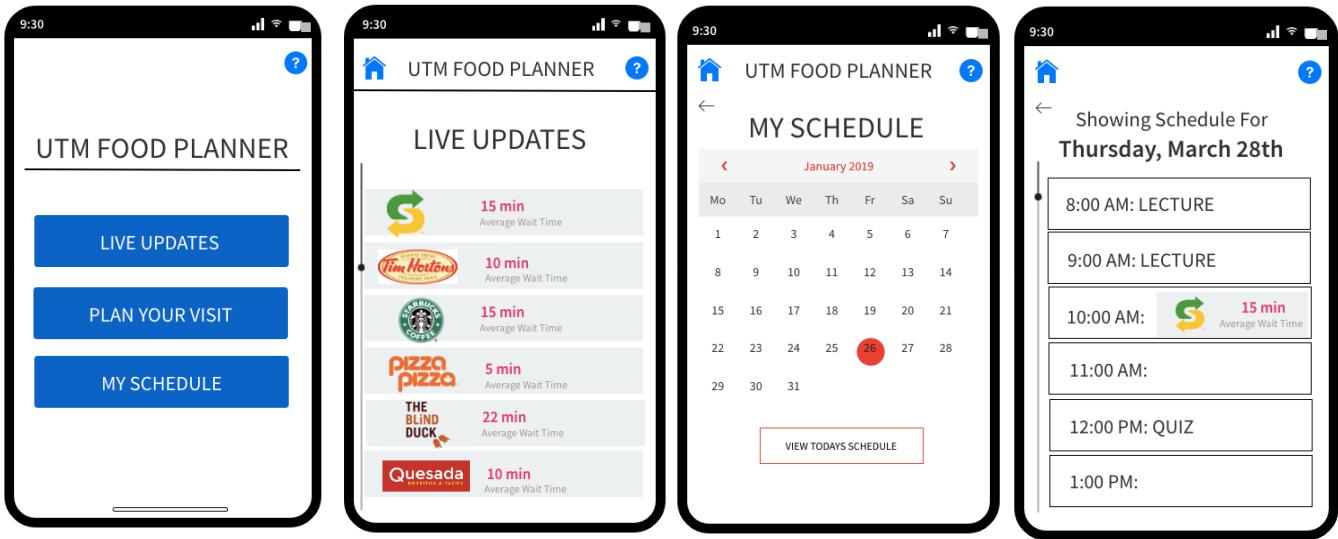
In order to conduct the user evaluation session, we set up our camera on a selfie stick, that was propped onto a water bottle for support. This allowed the camera to be stable and at the perfect angle throughout filming. The screens were printed and glued onto Q cards, which were flipped according to the button clicked on. The scenarios were printed and left on the side for participants to refer to if any confusion to the scenario aroused.

FINAL SCREENS

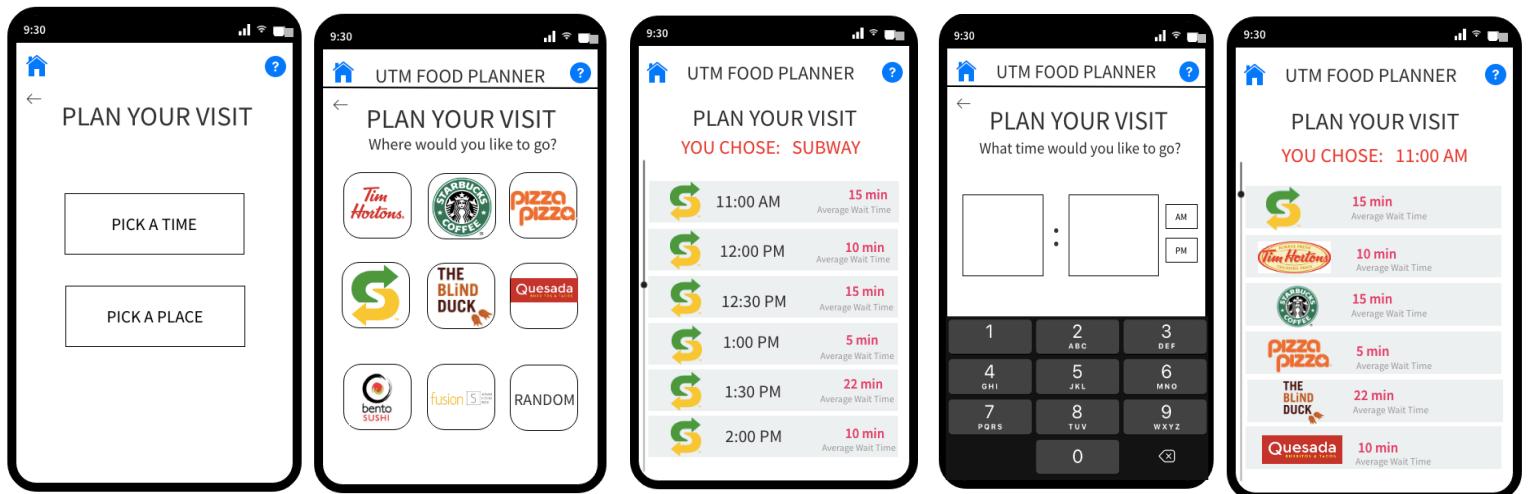


The flow chart above shows the flow in screens that will be presented to participants during the testing session. The hi-fidelity mock-ups display more colour and realism as to what the real app would look like. The screens below are the main screens used for the final testing session, with a total of 46 screens (for various options).

Home, Live Update, and Schedule Screens:



Plan Your Visit and Feedback Screens:



Feedback Screens:



RESULTS OF USABILITY EVALUATION

Using the methodology, and metrics mentioned above we conducted user testing on six users for each scenario. Individual user observations can be found in the appendix.

Synthesis of Observations

Metrics:	Notes:
The path the user took:	User took expected pathways. If taken a different path the expected they still completed the task successfully in a short period of time.
How long it took for user to complete task:	Average completion for each scenario: Scenario 1: 30 seconds Scenario 2: 1 minutes Scenario 3: 30 seconds
Understanding of what the icons means:	Understood meaning of icons and buttons without any hesitation
Number of times user expressed frustration:	No significant frustrations were expressed throughout the testing sessions
What did the user seem to struggle with:	Users did not struggle significantly with any task

Number of features used:	<ul style="list-style-type: none"> • Live update (2) • Schedule (3) • Plan ahead (2)
Level of comfort with app:	Expressed comfort with the flow and connection between the screens. Average comfort rating: 5/5
Was the user successful:	All users completed the task successfully and with ease

Top Patterns Observed

1. All users completed the task under a minute, significantly reduced times from the last testing session
2. Users were happy with the new calendar function
3. Understood when they had completed the task with the right feedback

Comparing the two prototype design results from studio 1-3:

Scenario Number	Studio Session 1	Studio Session 2	Studio Session 3
1	120 sec	60 sec	31 sec
2	180 sec	60 sec	69 sec
3	220 sec	120 sec	30 sec

This chart is comparing the average time that it took our users to complete the scenarios in studio sessions 1-3, you can tell by looking at the average completion time, in the first testing session the users took longer to complete the tasks. Due to the fact that the design of the app needed to be updated as well as the scenarios were not as clear, but in the

second user testing session, the users completed the tasks quicker due to the changes made to the protocol after session 1. Now, compared to the second session, users completed the tasks much quicker in the third studio session. This is due to the changes that we made after completing studio session 2.

Completion Rate:

For our third studio session, we completed 6 user tests, our completion rate for this studio was **100%**. All the users were able to complete their tasks successfully. The users did not have a hard time understand any icons as well as they were able to understand the functions of each feature quickly and navigated through the app with great ease. Our completion rate has stayed consistent throughout the second and third studio sessions.

Test Level Satisfaction:

All the users that were tested were asked if they were frustrated with any process or feature as well as this was a metric that we measured during the tests, we measured this by looking at the user's facial expressions as well as listening to their feedback. The user frustration level was **0%**, none of the users claimed that they were frustrated.

Number of Errors:

Out of the 6 users that were tested one user struggled with navigating through the pick a time feature page, as she was expecting that once she put a time in she will be given a go button to press to complete her request, due to a printing error the "GO" button was not present on the screen, but in the reality the button was actually supposed to be there. So overall approximately **17%** of users faced an error. Compared to our second studio session we see that there has been a decrease in the number of errors from 67% to 17%.

Overall, the participants felt comfortable using the app and were able to navigate throughout the app very efficiently and without hesitation, as they did in the previous testing session. The flow was very smooth and participants enjoyed the small logistical steps that were need to be taken to reach the destination. From the last studio session,

we were able to reduce completion time from minutes to an average of 30 seconds, which shows significant improvement and understanding of the app.

CONCLUSION

The final hi-fidelity studio session has been extremely successful, understood through reduced time to competition, reduced number of errors, zero user frustrations, and a high increase in satisfaction, with good feedback. Our team strongly feels that the hi-fidelity mock-ups presented are not in need of any significant improvements, as all icons, buttons, functionality, and language are understood. The overall design is human-centered and compliant to the heuristic standards. There were suggestions from participants for what additional features can be incorporated into the app including a chat feature, or map, which while do not focus on the main issue, are very interesting suggestions that can be taken into consideration if the project moves forward. While no design can be considered perfect, the design presented allows users to easily navigate through the app and aids in solving the problem of not being able to plan ahead for wait times, and allotting them into a student's personal schedule.

APPENDIX

i. User Observation Analysis

We observed students at the University of Toronto Mississauga in campus food lines. Students spend a lot of time on campus, whether it is to simply attend classes, lectures, spend extra time to study, etc. The task students partake in on an everyday basis is waiting in line to buy food on campus, and we observed that our fellow peers, staff, and faculty spend too much time waiting in these lines to purchase this food. Students come on campus to either attend classes or study, but end up wasting time waiting in line to purchase a food or snack. Students and faculty may get late for their lectures, meetings or busses due to the long lines, this common problem causes great inconvenience to the students, as students lose valuable time in productivity. These struggles are **caused by the problem that students do not incorporate waiting in these lines into their schedules.** Because students don't know how long they will have to wait for their food, they fail to plan for that, which leads to them becoming late for their classes or other priorities. This is demonstrated through different qualitative and quantitative methods of frustration observed in students waiting in line.

The task analysis leads to defining the 5 W's:

Who: The audience observed are University of Toronto (Mississauga) students and faculty as they struggle with this task daily.

What: The task is scheduling in the the waiting time in long lineups when purchasing food on campus, Students don't realize the importance of planning ahead which leads to a lot of frustration and inconvenience.

When: This problem usually arises on weekdays from approximately 10-6pm as this is the time frame that majority of students and faculty are on campus.

Where: University of Toronto Mississauga campus.

Why: This is an important task to discuss because students have planned schedules, and waiting in lines are not accounted for in those schedules, taking away from valuable time.

How: Students are usually purchasing food before, after, or in-between classes which means they don't have a lot of time to spare. When students do get in line to purchase food, it takes them 10 minutes or more just to order, and this can lead to many frustrations as students have other priorities.

Problem

The problem is that students spend a lot of time in the task of buying lunch, as they fail to incorporate waiting in line into their schedules. Instead of getting coursework done, attending meetings, classes, studying, or spending time in a productive way, students spend most of their time walking through campus to buy food and wait in long lines. Not only does this situation create stress and pressure for students because they have so much work to do, it also leads to a lot of unproductivity.

Observations

i. Overall Observation Synthesis

We observed four different campus restaurants during traditional breakfast, lunch, and dinner hours, to observe the lines during the most anticipated hours of the day. These specific times were chosen because, 8:00-9:15 AM is generally breakfast time for more students as they arrive on campus before early morning classes. 12:00-1:15 PM is lunch time when most students have a break for an hour or two. 5:00-6:15PM is a time when either student's days are ending so they grab dinner or they have a small break before their evening classes. 8:00-9:00 PM is the end of the day where students grab dinner at the end of their day, normally after class hours.

Below is a overall synthesis of the observations collected. The average wait time includes waiting in line to order, receive and purchase food. The average abandonment rate depicts the number of people who resorted to leaving the long lines. The qualitative observations were compiled based on how students reacted each specific time, it

displays various frustrations they dealt with in regards to their first priority which is education.

Location	Time Observed	Quantitative Observations	Qualitative Observations
Tim Horton's – Davis Building	8:00 AM to 9:15 AM	<ul style="list-style-type: none"> - 3 different lines, each with 10-15 people - After 10 minutes: 3 people left the line - Average wait time: 15 minutes - Total Abandonment: 6 people 	<ul style="list-style-type: none"> - People mostly ordering coffee and breakfast - Some people reading notes in line - After minutes of waiting, people turn to check their phone (Shows impatience) - People left closer to the end of the hour (start of many classes) - People who received their food after 9:00 grabbed their food and rushed (as classes start 9:10)

	12:00 PM to 1:15 PM	<ul style="list-style-type: none"> - 3 different lines, each with 12-15 people - After 20 minutes of waiting 4 people left the line - Average wait time: 15 minutes - Total Abandonment: 7 people 	<ul style="list-style-type: none"> - People are waiting in line with a group - Some people switched to shorter lines - People who join later tend to leave - People in line reviewing notes - One girl was working on her laptop while in line
	5:00 PM to 6:15 PM	<ul style="list-style-type: none"> - 3 different lines, each with 8-12 people - Average wait time: 10 minutes - Total Abandonment: 3 people 	<ul style="list-style-type: none"> - Line began getting longer at 5:30 (classroom break) - At 6:00, people hurried out with their order or abandoned the line
	8:00 to 9:00 PM	<ul style="list-style-type: none"> - 2 different lines - 5-6 people in each line - Total Abandonment: 1 person - Average Wait Time: 7 minutes 	<ul style="list-style-type: none"> - Final hour, lines were short, but still a significant wait time

Starbucks – Library	8:00 AM to 9:15 AM	<ul style="list-style-type: none"> - 23 people in line initially - After 10 minutes: 3 people at the end of the line left - 4 people entered the shop, but left - Average wait time: 15 minutes in line, 5 to receive order - Total Abandonment: 7 people 	<ul style="list-style-type: none"> - No space to walk around, line formed around tables - More people began leaving near the end of the hour (class time) - People looked uncomfortable in line - One individual spilled drink in the store, and left without reordering - One person left at 9:05 after ordering, but without receiving anything, indicating that they were in a hurry and could not wait any longer - People rushing out with their orders after 9:10
	12:00 PM to 1:15 PM	<ul style="list-style-type: none"> - 25 people in line initially - Average wait time: 20 minutes - After 10 minutes, 2 people left the end - 3 people came in and left - Total Abandonment: 6 people 	<ul style="list-style-type: none"> - People in groups, discussing how long the wait is - A couple decided to go to Tim Hortons instead - People studying in line with notebooks

			<ul style="list-style-type: none"> - These same people rushed out if they received order after 1:05 - Line increased at the end of the hour
	5:00 PM to 6:15 PM	<ul style="list-style-type: none"> - 15 people in line initially - 2 people came in and left - Average wait time: 9 minutes to order, 5 minutes to receive - Total Abandonment: 4 people 	<ul style="list-style-type: none"> - Shorter line at the end of the hour - People reviewing notes, with laptop - After receiving drinks, people tried to find a seat - A lot of commotion
	8:00 to 9:00 PM	<ul style="list-style-type: none"> - 6 people in line initially - No one left the line - Average wait time: 10 minutes 	<ul style="list-style-type: none"> - Closing hours, less people

Quesada – TFC	8:00 AM to 9:15 AM	<ul style="list-style-type: none"> - Closed 	
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	12:00 PM to 1:15 PM	<ul style="list-style-type: none"> - 15 people in line initially - 10 people considered lining up, saw the line and moved on - Average Wait Time: 20 minutes - Total Abandonment: 3 	<ul style="list-style-type: none"> - After waiting in line to order, students need to wait in separate line to pay - 2 people left and grabbed a snack from vending machine or salad bar - People who abandoned the line left after the end of the hour - Line got longer at the end of the hour
	5:00 PM to 6:15 PM	<ul style="list-style-type: none"> - Initially 9 people in line - Took approximately 10-12 minutes to order and receive food - It took approximately 5 minutes to cash out - Average wait time: 13 minutes - Total Abandonment: 2 people 	<ul style="list-style-type: none"> - People coming back from the gym (sweaty with a gym bag) - People constantly checking time on their phone - People who abandoned the line left after 15 minutes of waiting
	8:00 to 9:00 PM	<ul style="list-style-type: none"> - Closed 	

Subway – IB Building	8:00 AM to 9:15AM	- Closed	
	12:00 PM to 1:15 PM	<ul style="list-style-type: none"> - 20 people in line initially - 3 people observed the line and moved on - 6 people left the line after 25 minutes - It took approximately 20 minutes for a customer to stand in line, order, and receive food - It took another 10 minutes for customers at cash - Average wait time: 30 minutes - Total Abandonment: 9 people 	<ul style="list-style-type: none"> - People showing impatience through checking time, tapping foot - People reviewing notes - Turnover rate increased after 15 minutes
	5:00 PM to 6:15 PM	<ul style="list-style-type: none"> - 14 people in line initially - 3 people observed the line and did not join - approximately 15 minutes to place the order - Another 5-10 minute wait purchase at cash - Average wait time: 25 minutes 	<ul style="list-style-type: none"> - People in groups - Returning from gym (gym bag and sweat) - Some people went and got sushi or a vending machine snack instead

		<ul style="list-style-type: none"> - Total Abandonment: 5 people 	
	8:00 to 9:00 PM	<ul style="list-style-type: none"> - 6 people in line initially - Took approximately 10 minutes to order - 5 minutes to purchase food - Average wait time: 15 minutes - Total Abandonment: 0 people 	<ul style="list-style-type: none"> - Closing hours lines were shorter - People with notebooks

ii. Additional Observations:

In addition to observing restaurant spots, we made general observations study areas and classrooms.

Library	<ul style="list-style-type: none"> - Observed students who left their study table, returning half an hour later with coffee and snacks - Once returned, students spent more time distracted before returning to studying - People in group study had one person leave and later returning with
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	drinks for everyone, while the rest of the group stayed productive
Lecture rooms	<ul style="list-style-type: none"> - Students who walked in late to morning and afternoon lectures were observed to have a drink or snack in hand

i. Task Analysis

- *Who:* The audience observed are University of Toronto (Mississauga) students and faculty as they struggle with this task daily.
- *What:* The task is scheduling in the the waiting time in long lineups when purchasing food on campus, Students don't realize the importance of planning ahead which leads to a lot of frustration and inconvenience.
- *When:* This problem usually arises on weekdays from approximately 10-6pm as this is the time frame that majority of students and faculty are on campus.
- *Where:* University of Toronto Mississauga campus.
- *Why:* This is an important task to discuss because students have planned schedules, and waiting in lines are not accounted for in those schedules, taking away from valuable time.
- *How:* Students are usually purchasing food before, after, or in-between classes which means they don't have a lot of time to spare. When students do get in line to purchase food, it takes them 10 minutes or more just to order, and this can lead to many frustrations as students have other priorities.

Synthesis of Observations

We observed four different campus restaurants during traditional breakfast, lunch, and dinner hours, to observe the lines during the most anticipated hours of the day. These specific times were chosen because, 8:00-9:15 AM is generally breakfast time for more students as they arrive on campus before early morning classes. 12:00-1:15 PM is lunch time when most students have a break for an hour or two. 5:00-6:15PM is a time when either student's days are ending so they grab dinner or they have a small break before their evening classes. 8:00-9:00 PM is the end of the day where students grab dinner at the end of their day, normally after class hours.

Below is a overall synthesis of the observations collected. The average wait time includes waiting in line to order, receive and purchase food. The average abandonment rate depicts the number of people who resorted to leaving the long lines. The qualitative observations were compiled based on how students reacted each specific time, it displays various frustrations they dealt with in regards to their first priority which is education.

Time Observed:	Quantitative Observations:	Qualitative Observations:
8:00 AM to 9:15 AM	<ul style="list-style-type: none"> - Average wait time: 17.5 minutes - Average Abandonment rate: ~7 people 	<ul style="list-style-type: none"> - Rushing out after receiving order at the end of the hour - At this time, students seemed to be more worried about arriving to class late - Constantly checking time on phone

		<ul style="list-style-type: none"> - People studying with their notebooks - Abandonment rate increased at the end of the hour - Many people observed the line, but decided not to join
12:00 PM to 1:15 PM	<ul style="list-style-type: none"> - Average wait time: 21.25 minutes - Average Abandonment rate: ~6 people 	<ul style="list-style-type: none"> - Rushing out after receiving order - Constantly checking time on phone - More students in groups who are talking about how long the line is and how long they have been waiting - People studying with their notebooks and tablets - Many people observed the line, but decided not to join - People who receiving order the past 1:00 rushed

		out, indicating going to class
5:00 PM to 6:15 PM	<ul style="list-style-type: none"> - Average wait time: 15.5 minutes - Average abandonment rate: ~5 people 	<ul style="list-style-type: none"> - Rushing out after receiving order after the hour - Constantly checking time on phone - Line grew 30 minutes in, indicating a break given in class
8:00 to 9:00 PM	<ul style="list-style-type: none"> - Average wait time: 10.7 minutes - Average abandonment rate: 1 person 	<ul style="list-style-type: none"> - Students are not as worried about time - Lines are shorter - Lower abandonment rate

Top Patterns Observed:

- Many people displayed frustration through abandoning the line, which increased at the end of the hour when most classes begin.
- At the end of the hour, students would rush out with their order, indicating they had a class or other meeting
- Many people were observed to have notebooks signifying their priorities of studying
- Many students were constantly checking the time on their phones, revealing that they are in a rush
- Most students spent over 15 minutes purchasing food in mornings and afternoon.

Observed Pain Points

From these observations we were able to synthesize a key user pain. This user pain leads to one emotion, which is frustration.

The user pain is being unable to schedule and plan when to buy food. Students are unable to predict from where and at which time it would be best to purchase food during their busy schedules. This can lead to frustration, because students are always on a time crunch when on campus and have lists of things to do.

Some more frustrations that connect with the user pain are leaving long lines. What would be considered to be a long line is when a customer has to wait 10 minutes or more just to place their order. Students have various prior commitments and if purchasing food takes too long they are forced to leave lines, because they have to be somewhere to be at that specific time. This was indicated through the large number of people abandoning lines after waiting a significant amount of time.

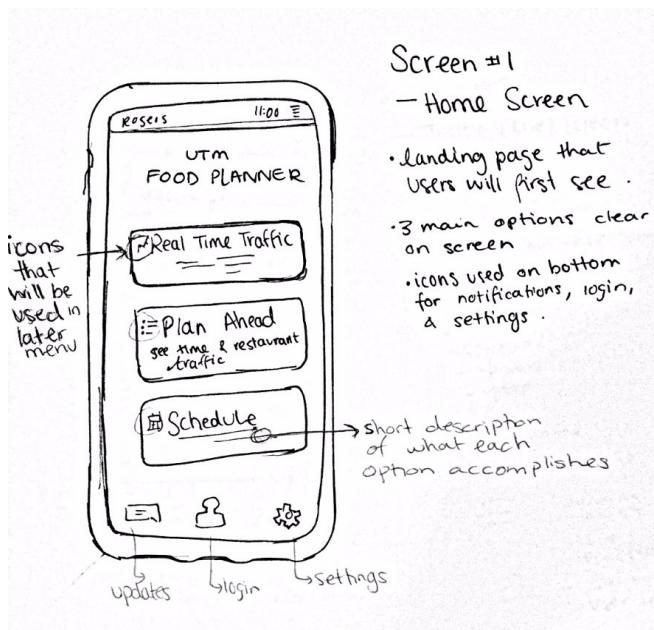
Another frustration connected with the user pain is arriving to class/meetings late. Students tend to buy food during small breaks that they have in between classes. Since time is limited, and it takes a long duration just to order food and sit down and eat, it leads to arriving to lectures late. This can be very frustrating for students as they sometimes miss out on vital information. It forces them to choose between their wellbeing and education. This was observed through students rushing out with their orders 10 minutes past the hour, or even abandoning the line, indicating that they were late for something.

ii. Ideation from Observation Analysis

Observation that is a user pain & frustration:	How App will solve user pain:
Being unable to schedule and plan the best times to purchase food	Solution will let user know how long they will have to wait at each restaurant, so they can go to the one

	that will have the shortest lines at that current time
Leaving long lines due to frustration	If user has a desired restaurant to purchase from, they can use the app to determine when the best time to visit will be
Arriving to class/meetings late or having to leave lines due to prior commitments	The app will suggest best restaurant to visit at the time that they are available so that they do not attend class/meetings late

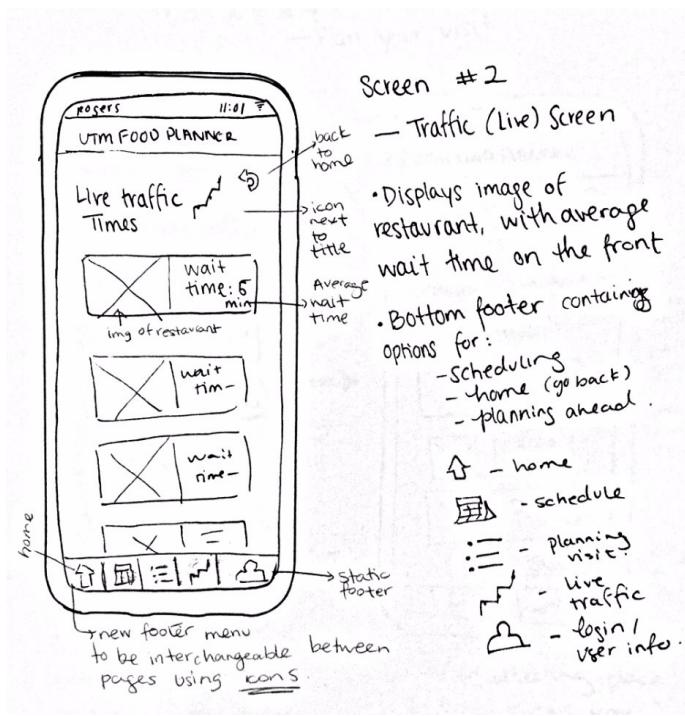
Solutions:



Real Time Traffic

During all our observations we concluded that students, staff and faculties all spend a lot of time in lines waiting for their food and as a result the loose valuable time that they can use to study or to finish important work. Another crucial service that our app offers is that it offers a real time traffic update, advising the user when the lines are short for

the food places near them. This feature will allow users to quickly check how the lines are at each restaurant. The app will allow users to receive live updates at all times and show which restaurant is available at that current time.



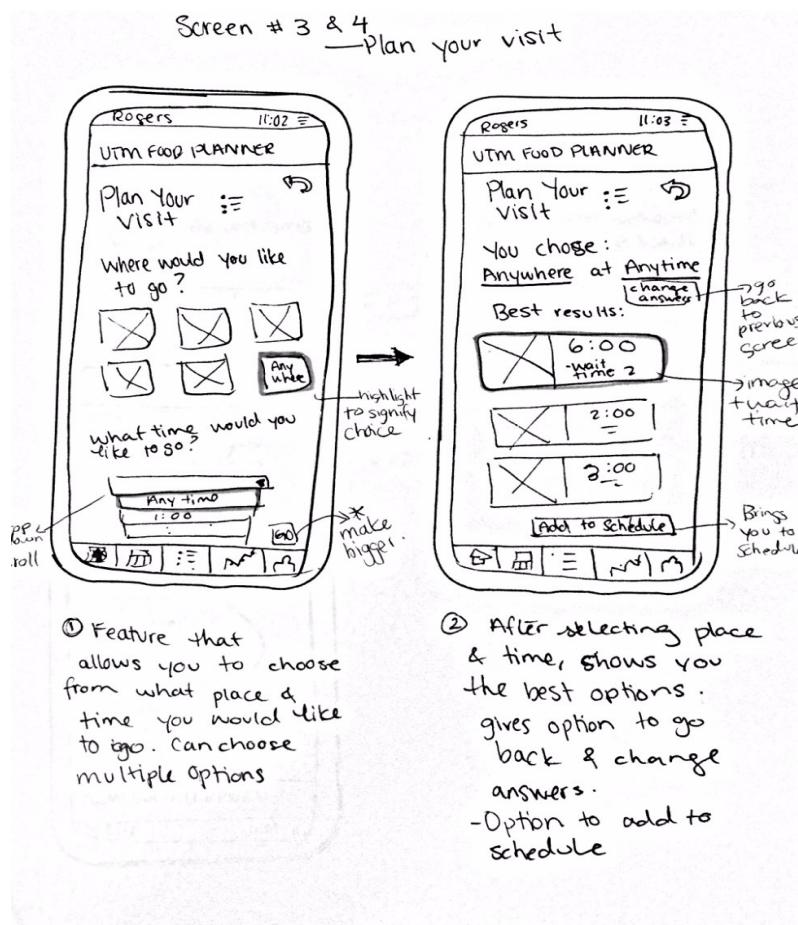
Pick a Time

One option will be to allow the user to select a time that they plan to buy food. This can be based on when they may have break between classes or when they feel they will be hungry. The app will then suggest several locations where they can go eat, and how long it may approximately take at each restaurant. This way users will know which place is the best place to buy from if they have a lot of things to do during their break, like having group meetings, completing assignments, or studying.

Pick a Restaurant:

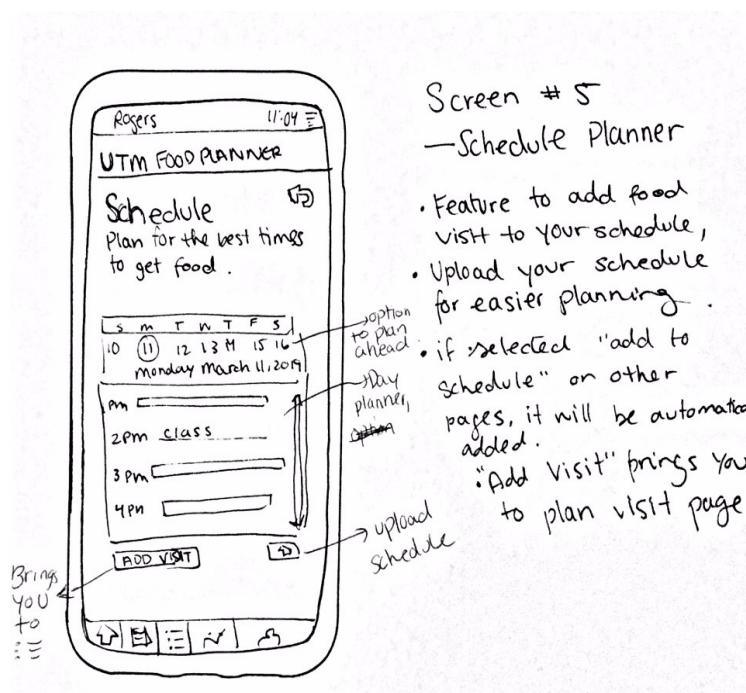
Another option is to pick the restaurant the user feels like eating from that day. Once the user has picked what they want to eat, the app will tell them the best predicted times to

buy food from them that day. The user can then pick whichever time works best for them.



Food Plan Scheduler:

Another features that this app will offer the user is the ability to create their own food plan schedule. User will be able to organize out their meal plan for the week based on what times they are available and where they want to eat. The app will then provide them with the best restaurant to each from every day or what time is the best to go.



The user pain point here is that the UTM community ends up spending a lot of time simply standing in lines during their break, because they are unable to schedule when to get food. The app addresses the pain by allowing users to plan out and predict what would be the best time to purchase food so that they will not be stuck wasting times in long lines and instead be more productive.

iii. Usability Principles

The heuristic principles that are app followed to ensure that our users have a good user experience with usability are the following:

- 1. Visibility of system status:** It's necessary that the system continuously keeps the user informed about what is going on. Its crucial to let the user know that their request is being processed or that their request didn't go through because of an error, or else the user starts to panic and causes them to become frustrated. How we will ensure that our users are informed about what's going on is when they complete a request for example, when they want to find restaurants near them

that are not busy at the time they plan on going to get food, the screen will go blank and a loading screen icon will appear and advise the user that their request is being processed.

Another example is when the user will click a button to complete a task the color of the button will be changed, it will become more dark to assure the user that their action has been recorded. A good UX must inform their users with an appropriate feedback on their gestures or actions.

2. **User control and freedom:** A user must have the ability to edit and undo any taken step, as a user experience designer we need to think of possible situations that our users might face where they would need to be able to undo their action. Users need to feel like your app is assisting them and not punishing them. We are going to assure that our users are able to redo any action by having a redo icon on the screens where the user is expected to complete a task. For example on the screen where the user is expected to enter their break times, if they make a mistake they can simply undo the entire screen instead of backspacing and completing the form again.

Another example is if the user uploaded a pdf of their class schedule and by mistake they click the delete icon, the system will send a confirmation notification, advising them that they are about to the delete a document and weather they would like to keep the document or delete it.

3. **Consistency and standards:** Having consistency through the steps and processes that users have to follow to complete a certain tasks, allows the user to navigate through the app with great ease. If the systems and button are all different colors and shapes then the user will get confused and will take time understanding the functions of each button. This will as a result make your user lose interest in the app. We would maintain our consistency by placing our brand logo in the left corner of all the screens, as well as our settings icon will be the a

standard icon that Iphones use, this is so our users can relate better and understanding the purpose of this icon.

4. **Error prevention:** Any good user experience product follows certain steps that prevents errors prior to the errors taking place, for example in our app we will only allow users to upload their school schedules that are in a pdf, txt, csv, png and jpg format. Once when the user clicks the download icon on the screen the system will take them to an uploading screen, and advising them prior to they uploading a document that they can only upload a pdf, txt, csv, png and jpg document. This will prevent the user uploading a different file type format that the system will not accept the paper and they would have to redo the uploading process.

iv. First Lo-Fi Evaluation Session (A6)

Observation Metric Template:

Metrics	Notes
The path the user took:	This shows us the different perspectives the users have and what approaches they take. It brings to light some things we may not have considered.
Number of times user clicked on help:	Show if app is confusing or hard to understand for user
How long it took for user to complete task:	Allows us to recognize whether the app is simple enough for the user. If the whole process takes too long, the user is likely to not use it.

Understanding of what the icons means:	We used quite a few icons throughout the app and want to see if the user is able to comprehend the meaning of each icon.
Number of times user expressed frustration:	Allows us to interpret is the prototype is too complex or difficult to use.
What did the user seem to struggle with:	This will let us recognize the snags in the prototype and see what are some errors that we need to fix for the next round.
Number of features used:	Will help us in recognizing whether some features are unnecessary or not needed to when solving the pain point.
Level of comfort with app:	Showcases whether the user feels intimidated by the app or takes longer to adapt to it.
Was the user successful:	Allows us to interpret whether the app is too difficult for users or the pathways are not clearly enough laid out.

PROTOCOL FOR FIRST LO-FI EVALUATION SESSION

Initial questions:

Just by looking at the app, what information do you think you can extract?

Who do you think the app is designed for?

Exit questions:

What is your overall impression of this app?

What did you like the best?

What did you like the least?

If you were the app developer, what would be the first thing you fixed?

Is there anything that you feel is missing?

Do you have any other final comments or questions?

Instructions/Script:

The name of the app you are using is a UTM food planner app, it tells you what the best times are to buy food and from which restaurant, and allows you to schedule it in.

Go through each scenario and try to complete the task being asked, there are 3 scenarios in total.

If you decide to use the time option, you may only do hour intervals for this prototype.

For example, 1:00PM or 2:00PM, not 1:30PM or 2:15PM etc.

You will be asked a few questions before and after you complete the scenarios.

If possible think aloud. Talk about what problems you are facing, what solutions you are considering, why you are having trouble, and insights or wishes that you have.

We are unable to provide any help so do your best.

If you feel like it is getting too much or too difficult, It is okay for you to quit at any time.

Just a reminder that we are testing the system not the you the participant, and we are only interested in your thoughts about the system.

Do you have any questions before you start?

Scenario 1:

You are a 3rd year Life Science student and have a final test for your biology course at 5PM. You plan to arrive on campus at 12PM and spend the day studying. Since you will be spending quite some time on campus, you also decide you will buy food from Pizza Pizza in the Davis building. Your test takes place in the New North building. Plan out what time would be the best for you to buy your lunch before your test.

Scenario 2:

You are a 2nd year DEM student. Today is Tuesday, and it's your most busiest day of classes. You have a class from 9-11AM and then 12-1PM. You only have an hour break

between classes to go buy and eat lunch. You don't have a specific restaurant in mind, you just want to get the food within your break and not be late for class. The current time is 11AM.

Scenario 3:

You have a scheduled exam on March 20th, 2019 at 6pm in Davis, room number 430.

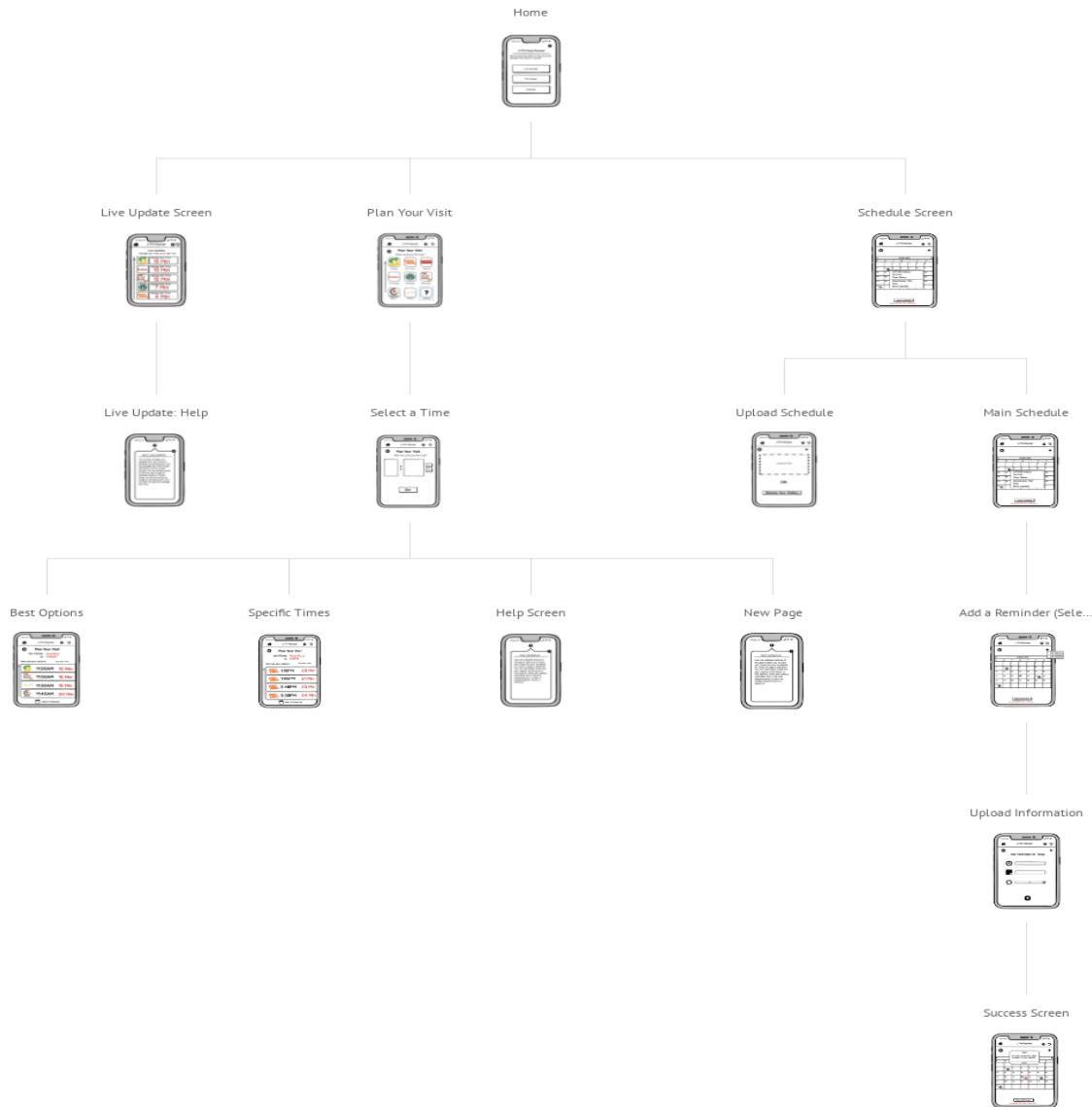
You will be in the library from 8:00am-3:00pm studying and would like to get food at 5:00pm, add this event onto your calendar and set a reminder.

Screen Images

The following flow chart display the main screens that were presented in the lo-fi evaluation session, designed using Balsamiq. With a total 28 screens for the session based off the predicted selections that will be made in the scenarios, the screens will be printed out and pasted on a Q-card flip book for ease in testing. Based off the heuristic evaluation session, the design includes:

- Each page had a bottom footer filled with features like Home, Schedule, Live planner etc. which we decided to remove because it was not a necessary feature and would confuse the user

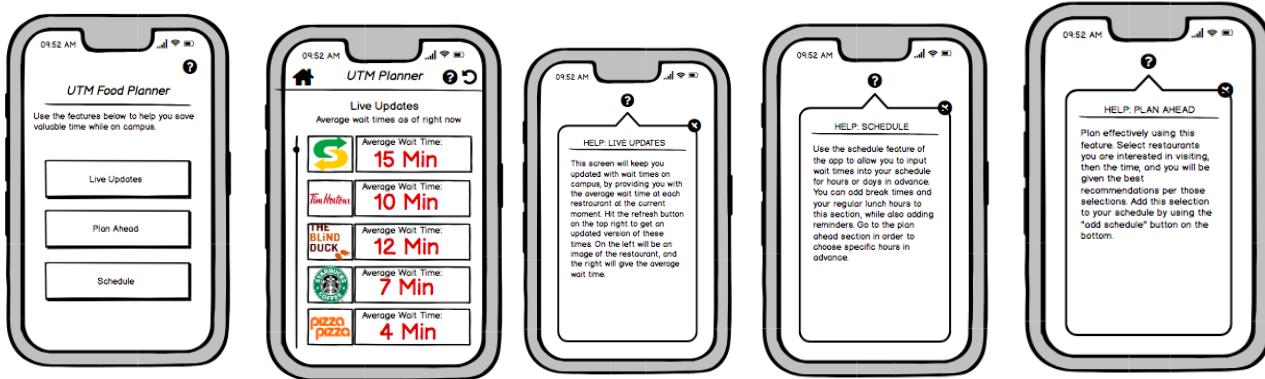
- The Plan a Visit feature was initially supposed to be all on one page. So the user would be able to pick a place to eat and a time on the same screen before moving onto the next. We decided to split that screen into 2 to make it easier and less complicated for the user. So the user first picks a place, then it takes the user to the next screen where they can input their time and press “go” to get the



results.

- For the “Schedule Planner” screen we kept most of the same features but changed up the layout so that it’s easier to use

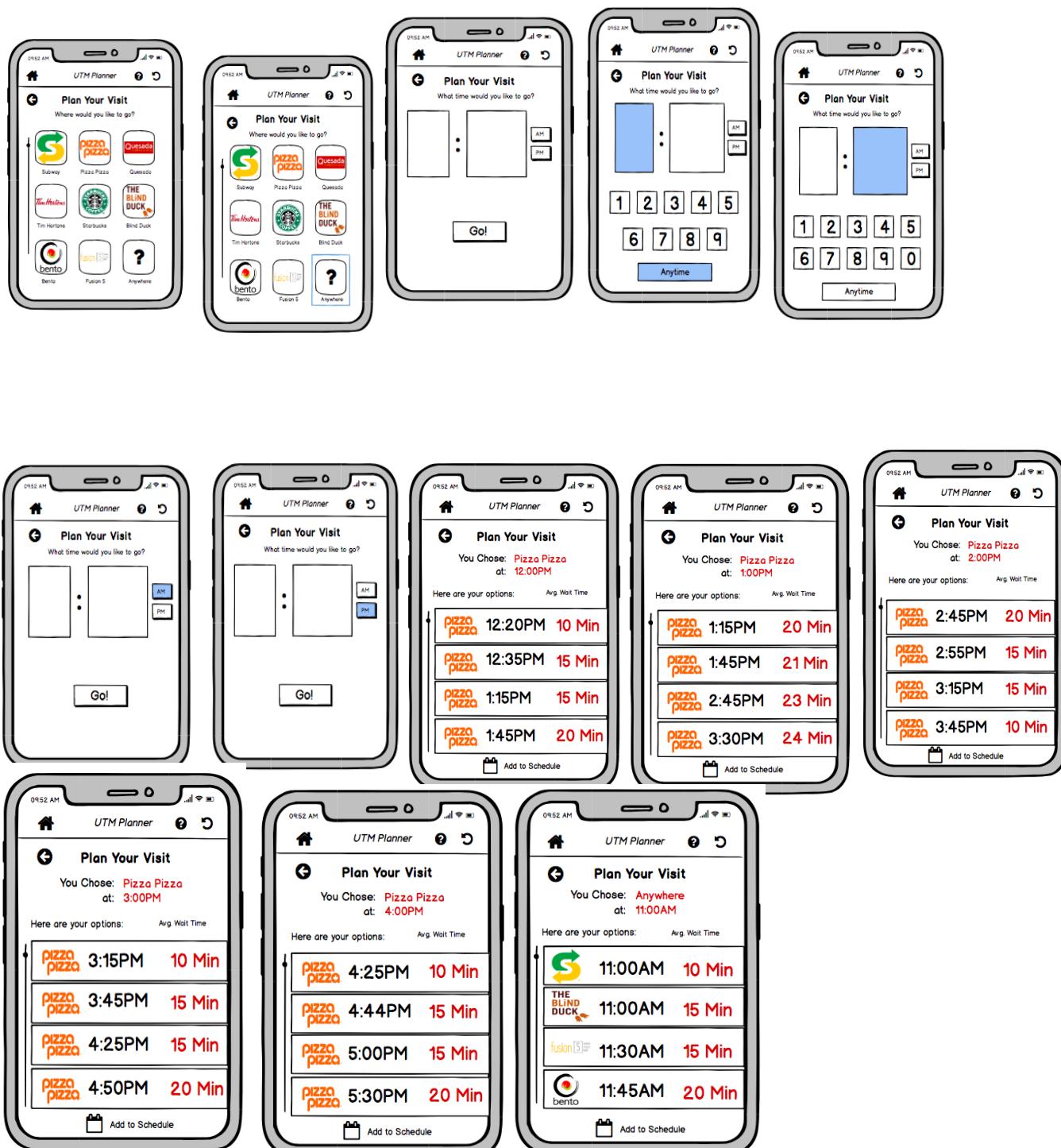
Home, Live update, and Help Screens



Schedule Feature Screens



Plan Ahead Screens



OVERALL FINDINGS

Using the protocol, methodology, and metrics mentioned above, we conducted user testing on eight users for each scenario. Individual user observations can be found in the appendix.

Synthesis of Observations

Metrics:	Notes:
The path the user took:	Based off of our path flow, users took different paths in each scenario. Showed confusion when entering the schedule pathway, and finding their way back home to enter this path. Confusion in path is what elongated the process
Number of times user clicked on help:	Users did not click on the help button despite being stuck on a page. Help button may not have been clear, or in the case of prototype, did not feel it was functional.
How long it took for user to complete task:	Average completion for each scenario: Scenario 1: 2 minutes Scenario 2: 1.5 minutes Scenario 3: 4.5 minutes
Understanding of what the icons means:	Users did not always understand the wording of "Schedule" and "Plan Ahead." Took time to find "add to schedule" or "go" buttons.
Number of times user expressed frustration:	Users expressed frustration mainly to the schedule function, what to do when reaching an option screen, as well as were unsure when

	they had successfully completed the task. Confusion between back and refresh screens.
What did the user seem to struggle with:	Did not receive enough feedback to understand when they had completed a task and what step of the process they were on. Confusion with buttons
Number of features used:	<ul style="list-style-type: none"> • Live update (2) • Schedule (3) • Plan ahead (5)
Level of comfort with app:	Expressed comfort with the flow and connection between the screens. Average comfort rating: 4/5
Was the user successful:	All users completed the task successfully

Additional Observations/User Suggestions:

- The live updates section can be color coded
- The calendar should be interactive, when the user clicks on the calendar they should be able to add the event on the same screen
- Link between schedule and plan ahead screen is not clear
- Add an approximation time section, let users know how long it will take for them to reach their destination
- Reminder should be given and not an option
- Add a favorites section to avoid going through all places
- More feedback

Top Patterns Observed

The main issues that were observed:

1. Not enough feedback
 - Users were not clear as to when they had completed a task, added an event, or selected an option
 - By providing more feedback on these aspects, it will clear any confusion they have on the options they have selected
2. Scheduling feature
 - No clear link between the schedule option and how that helps with planning your meal
 - Too many options on the screen. Ie. No one needed to “upload schedule” or “add a reminder” – both of these should be a given
3. Confusion of icons
 - Users clicked on different options than what was expected. Home was clear, but showed confusion on refresh and return buttons, as well as other button options

JUSTIFICATIONS OF CHANGES

Changes to be made in protocol:

Updated Scenarios to match new screens:

Scenario 1:

You are a 3rd year Life Science student and have a final test for your biology course at 5PM.

It is 9AM and you are already on campus. Since you will be spending quite some time on campus,

you also decide that you will buy lunch from Subway. Plan out what would be the best time for you

to buy your lunch before your test and add it to your schedule.

Scenario 2:

You are a 2nd year DEM student. Today is Thursday, and it's your most busiest day of classes. You have a class from 9-11AM and then 12-1PM. You only have an hour break between classes to go buy and eat lunch. You don't have a specific restaurant in mind, you just want to get the food within your break and not be late for class. The current time is 11AM.

Scenario 3:

You have a scheduled exam on March 28th, 2019 at 6pm in Davis, room number 430.

You will be in the library from 8:00am-3:00pm studying and would like to get food at 5:00pm, add this event onto your calendar and set a reminder.

Updated Exit questions:

When using this app did you feel that something was missing?

Did you feel comfortable with using this app?

Changes in user metrics

Removals:

- Number of times users clicked on help – users did not feel the need to click on help and so justified as an invaluable metric

Additions:

- Able to understand distinction between features- Many users in the last observation found it difficult to understand the distinction. Now that changes have been made, we want to see if users find it distinguishable.

Changes to be made in Screens:

- Many users were unable to differentiate the difference of "Plan Ahead" and "Schedule" which is why we need to change the names so they are different enough from each other
- Schedule needs to be clear in terms of function. Many people displayed confusion through delayed selection times and by being surprised by next screen
- We need to include a daily schedule planner

- Final option screen in plan your visit needs to be more user friendly. People were clicking on options that were not buttons, and confused about what to do next. Based on that we added an alert feature where you can add the time to your schedule.
- We observed that users were confused from the results in the “Plan your visit” feature. We realized there technically would not be much of a difference if you were to pick a time AND a place vs. Live updates. Which is why we decided to split the two, and make it into two options where you can pick a time OR pick a place.

Individual User Observations

User 1:

Metrics:	Notes:
The path the user took:	Live Update- Place- Time
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 2 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> • He had difficulty understanding the difference between plan ahead and schedule
Number of features used:	<ul style="list-style-type: none"> • Live update

Level of comfort with app:	4
Was the user successful:	2 - Completed task easily

Additional Notes:

- The live updates section can be color coded
- The calendar should be interactive, when the user clicks on the calendar they should be able to add the event on the same screen
- Add an approximation time section, let users know how long it will take for them to reach their destination

User 2:

Metrics:	Notes:
The path the user took:	Live Update- Place- Time
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 2 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> • He had difficulty understanding the difference between plan ahead and schedule
Number of features used:	<ul style="list-style-type: none"> • Live update
Level of comfort with app:	4

Was the user successful:	2 - Completed task easily
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Additional Notes:

- User advised that there should be a section where the user can see the food menu and decide what they would like to order

User 3:

Metrics:	Notes:
The path the user took:	Schedule- Add new event- Home- Plan Ahead
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 2 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> • The user was struggling with the adding new event part in the schedule section
Number of features used:	<ul style="list-style-type: none"> • Plan Ahead • Schedule
Level of comfort with app:	2
Was the user successful:	2 - Completed task easily

Additional Notes:

- User suggested that plan ahead and schedule are the same thing and should change the names given to the sections to represent that both section perform different functions
- User also suggested that we should have an embedded function into the app where the user is able to import their schedule from their acorn and automatically all the quiz and assignment dates will be added onto the calendar

User 4:

Metrics:	Notes:
The path the user took:	Plan ahead- Pizza Pizza- Put in your time- Choose a time
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 3 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> • The user was accepting a confirmation page after completing the plan your day function • Add to schedule button is to small in size and should be located at the top so it can be seen easier
Number of features used:	<ul style="list-style-type: none"> • Plan Ahead
Level of comfort with app:	4
Was the user successful:	2 - Completed task easily

Additional Notes:

- The plan your visit function should have live updates, being given to the user, for example the user can embed a time that they would like to go get food and the app suggests a variety of food places near them that they can go to that are not busy
- There should be more feedback given to the user, such as confirmation pages, instructions and labels

User 5:

Metrics:	Notes:
The path the user took:	Schedule- Add new event- Back- Add reminder- Add- Back
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none">• 4 minutes
Understanding of what the icons means:	<ul style="list-style-type: none">• The user had a difficult time understanding the note icon as well as the classification section in the schedule segment
Number of times user expressed frustration:	1
What did the user seem to struggle with:	<ul style="list-style-type: none">• The user was struggling with the adding a new event into the calendar as the user did not understand what to enter in the notes and classification sections
Number of features used:	<ul style="list-style-type: none">• Schedule
Level of comfort with app:	4
Was the user successful:	2 - Completed task easily

Additional Notes:

- User suggested that there should be a add an event on the schedule icon available on all portals, this will connect the plan ahead page with the schedule page
- Have an embedded map that will advise user on how far their desired food place is and how long their travel time will be
- The reminder option should be available once the user adds a new event instead of a separate portal

User 6:

Metrics:	Notes:
The path the user took:	Schedule- Upload doc- Home- Plan ahead- Add time- Home
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 5 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	3
What did the user seem to struggle with:	<ul style="list-style-type: none"> • The user had a difficult time understanding the schedule function of the app, they were confused in regards to what tasks the schedule function performs
Number of features used:	<ul style="list-style-type: none"> • Plan Ahead • Schedule
Level of comfort with app:	2
Was the user successful:	2 - Completed task easily

Additional Notes:

- Suggested that the names of the functions should resemble their tasks, suggested to rename Plan ahead and Schedule

User 7:

Metrics:	Notes:
The path the user took:	Plan ahead- Pizza Pizaa- Put in your time- Choose a time
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none">• 2 minutes
Understanding of what the icons means:	N/A
Number of times user expressed frustration:	1
What did the user seem to struggle with:	<ul style="list-style-type: none">• Had difficulty understanding some wording used• The anytime on the time portal didn't make sense to the user
Number of features used:	<ul style="list-style-type: none">• Plan Ahead
Level of comfort with app:	5
Was the user successful:	2 - Completed task easily

Additional Notes:

- The user advised that we should change the wording for plan ahead and schedule as it seems that both functions complete the same tasks

User 8:

Metrics:	Notes:
The path the user took:	Plan ahead- Pizza Pizza- Time- Place the visit
Number of times user clicked on help:	0
How long it took for user to complete task:	<ul style="list-style-type: none"> • 2 minutes
Understanding of what the icons means:	<ul style="list-style-type: none"> • The “add schedule” icon was too small in size
Number of times user expressed frustration:	1
What did the user seem to struggle with:	<ul style="list-style-type: none"> • Feedback confirming that her visit has been added to the schedule
Number of features used:	<ul style="list-style-type: none"> • Plan ahead
Level of comfort with app:	4
Was the user successful:	2 - Completed task easily

Additional Notes:

- Add push notifications that remind users of their events
- Add favorites section

v. Med-Fi Evaluation Testing Session 2 (A7)

Updated Scenarios: There were only minor changes made to the scenarios to match the logistics in the prototypes.

Scenario 1:

You are a 3rd year Life Science student and have a final test for your biology course at 5PM.

It is 9AM and you are already on campus. Since you will be spending quite some time on campus,

you also decide that you will buy lunch from Subway. Plan out what would be the best time for you

to buy your lunch before your test and add it to your schedule.

Scenario 2:

You are a 2nd year DEM student. Today is Thursday, and it's your most busiest day of classes. You have a class from 9AM and then 11:00AM-12:00PM. You only have an hour break between classes to go buy and eat lunch. You don't have a specific restaurant in mind, you just want to get the food within your break and not be late for class. The current time is 10AM.

Scenario 3:

You have a scheduled exam on March 28th, 2019 at 6pm in Davis, room number 430.

You will be in the library from 8:00am-3:00pm studying and would like to get food at 5:00pm, add this event onto your calendar and set a reminder.

Updated Screening Questions**Exit questions:**

What did you like the best?

What did you like the least?

When using this app did you feel that something was missing?

Did you feel comfortable with using this app?

Do you have any other final comments or questions?

Instructions/Script:

The name of the app you are using is a UTM food planner app, it tells you what the best times are to buy food and from which restaurant, and allows you to schedule it in.

Go through each scenario and try to complete the task being asked, there are 3 scenarios in total.

If you decide to use the time option, you may only do hour intervals for this prototype.

For example, 1:00PM or 2:00PM, not 1:30PM or 2:15PM etc.

You will be asked a few questions before and after you complete the scenarios.

If possible think aloud. Talk about what problems you are facing, what solutions you are considering, why you are having trouble, and insights or wishes that you have.

We are unable to provide any help so do your best.

If you feel like it is getting too much or too difficult, It is okay for you to quit at any time.

Just a reminder that we are testing the system not the you the participant, and we are only interested in your thoughts about the system.

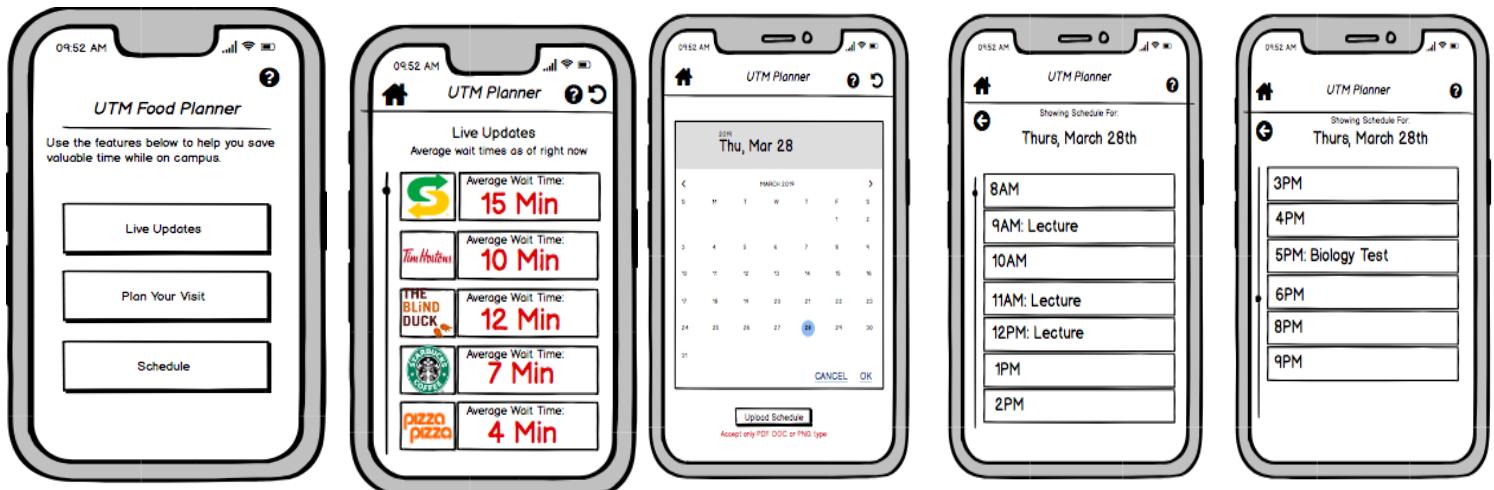
Do you have any questions before you start?

Screens for Second Lo-fi Evaluation Session

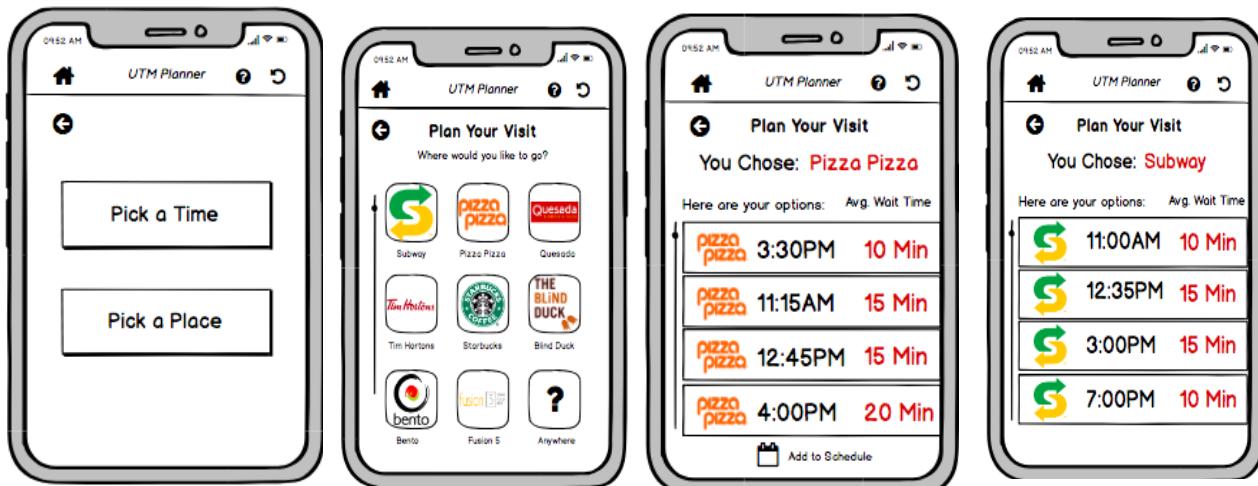
Based off of the first evaluation session analysis, changes were made after assessing the user testing sessions and comments. The screens below are what were used for the second user testing session.

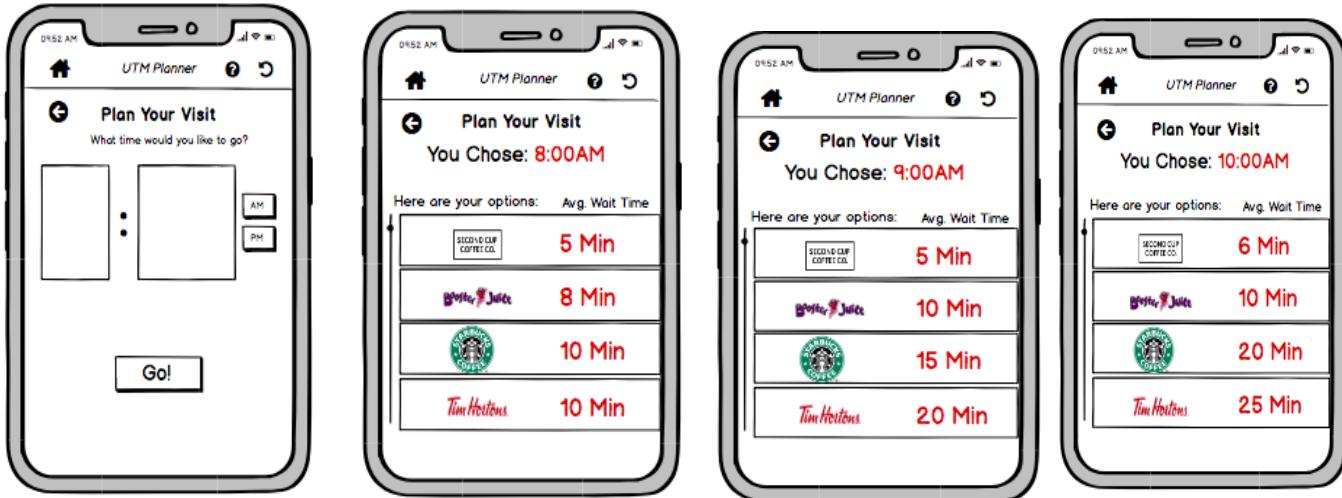
The user testing was conducted by placing the screens on a q-card flip book, totaling to 46 screens (refer to appendix).

Home, Live Update, and Schedule Screens



Plan Your Visit Screens





RESULTS OF

USBABILITY EVALUATION

Using the methodology, and metrics mentioned above we conducted user testing on seven users for each scenario. Individual user observations can be found in the appendix.

Synthesis of Observations

Metrics:	Notes:
The path the user took:	User took expected pathways on average. Interesting paths taken: When given time they still opt for “choose your place” option on menu
How long it took for user to complete task:	Average completion for each scenario: Scenario 1: 1 minutes Scenario 2: 1.1 minutes

	Scenario 3: 1.5 minutes
Understanding of what the icons means:	<ul style="list-style-type: none"> - Confusion with refresh and return icons - Did not click calendar like they did the first time
Number of times user expressed frustration:	Expressed frustration with schedule function. Thought that they had reached a static calendar page and most did not end up using it. No clear feedback on this page or direction.
What did the user seem to struggle with:	Schedule function and how to add to the schedule
Number of features used:	<ul style="list-style-type: none"> ● Live update (2) ● Schedule (1) ● Plan ahead (5)
Level of comfort with app:	Expressed comfort with the flow and connection between the screens. Average comfort rating: 4/5
Was the user successful:	All users completed the task successfully

Top Patterns Observed

4. Time to complete task significantly reduced, implying that changes made to prototype have been effective
5. Users did not click on the calendar function as desired, they did not feel like there was more to this calendar and thus a static page
6. Happy with the clear feedback being received
7. Confusion with the language of “schedule” – many asked who’s schedule it was.

The users were generally quite comfortable with using the app and did not express much frustration. Many users mentioned the same problems/issues/suggestions that we plan to implement for the next prototype. In conclusion, the second studio session does not require as drastic and as many changes as the first studio session did which tells us that we are headed on the right track in perfecting the prototype design.

Number of errors:

Based on the user finding there were 6 users that tested our app out of which 4 users made errors, so about 67% of the users. They were mostly confused between the refresh and back button features.

Completion Rate:

The completion rate for this specific user testing session is 100%, out of the 6 individuals that tested our app all the users were able to complete the tasks successfully. In certain situations, the user did click on the wrong button or choose the wrong feature to complete the required task but eventually navigated through the app on their own and completed the required task.

Test Level Satisfaction:

After every user testing session the user was asked if they were satisfied with the app, a number of the individuals suggested a few key areas that we could work on, in regards to the wording but they were all satisfied, and 0% individuals reported any sign of frustration, which hints to the idea that the layout and navigation of the app is effective.

Comparing the two prototype design results from studio 1 and studio 2:

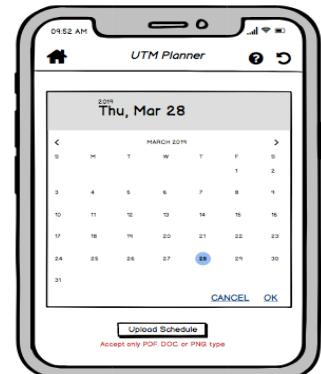
Scenario Number	Studio Session 1	Studio Session 2
1	120 sec	60 sec

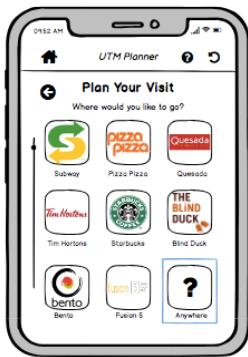
2	180 sec	60 sec
3	220 sec	120 sec

This chart is comparing the average time that it took our users to complete the scenarios in studio session 1 and studio session 2, you can tell by looking at the average completion time, in the first testing session the users took longer to complete the tasks. Due to the fact that the design of the app needed to be updated as well as the scenarios were not as clear, but in the second user testing session, the users completed the tasks quicker due to the changes made to the protocol after session 1.

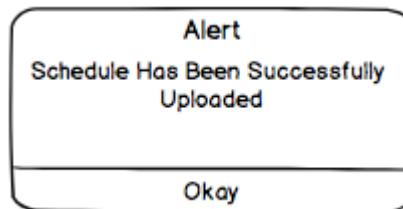
ANALYSIS OF PROTOTYPE

- The wording of the option “Schedule” was difficult to understand for many. They were unsure who’s schedule the app was discussing. This is why we will rename it to “My Schedule”
- The calendar to many looked un-clickable. They did not click on the date they wanted like we had intended them too, which is why we need to include a better calendar, with proper squares that invites the user to click on it.
- Some user’s wanted more feedback when the food plan was added to the schedule. To solve this we will include an alert box that verifies that the lunch time has been added. Also remove refresh button as it remained unused and only mistaken with return.





- The wording for “Anywhere” and “Anytime” should be changed to “Random”, so that it is easier for users to understand the language.



Individual User Analysis from Session 2

Additional Observations/User Suggestions:

- The live updates section can be color coded
- The calendar should be interactive, when the user clicks on the calendar they should be able to add the event on the same screen
- Link between schedule and plan ahead screen is not clear
- Add an approximation time section, let users know how long it will take for them to reach their destination
- Reminder should be given and not an option
- Add a favorites section to avoid going through all places
- More feedback

Top Patterns Observed

The main issues that were observed:

4. Not enough feedback
 - Users were not clear as to when they had completed a task, added an event, or selected an option

- By providing more feedback on these aspects, it will clear any confusion they have on the options they have selected

5. Scheduling feature

- No clear link between the schedule option and how that helps with planning your meal
- Too many options on the screen. Ie. No one needed to “upload schedule” or “add a reminder” – both of these should be a given

6. Confusion of icons

- Users clicked on different options than what was expected. Home was clear, but showed confusion on refresh and return buttons, as well as other button options

vi. Changes to be made in Screens from Lo-Fi Evaluation Session 1

- Many users were unable to differentiate the difference of “Plan Ahead” and “Schedule” which is why we need to change the names so they are different enough from each other
- Schedule needs to be clear in terms of function. Many people displayed confusion through delayed selection times and by being surprised by next screen
- We need to include a daily schedule planner
- Final option screen in plan your visit needs to be more user friendly. People were clicking on options that were not buttons, and confused about what to do next. Based on that we added an alert feature where you can add the time to your schedule.
- We observed that users were confused from the results in the “Plan your visit” feature. We realized there technically would not be much of a difference if you were to pick a time AND a place vs. Live updates. Which is why we decided to split the two, and make it into two options where you can pick a time OR pick a place.

vii. Individual User Observations Session 2

User #1:

Scenario 3

Metrics	Notes
The path the user took:	Schedule- home button-plan visit- plan your time- subway- subway screen- click und button instead of back button- pick a time- 5pm go- subway- alert would you like to add this to your time, yes- confirmation page
How long it took for user to complete task:	2 minutes
Understanding of what the icons means:	The refresh button instead of home button
Number of times user expressed frustration:	0
What did the user seem to struggle with:	Understanding that the proves was finished, she wanted a feedback box saying that the event has been added
Number of features used:	2, plan ahead and schedule
Was the user successful:	yes
Able to understand distinction between features	No, messed up the plan schedule and plan ahead

Additional info:

- Reminder added to notifications, pull down confirming that her event has been added
- Lack feedback
- Empty spaces confused the user
- Understands content initially
- Looked at schedule and went back home
- Picked time instead
- Clicked refresh rather than back, clicked on food
- Seemed sort of comfortable with using app
- Wants more feedback after adding event to schedule
- Confused with empty spots

User Analysis: Overall, the user was generally confused and not as comfortable with the app as we had hoped. This user wanted more feedback which is something we need to focus on for the high fidelity prototype.

User #2:

Scenario 1

Metrics	Notes
The path the user took:	Plan ahead- pick a time- 2pm- you chose 2 pm-bento- schedule 2pm would have been updated
How long it took for user to complete task:	1 min
Understanding of what the icons means:	No
Number of times user expressed frustration:	0

What did the user seem to struggle with:	nothing
Number of features used:	1- Plan your visit
Was the user successful:	yes
Able to understand distinction between features	yes

Additional Info:

- Plan visit
- Happy reaction
- Understood time results
- Questioning usefulness about app
- Found it easy to use
- Comfortable with app

User Analysis: This user was overall quite comfortable with using the app. They seemed to appreciate the pain point this app was trying to target, which tells us that we are going in the right direction and that there is a need for this solution.

User #3:

Scenario 2

Metrics	Notes

The path the user took:	Schedule- schedule home screen-food for 11am- pick a time- bento-add to schedule yes- confirmation page confirming that it has been added
How long it took for user to complete task:	1 min
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> - Confused on where the schedule came from, advised that the schedule is his schedule - Change the schedule name to my schedule
Number of features used:	2, plan your visit and schedule
Was the user successful:	yes
Able to understand distinction between features	yes

Additional Info:

- Took a few min to understand Screen 1
- Clicked schedule
- Slightly confused and hesitant
- Used schedule to add times
- After using for a bit, got comfortable with app
- Personalize schedule option to “My Schedule”

User Analysis: It took a bit of playing around for the user to get comfortable with the app. The schedule option seemed to confuse the user the most which tells us that we need to change the wording or the functioning of that feature.

User #4:

Scenario: 1

Metrics	Notes
The path the user took:	Schedule- schedule home screen- home screen- live update- pizza pizza- plan your visit- choose 3pm- subway- would you like to add to scheidle alert, yes- confirmation on schedule advising that it has been added to the schedule
How long it took for user to complete task:	- 1min
Understanding of what the icons means:	yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	No
Number of features used:	- Schedule

	- Live update
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional info:

- The user advised that they would like an alert advising that it has been added to the schedule
- Goes to schedule
- Understand the update
- Understands general features of app
- Wants an alert

User Analysis: This user mentioned that they wanted more alerts and feedback after certain actions on the prototype. This is something we need to work on for the high fidelity prototype.

User 4:

Scenario 3

Metrics	Notes
The path the user took:	Plan your visit- pick a time- 5pm- subway- add to schedule alert, yes- added to schedule
How long it took for user to complete task:	1 min
Understanding of what the icons means:	na
Number of times user expressed frustration:	0

What did the user seem to struggle with:	Understanding the difference between pick a time and pick a place, the fact that the - He got confused, he thought that this was just a calendar and not an interactive calendar
Number of features used:	2
Was the user successful:	yes
Able to understand distinction between features	Yes

Additional info:

- The anywhere option needs to be reworded, add the word random
- Working much faster
- Understands app
- Include more hours on subway
- Calendar looks not clickable - wants stuff written on calendar
- Add borders on calendar
- Thought it was straightforward

User Analysis: This user generally found the app easy to use. They thought the calendar was not clickable which a change needed in the prototype. The user also wanted information and events included in the calendar which tells us that the formatting of the calendar needs to be corrected or changed.

User 5:

Scenario 1

Metrics	Notes
The path the user took:	Plan your visit- pick a place- subway- 11pm- alert asking if she would like to add o to schedule, yes- final show on the schiled column that it has been added
How long it took for user to complete task:	1min
Understanding of what the icons means:	Understood all icons
Number of times user expressed frustration:	0
What did the user seem to struggle with:	- Understanding what schedule is, need clarification that its her schedule
Number of features used:	1
Was the user successful:	yes
Able to understand distinction between features	No confused between schedule and plan your visit

Additional info:

- Went to Plan you visit
- Understands app features
- Going through app very quickly
- “Change Schedule”

User Analysis: This user went through the actions fairly quickly compared to the others. This user also pointed out the difficulty in understanding what the “Schedule” feature meant, and asked who’s schedule were we talking about. This shows that quite a few users do not understand the language that we used.

Scenario 3

Metrics	Notes
The path the user took:	Plan your visit- pick a time- 10:00pm- chose 10 pm- starbucks-
How long it took for user to complete task:	1 minute
Understanding of what the icons means:	Yes, understood all icons
Number of times user expressed frustration:	0
What did the user seem to struggle with:	Nothing
Number of features used:	1
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional Info:

- Sync a live update into the calendar
- Comfortable with app
- Unsure of what to do at results - or unsure of what to choose
- Show that those places that are closed at that time are unavailable
- Real update after you add to schedule to show change

User Analysis: This user overall found the app easy to use. They were unsure of what to do at the results section. This user also made a few suggestions that we can consider for the next iteration of the prototype.

User 6:

Scenario 3

Metrics	Notes
The path the user took:	Schedule home- plan your visit- pick a place- subway- baack- pick a time- 5pm- you chose 5pm- fusion 5- alert to add in scheidle- yes- confirmation saying that fusion 5 and 5:00
How long it took for user to complete task:	2min
Understanding of what the icons means:	Got confused between the refresh button and back button
Number of times user expressed frustration:	0
What did the user seem to struggle with:	<ul style="list-style-type: none"> - Understanding that the calendar she cant click on - The calendar was not updated with the events
Number of features used:	2, plan your visit and schedule
Was the user successful:	yes
Able to understand distinction between features	no

Additional info:

- Went on Schedule
- Calendar looks unclickable
- Went to home then Plan Your Visit instead
- Seems comfortable with app overall

- Understands average time meaning
- Just looks like an open calendar
- Wants exam shown on main calendar
- Confusion with icons - Refresh vs. back
- Add back button on calendar

viii. Hi-Fidelity Individual User Testing

User 1

Scenario 3

Metrics	Notes
The path the user took:	Plan visit- pick a place-subway- 12:35pm- alert box- yes- alert box it has been added, success
How long it took for user to complete task:	30 sec
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	NA
Number of features used:	2 -Plan visit -Schedule
Was the user successful:	Yes

Able to understand distinction between features	Yes
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Additional Notes:

- User explained that she liked the fact that she was given the ability to pick a place or time
- Comfortable with app
- Likes the option pick a time and place
- Hesitated at times
- Suggested connecting calendar to quercus

User 2

Scenario 2

Metrics	Notes
The path the user took:	Plan my visit- pick time- 10:00pm- subway- add to schedule- confirmation it has been added
How long it took for user to complete task:	28 sec
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	NA
Number of features used:	2

	-Plan your visit -Schedule
Was the user successful:	Yes
Able to understand distinction between features	Not clear on the live updates

Additional Notes:

- User explained that she was under the impression that live updates meant that she could reserve her spot in a line
- Did not click live updates like we expected to
- Comfortable with app
- Chose shortest time
- Asked if spot is reserved in line - possible idea
- Went through second scenario much faster
- Understands language

User 3

Scenario 2

Metrics	Notes
The path the user took:	Plan your visit- pick a place- random- fusion 5- 10:30- add to schedule yes- it has been added success alert, great
How long it took for user to complete task:	1 min
Understanding of what the icons means:	Yes

Number of times user expressed frustration:	0
What did the user seem to struggle with:	NA
Number of features used:	2 - Plan visit - Schedule
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional Notes:

- Likes the random option
- Worked through app fast
- Liked app, says its easy to use
- Time confuses her, is it pick up time?
- Understands features on main screen
- Likes how it is small logical steps, one at a time

User 4

Scenario 2

Metrics	Notes
The path the user took:	Plan your visit- pick a place- pizza pizza- refresh- back-home- pick a time- 10:00- second cup- would you like to add to schedule, yes- success alert box, great

How long it took for user to complete task:	2 minute
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	NA
Number of features used:	<p>3</p> <ul style="list-style-type: none"> - Pick a time - Pick a place - Schedule
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional Info:

- Took a few seconds to analyze each screen
- Using app comfortably

User 5

Scenario 1

Metrics	Notes

The path the user took:	Plan your visit- pick a time- 12pm- Add to schedule, yes- confirmation
How long it took for user to complete task:	27 sce
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	- Once when she put pick a time, she was expecting there to be a go button
Number of features used:	2 - Plan your visit - Schedule
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional Info:

- Taking time with app, but generally good
- Not confused
- “Very intuitive”
- Worked well with app overall, displayed no frustration

User 6

Scenario 1

Metrics	Notes
The path the user took:	Plan your visit- pick a time- 12:00pm-pizza- yes add to schedule- confirmation saying that it has been added to the schedule
How long it took for user to complete task:	36 sec
Understanding of what the icons means:	Yes
Number of times user expressed frustration:	0
What did the user seem to struggle with:	NA
Number of features used:	2 -Plan your visit - Schedule
Was the user successful:	Yes
Able to understand distinction between features	Yes

Additional Notes:

- Have a category option given where the user can choose what kind of food they want

- User suggested that we can add an information button to each food place that tells the user what kind of food they will find
- Works well with app, took a few seconds to analyze each screen
- Found it straightforward
- Worked though second scenario faster
- Suggested distinguishing between food and drinks
- Categorize each type of food - like coffee places. Add a symbol on the side or like an info circle