Nomad Rides

Group 17

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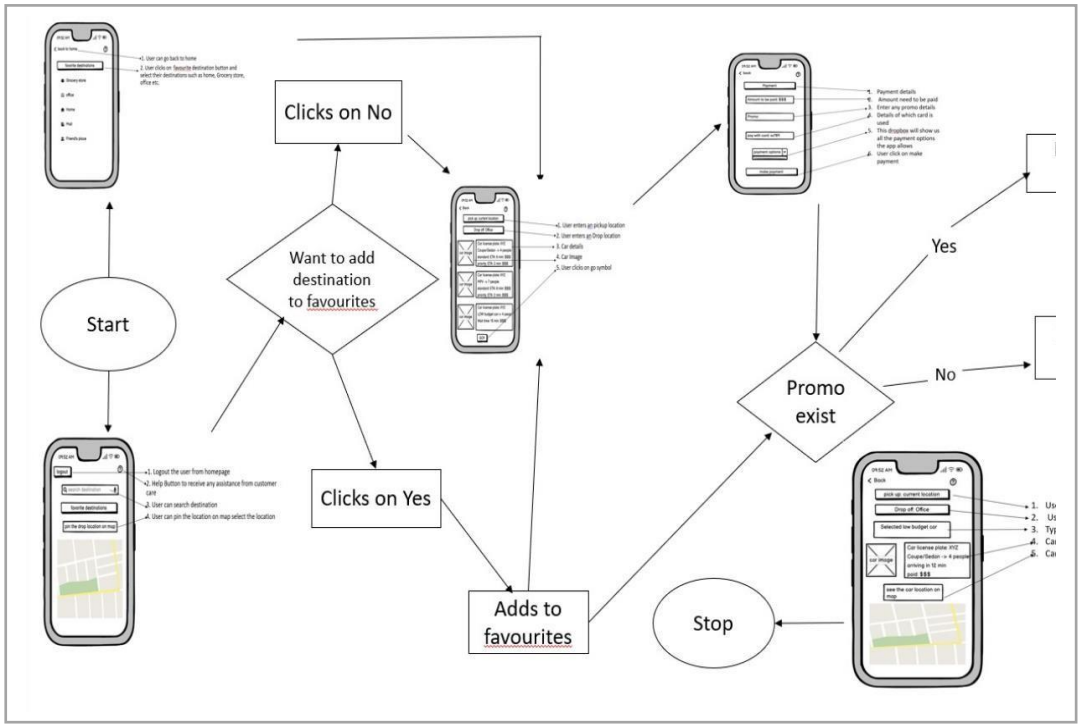

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1 Design Problem

Rideshare applications have been on rise the past decade, and the number of users and the drivers has been upward. Though the market is booming, drivers on the field are upset with the amount of Share that is deducted by the companies for each ride. Customers are worrying about the hike in the prices of rideshare services over the past few years. This specific problem was exclusively derived from the startup "Nomad Rides". Build an application which aims to envice the possibility of having a mutual benefit and fair priced rideshare application to both the customer and driver. This application will be stepping away from any conventional rideshare service and embarks on a new methodology, in which they do not collect commission for each ride from the driver but rather substitute it with a monthly membership fee. This reduces the price for the customer and also evens out fairly with the driver, as their efficiency to maximize their ride services will not be abused by Rideshare companies via commission. The target audience are mainly daily commuters and rideshare drivers. According to demographics, 36% Americans have used a rideshare application in the past year. Young adults (18-29) cover the chunk of the target audience, covering up to almost 50% of the total users, with the majority being students or office going adults. The application intends to view rideshare drivers, who are around 1.7 million people in total across the globe, with majority being middle aged men as another high potential stakeholder. An interface which books a ride automatically for the user and bridges out the search of a taxi via application will directly impact many taxi drivers who have not adjusted to the modern technology, it also affects public transport as the application's interface provides an alternative to public rides. The user interface of the application indirectly impacts all the rideshare application users and also the flow of traffic in certain busy scheduled uptown areas.

2 User Research Planning

In this section we are discussing how we need create a focus setting and discuss about how to create a discussion guide which helps in creating affinity diagrams and followed by task flow diagrams.

2.1 Focus Setting

We wanted to understand our target user base from the perspective of their daily life and how we can develop a solution to help them find the best ride share application. Our focus statement reflects this: "Understand how students/people currently finding ride share options. Identify the constraints that guide their decisions (Timings, budget). Identify factors that help students/people to try our rideshare application."

2.2 Discussion Guide Creation

The term discussion guide refers to a document that describes the questions and activities you will utilize during the interview. This discussion guide is not a script. Discussion guides will always help us to be on point and not to deviate from the original topic and help us to be open-ended. When we are creating a discussion guide there are some do's and don'ts:

Do's:

1. Stay on the open-ended side.
2. Break compound questions into simpler questions.
3. Always use layman's terminology
4. Keep questions neutral.

Don'ts:

1. Don't ask your users what they want the app to DO.
2. Ask them to tell you stories.
3. Walk you through their real experiences.
4. They may make suggestions

We have divided the discussion guide into 4 parts such as Introduction, Key demographic questions, warm-up questions, Main questions (Open-ended discussions) and a Design Probe question. We introduced ourselves in the introduction section and explained what our app. Is. In the key demographic questions, we have collected data such as Name, Age, Gender, Profession and annual Income of the focus group. After that we asked them some warmup questions, Main questions and a design probe question. Here are the examples of a warm-up question, main question and the design probe question.

Warmup Question: -

1. How often do you commute? What is your preferred mode of transportation?

Main Question: -

1. What do you prioritize when choosing a rideshare application?

Design Probe question: -

Uber, Lyft

1. Have you used any of the above apps and what was your experience?

The main difference between these questions is, in the warmup question we have asked users “How often do you commute? What is your preferred mode of transportation?” This question helped us to understand the user’s pattern of what they prefer the most when they want to go from one place to another. In the main question we have asked a question “What do you prioritize when choosing a rideshare application?” This helped us to understand what are the factors that users are considering when choosing a rideshare application. In the design probe question we want to make sure that whether the users are aware of the existing rideshare application.

3 User Research: Focus Groups/Interviews

In this section we will discuss about who to recruit users for a focus group and how to conduct an interview on the focus group. This interview process of the focus group will help us to collect the data to design our product or app.

3.1 Recruitment Process

Recruitment of participants was to analyze and get a brief idea of the conceptual model of the user. Our target users were young and middle-aged adults who commute on a regular basis. These users are either students or working-class professionals, who either use public transportation or ride sharing applications to reach their destinations often. As the very first step, we sent out emails regarding a focus group interview to people within our network. 5 Once our area of network was covered, we put survey posters in the library to recruit candidates and we also posted about it on social media. One challenging aspect of recruiting was recruiting participants who were not known to us. As mentioned earlier we used survey posters put up in the UIC library as a medium, which did not produce many results and then we decided to recruit via social media, which finally did increase the focus group number. There was also an element of uncertainty if these people would not show, for which we compensated with extra participants as a safety measure. We have recruited 6 participants in total. Four of our participants were students from UIC, out of which 3 participants were from our network who are majoring in CS, and one student was recruited via social media who was a psychology major. The students within our network were well experienced with technology and are also familiar with coding, while a student majoring in psychology lacked knowledge of coding, he was well accustomed to technology. The other two participants reached out to us through social media, with all three of them being working class professionals, ages ranging from 24 - 32.

3.2 Participants

As soon as we decided on this design project, our first step was to understand whom we are catering to. In understanding the audience, we have conducted research on things like which section of users use ride sharing applications the most. Based on this research we understood that our target audience are students or working-class professionals who commute often.

3.3 Focus Groups/Interviews

Focus groups are discussion sessions among a group of people, who are asked and encouraged to express and opinionated on a certain topic, idea or product. They were conducted to understand and analyze the conceptual model of a ride sharing application according to the average user. We were hoping to learn about any design trends which the users are accustomed to and that which needs to be followed by our group, and we were also hoping to know more about pain points of users current commute experiences. We have conducted two individual focus groups and both focus groups has three members each. Both the focus group sessions lasted for hour to hour and half respectively. We followed a discussion guide to help us create a 6 layout for the interview. We followed a semi-structured form of focus group and hence went with a discussion guide. We asked questions about the user experience using rideshare applications and several other aspects of the same nature. We used Uber and lyft applications as our design probe. We decided to use these applications as design probes because these applications do all the things our product is designed to do. Three experimenters were present during each focus group and the details are as follows: - For the first focus group sessions, Varshith acted as a moderator, Anurag as audiographer and Madhav as note taker. - For the second focus group sessions, Varshith acted as a note taker, Anurag as moderator and Madhav as audiographer. We used one experimenter to take notes and another to record audio and recorded the responses in the form of audio and then used an online tool to transcribe this audio to text, the name of the website used is “iTranscribe”. Mostly, when we asked open ended questions regarding an experience of some kind, the participants were actively continuing the conversation and there were no awkward silences. Being a part of a semi-structured focus group, we asked more questions about certain topics on the spot, in case we felt it needed more focus, these questions only gave out surface level responses. One thing we would update are the follow-up questions. We would most probably conduct a mock practice session just to familiarize ourselves with follow up questions.

4 User Research Data Analysis: Affinity Diagramming

In this section we have discussed how we need to make an affinity diagram and how this affinity diagram is helpful in analyzing the data in the next step. Affinity diagramming will help us to sort large amounts of data into logical groups. This will help us to group “items” into homogeneous categories. Items can be anything: brainstormed ideas, user needs, user quotes, features, web pages, etc. The reason why we use Affinity diagramming is it helps designers use induction to find 7 emergent themes and structure in the data. Externalizing the emerging system model helps communication among the team and exposes possible fallacies or problems. Seeing the Big Picture, the cumulative picture of all the data at once, leads better to leaps of intuition. We have organized two focus groups with 3 UIC Students in one group and the second group has two UIC students and one who is not a UIC student working as professional in the industry. As a group we have analyzed the transcribed copy of our focus groups recordings and identified some of the common topics and grouped them together. We have Discussed some of the disagreements in groupings together and sorted it out.

We have identified some important themes in the affinity diagram.

1. Reliability of application to work smoothly and driver to arrive.

   In this theme the user wants the application to work smoothly, and the user expects the driver to arrive on time. Time is the most important factor for the users in this theme.

2. Getting the cheapest option out there in the market

   In this theme the user wants to get the cheapest ride option when they book a ride. So the user expectation in the app is to get the cheapest ride that is available.

3. cheaper rides and no shock surges

   In this theme the user expects to book a cheaper rides with no sudden rise in the price. When a user waits for cheaper rides, they usually end up paying a higher fare value in result of waiting for a cheaper ride.

4. Best option available based on situation automatically.

   In this theme the user wants to get the best option available in that particular situation. For example if it is late night booking the user will have difficulty booking a ride. In these situations, the user will have the best option to book a ride that is available.

5. On time rides

In this theme the users wants to have on time rides and the user expects to get his ride on time without any delays

6. Reaching the location on time

   In this theme the user expects to reach the location on time without any delays.

We have identified some do's and don'ts while creating affinity diagram They are as follows:

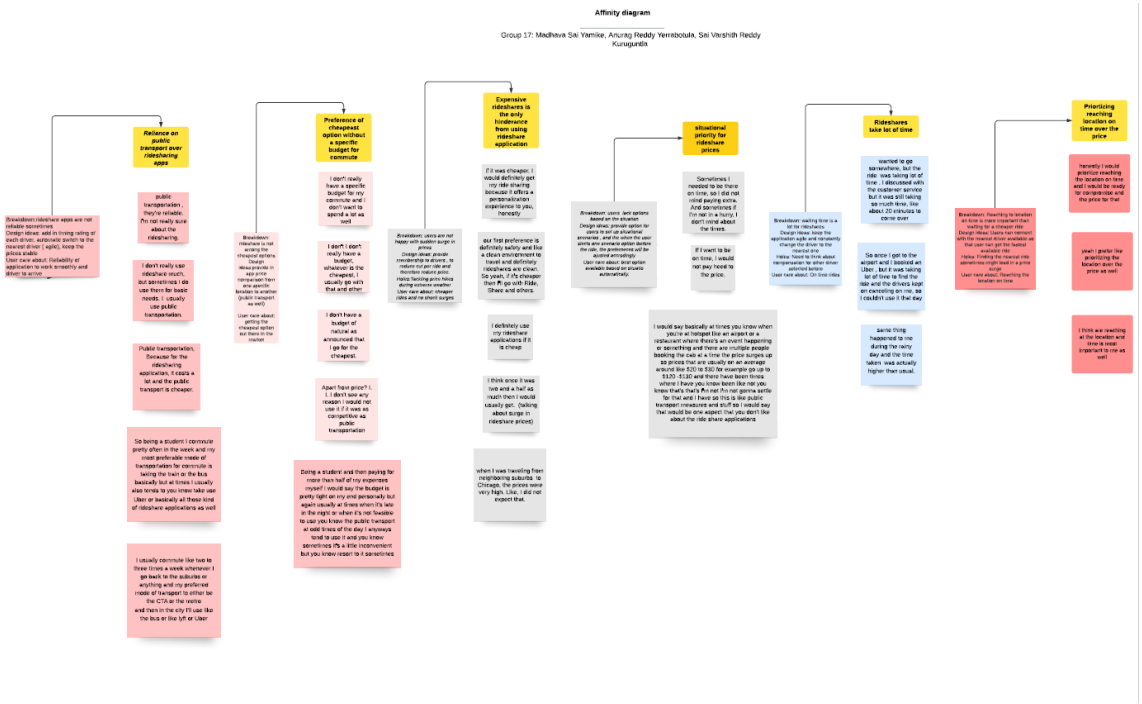
-

Do's:

1. We Always allowed theme labels to emerge from the natural groupings.
2. Scale and scope can vary from one problem to the entire system.
3. We have Focused on what are users' goals, needs, and priorities – and see what the themes are emerge.

Don'ts:

1. We made sure to ban certain words like "feature", "implement", and "develop" to get team thinking out of the box.
2. We have never started with the theme labels.
3. We have Avoided using the interview questions as clusters.



Affinity Diagram

5 User Research Data Analysis: Walking the Data

In this section we will discuss what is meant by walking the data and how its done and what are the outcomes of it. When we are walking through the data we need to understand what users need/want/prefer/care about with respect to a certain interaction. We need to go through the data and write interpretations of it. We can use the voting method to pick what the user needs. In each theme we have identified what are the user needs and how we as a team can develop a design process. We have discovered that there are 6 main themes in this app. The users expect to get cheaper rides, Rides on time, no sudden price fluctuations and best available ride options from the app.

User need#1: Book a ride and adjust the time of arrival for the cab driver.

User need#2: Pick a ride from a heavy traffic region and use the switch driver option to change the driver based on application suggestions.

User need# 3: Expensive rideshares is the only hinderance from using rideshare Application

User need#4: Preference of cheapest option without a specific budget for commute

In order to achieve these user needs we have created some design process ideas and they are as follows: -

To achieve the User need #1: Add in timing rating of each driver, automatic switch to the nearest driver (agile), keep the prices stable.

To achieve the User need #2: Keep the application agile and constantly change the driver to the nearest one.

To achieve the User need #3: Provide membership to drivers, to reduce cut per ride and therefore reduce price.

To achieve the User need #4: provide in app price comparison from one specific location to another (public transport as well)

6 Design Artefacts: Personas, Scenarios, and Storyboards

In this section we will be discussing how we need to create personas, scenarios and storyboards based on the affinity diagram and data we collected from the focus groups. These personas will help us to create scenarios and storyboards.

6.1 Persona

Personas are “rich descriptions of typical users of the product under development that the designers can focus on and design the product for”. A persona helps ground communication among team members –a common point of reference. In order to create personas we need to list user characteristics and user capabilities based on user research data. Based on the user characteristics and capabilities we have divided our persona into focal and secondary persona

Focal persona – Primary users of the product who are its main focus. We will optimize the design for them.

Secondary – Secondary persona are the users who also use the product. We will satisfy them when we can.

From the 6 major themes, we identified 3 personas. Michael Scott, who is our focal persona, is a 35-year-old working adult who is a regular rideshare user and does not own a car. Dwight, who is our secondary persona, a PhD student who is an occasional rideshare user and does not own a car. Jagan Mohan Reddy, who is also our secondary persona is a studious undergraduate student who prefer public transportation. Below are the details of each persona:

Image source: https://xsgames.co/randomusers/assets/avatars/male/8.jpg

Michael Scott

" Loyalty needs to be appreciated"

At a Glance

- 35-Year-Old Working adult
- Regular rideshare user
- Does not own a car

Michael's Day:

Michael is a middle aged family man living in the suburbs.Michael works in downtown and uses rideshare application on regular basis to commute. Michael believes he has been using the application long enough for the rideshare company to provide him with special promotions and benefits to appreciate his loyalty. Michael is upset with constant surge in prices during out of ordinary circumstances and wants the application not enforce this on loyal customers.

Goals:

- Receive special benefits for regular use
- Avoid uneven surge in prices.

Image source: 116596234-40-years-old-middle-aged-handsome-man-working-on-laptop-computer-in-office-man-working-in-office.jpg

Jagan Mohan Reddy

20-year old UIC student.

At a Glance

- 20-Year-Old Working adult
- Prefers public transportation

Jagan Mohan Reddy's Day:

Jagan Mohan Reddy is 20 year old undergrad student living in the periphery of Chicago city (20 minutes away) and commutes to college campus using CTA. Reddy being a college student prefers cut-rate prices for his commute , as rideshare services are costly, he only prefers public transportation as it is cheap compared to rideshare application. Reddy is looking to find an affordable option under rideshare category for the upcoming winters. He is willing to shift his loyalty towards rideshare application if the prices offered are competitive to public transportation.

Goals:

- Get a competitive price offer from rideshares over CTA.
- Find affordable rideshare for winter.

Image source: 1000_F_254393324_feP93EMI8IUvITiEWWWwWmxXfTHQTK2y.jpg

6.2 Scenario

A scenario is a written story explaining how a user will use a product to achieve a goal. Scenarios help us acts as a bridge between an initial design idea or problem and a solution. It advances the fidelity of an idea and stands on its own, without explanation. We need consider the below 4-5 key tasks when we are writing scenarios: -

• Identify the people involved

• Identify the starting state / context

• List the goals a user may have, as they pertain to your product or service

• Prioritize the goals based on your understanding of your users

• Craft stories

Based on the 3 personas created & the key factors that we identified from the user research, we created 3 scenarios. Each of the scenarios are also paired with a storyboard. These give us the necessary context to develop an app that provides a seamless user experience.

Scenario 1:

Dwight is the type of person that uses the ridesharing service to go grocery shopping and attend any off-campus events. In this situation, getting a ride as soon as possible and arriving at the destination within the exact ETA shown on the application are his top priorities. One of Dwight's aims in using a ride-sharing application is to go grocery shopping. His pals showed him a new ride-sharing app that has a favorites option from which he may choose his regular grocery store as the destination. Our program will provide the arrival time of the trip and the time he will arrive at the destination once he selects the destination. In addition, the application will feature a second option directly beneath the default one named as "priority," which will cost more but come with advantages including a faster journey and the ability to arrive at the location on time.

Scenario 2:

Every day, Michael uses ridesharing services to commute from his home to office. However, he is somewhat worried about the surge certain rides may experience because of numerous

Unanticipated events. Michael discovered our ride-sharing program, which automatically 12 applies the promo code for devoted clients who have scheduled more than 15 rides in a month, thereby lowering the surge as well as the ordinary fare.

Scenario 3:

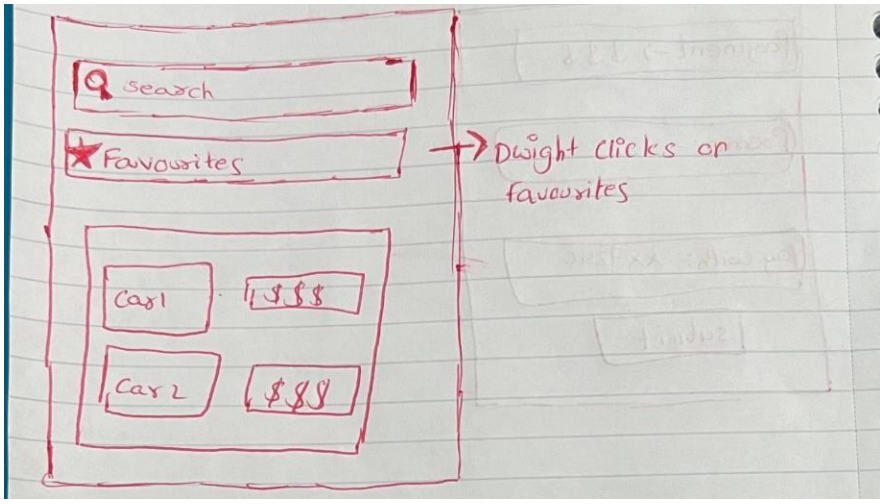
Undergraduate student Jagan Mohan Reddy uses the CTA to travel to campus because it is an inexpensive option. In contrast, he finds it challenging to use CTA to travel to campus in Chicago during the bitterly cold winters. His brother suggested that he use our ridesharing app, which includes a function that makes it more affordable. However, this option comes at the penalty of a somewhat delayed arrival at the destination.

6.3 Storyboard

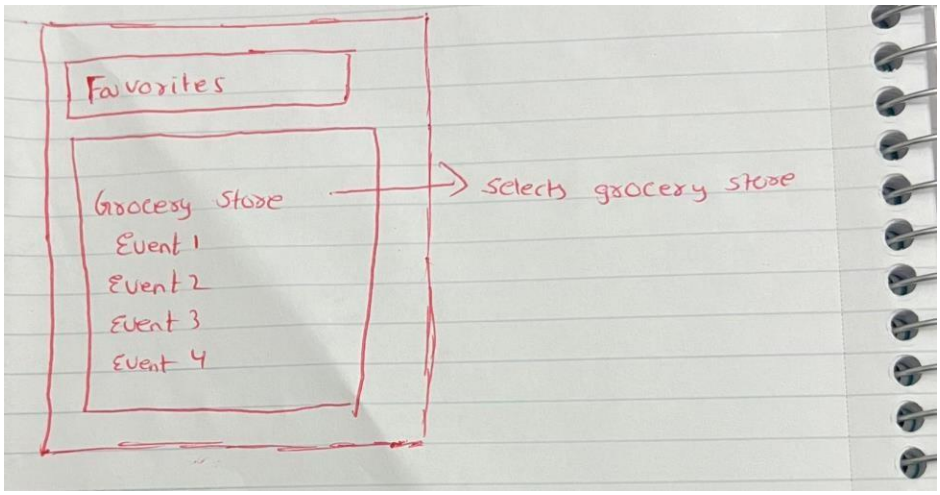
There are many types of storyboards such as Narrative, sequential, state transition diagrams and branching storyboards. We specifically use Narrative storyboards because they / they are the

• Best used during early design phases

• Show both interface and user in context of use



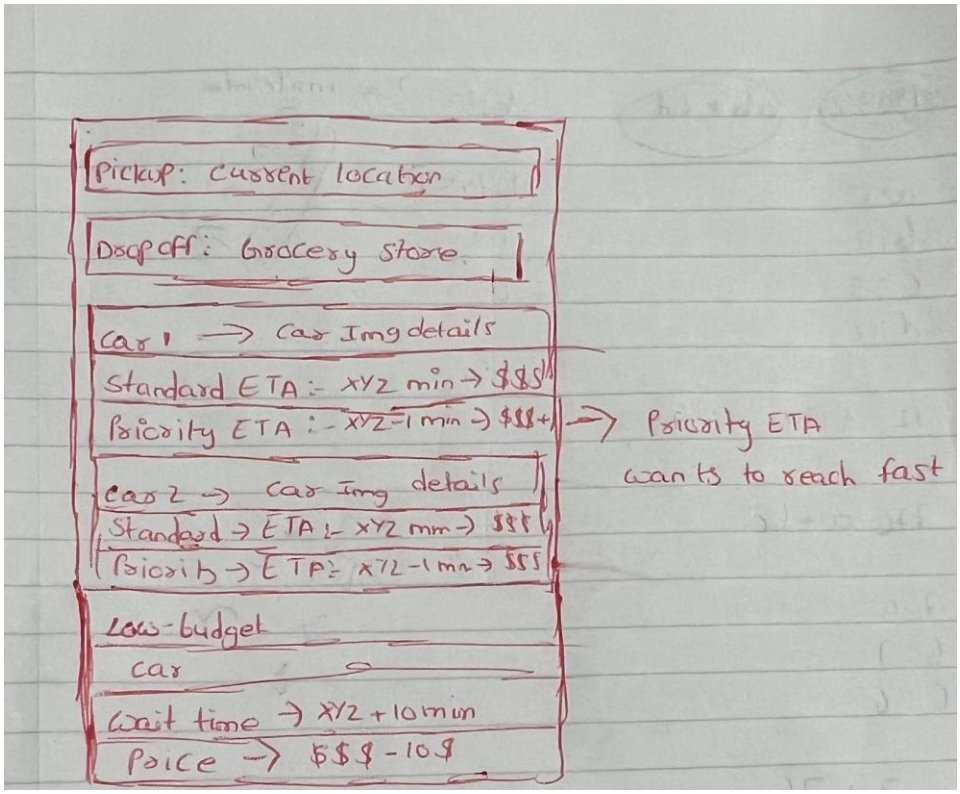
Dwight selects the option called favorites.



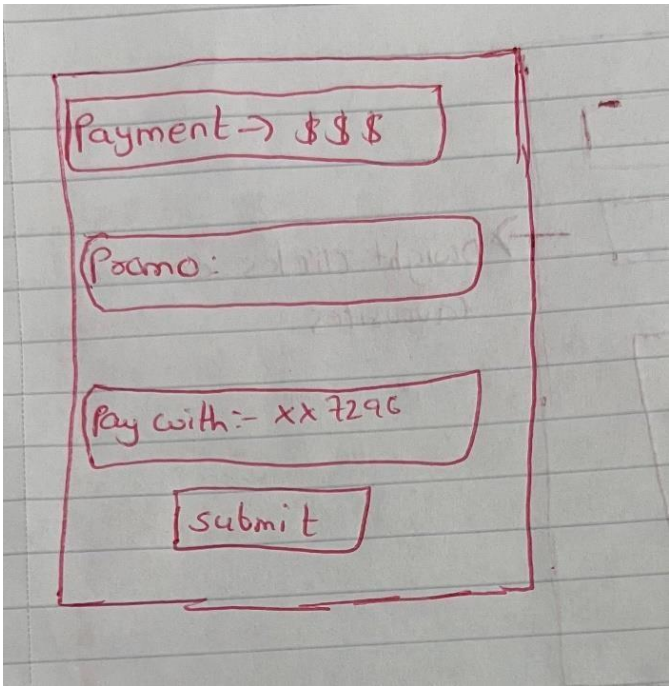
Dwight selects a destination from his favorites (Grocery Store)

7 Task Analysis and Task Flow Diagram

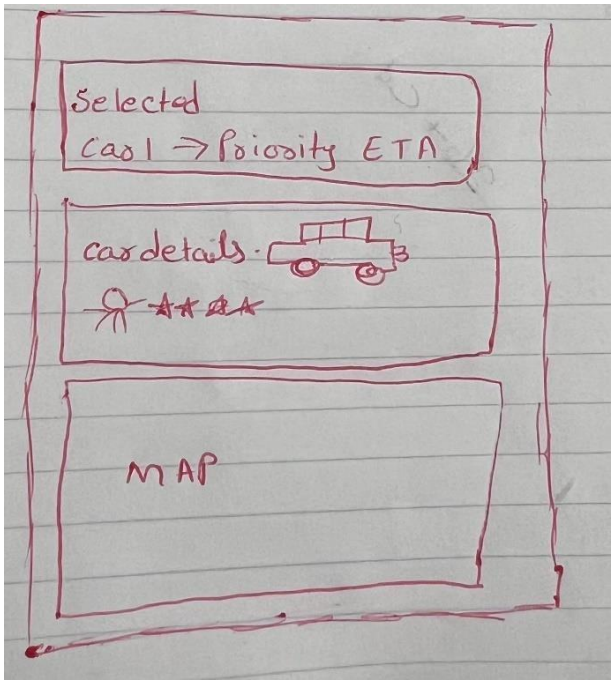
In this section we are discussing the difference between task analysis and task flow diagrams. This task flow diagram will help us to develop a wireframe flow diagram. Task analysis is one way to represent and create a conceptual model for your system and Task flow diagram is to show how tasks are ordered to flow from one to the other naturally according to user's mental models. In order to create a effective task flow diagram we need to be Detailed About our Tasks. We need to understand our tasks in detail which help us to understand how they should fit together.



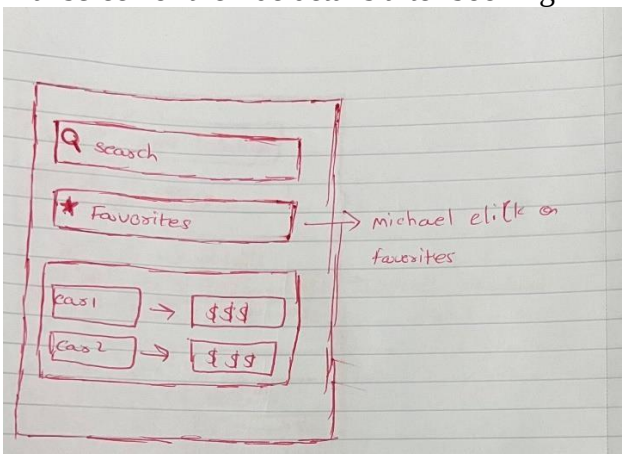
Dwight will select his priority option



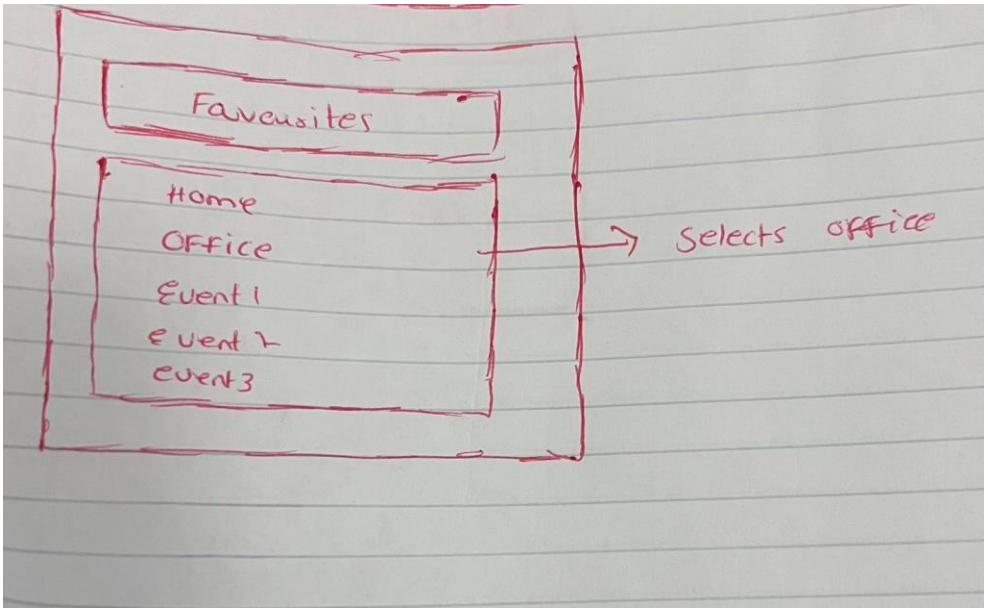
Dwight selects the payment method and clicks on submit



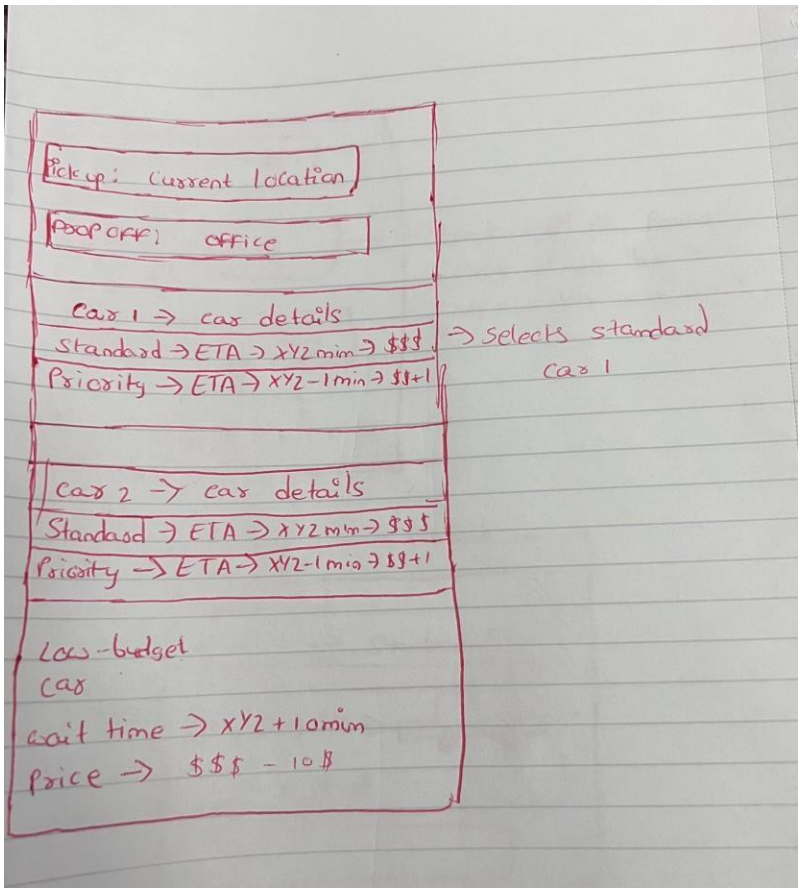
Final screen of the ride details after booking



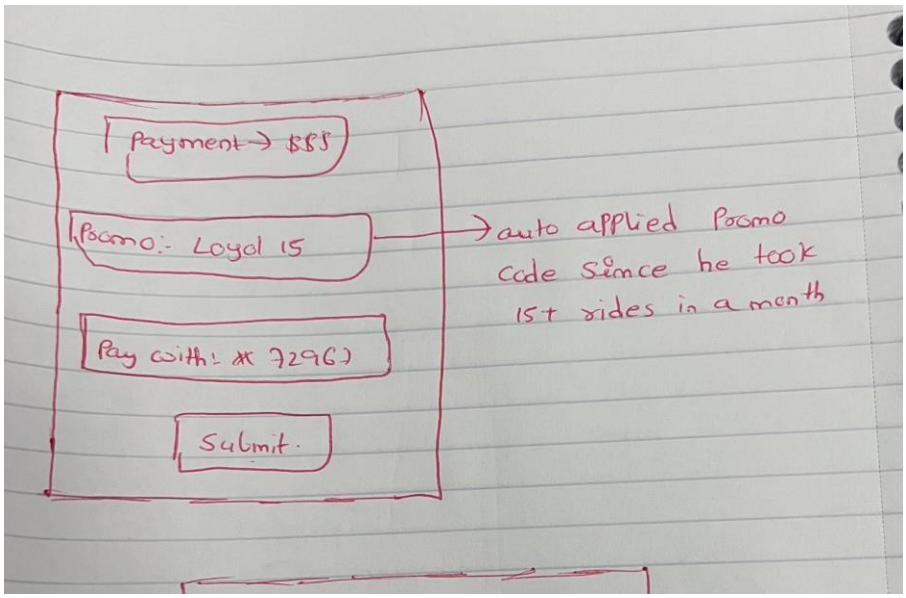
Michael clicks on his favorite



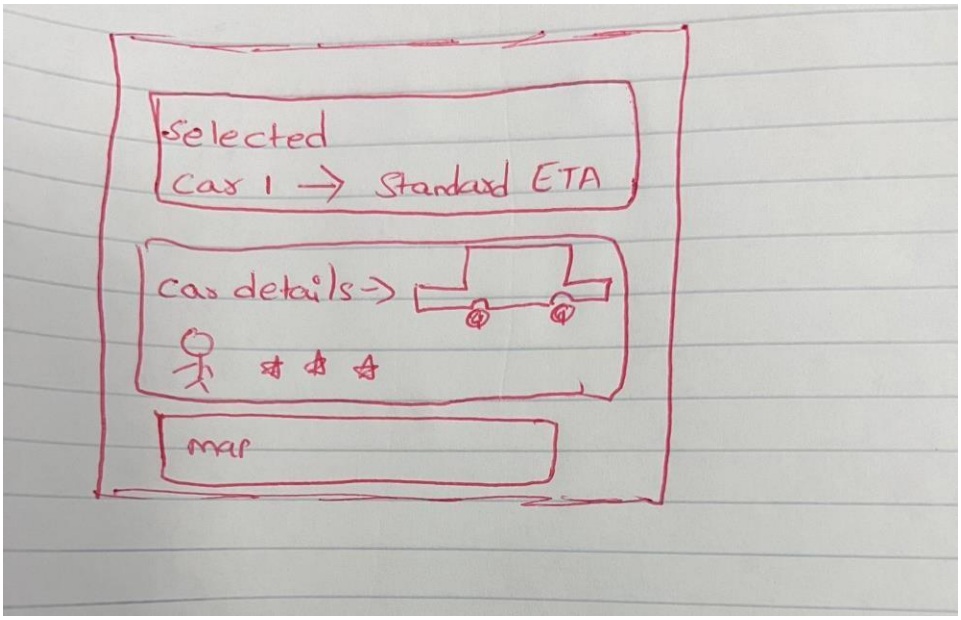
In his favorites he will select the office option



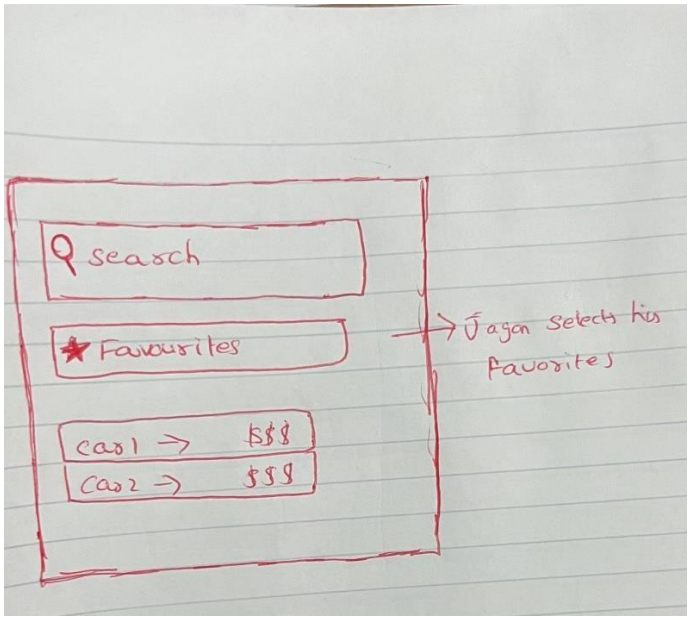
Michael selects the standard option



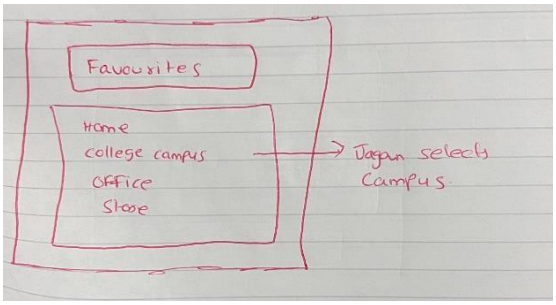
Promo applied to the trip



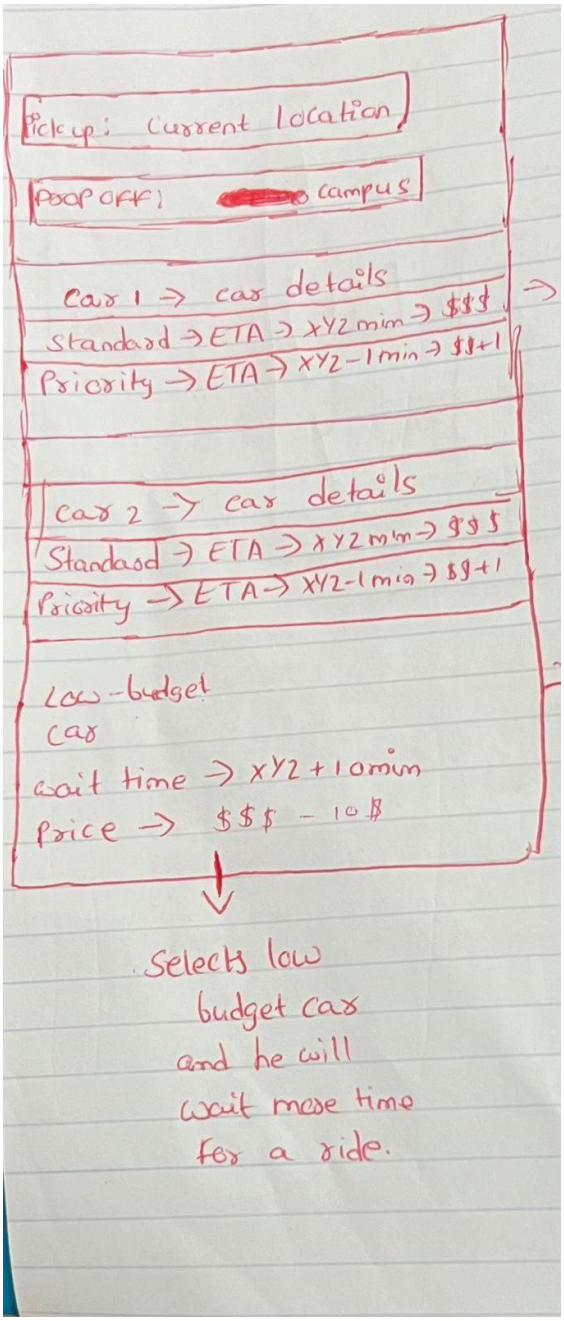
Final screen of the ride details after booking



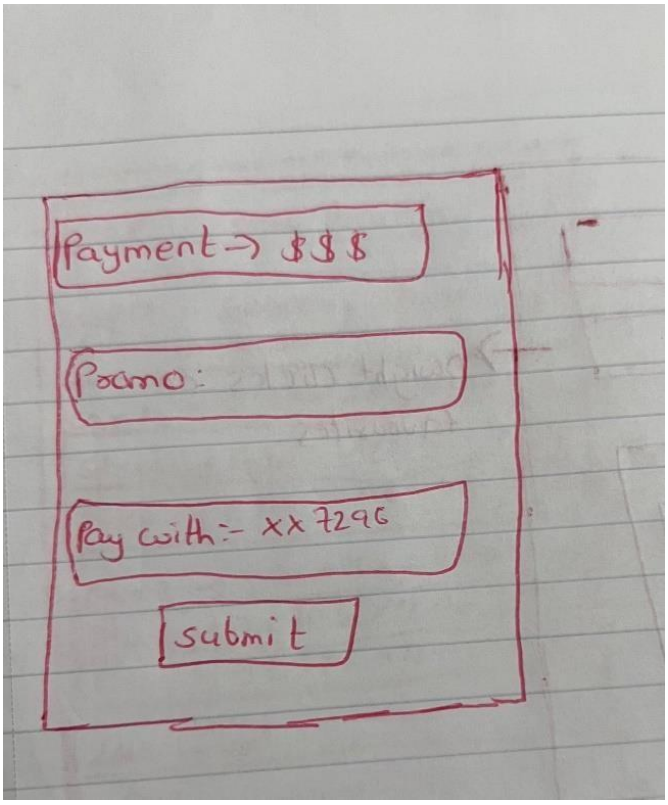
Jagan selects his favorite



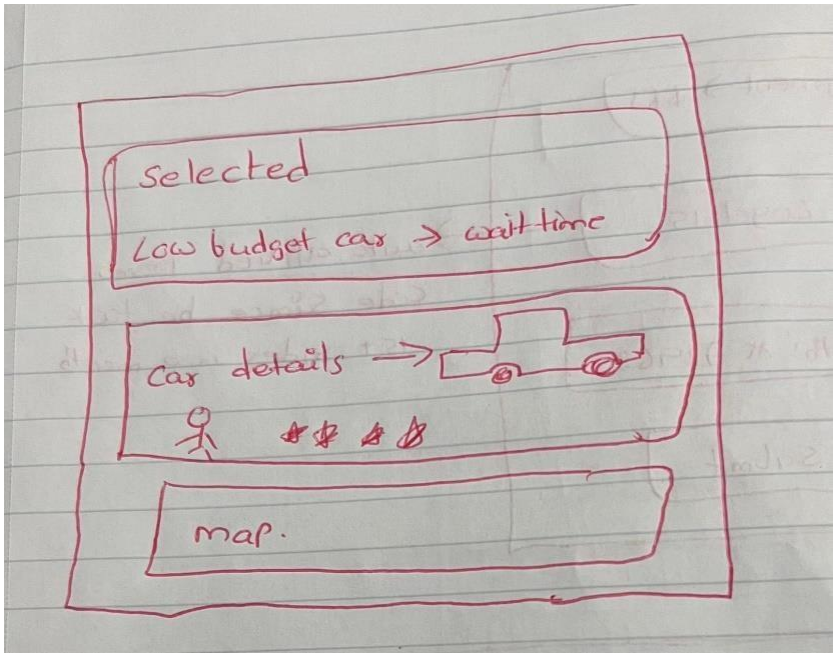
Jagan selects campus



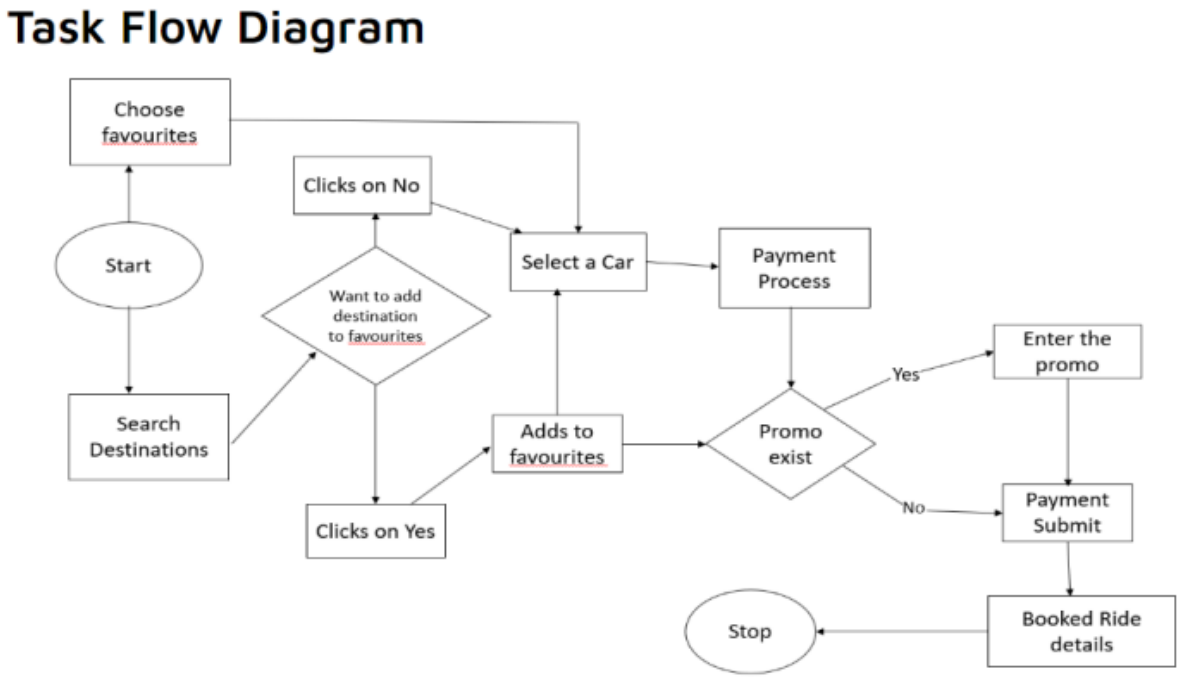
Selects a car ride for less price



Jagan selects the Payment method and click submit



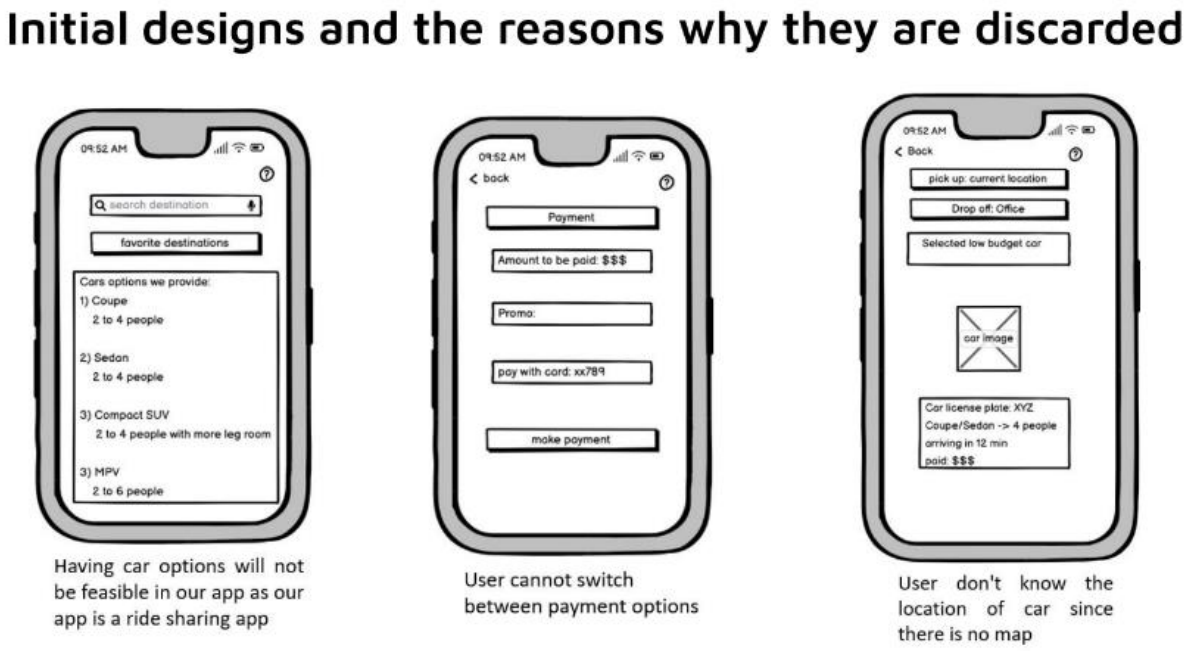
Final screen after booking

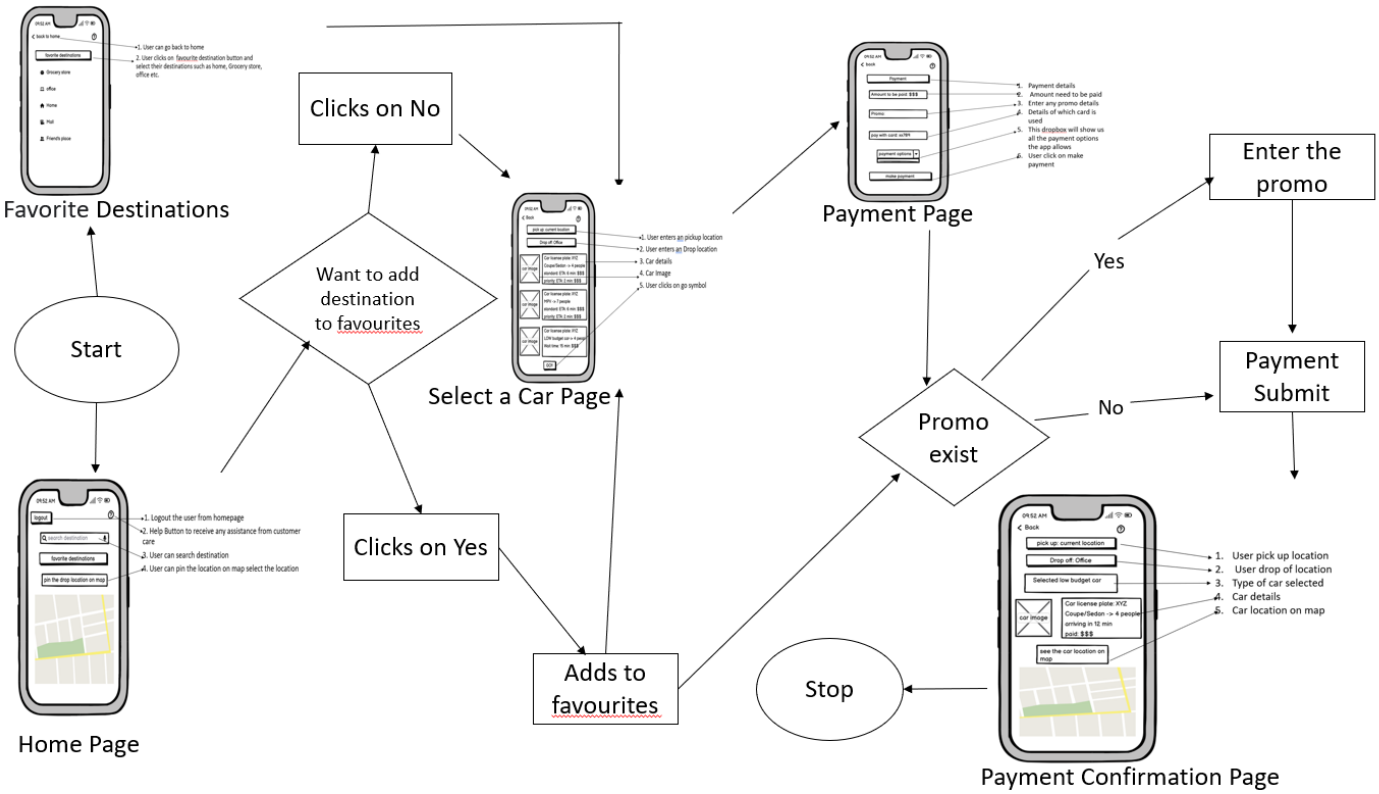


8 Wireframe Flow Diagram

In this section we will discuss about what is a wireframe flow diagram and what is process and software is used to create individual wireframes. In wireframe flow diagram each box in the task flow becomes a screen. Each decision point becomes an interaction the user will take to make the decision. To understand the wireframe flow diagram we need to understand the concept of wireframes. Wireframes are abstracted views of the design of each screen in your app, site, system, etc. Every planned feature / functionality is represented. The purpose of wireframe is to have a Structure, Information hierarchy, Controls, Content. These wireframes 21 are NOT look-and-feel, colors, or graphics. They are purely about what information flows from one screen to the next and how the interaction is done. The software we used to create individual wireframes screens is Balsamiq and Microsoft PowerPoint. These are some of the

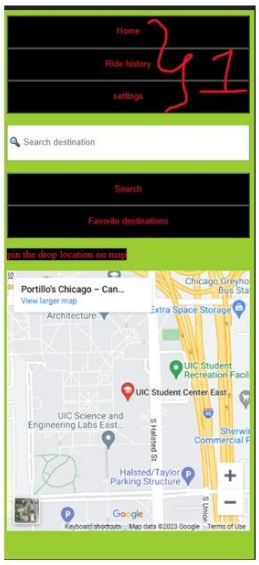
alternative design solutions that we have brainstormed as a group and the reasons why they were discarded:



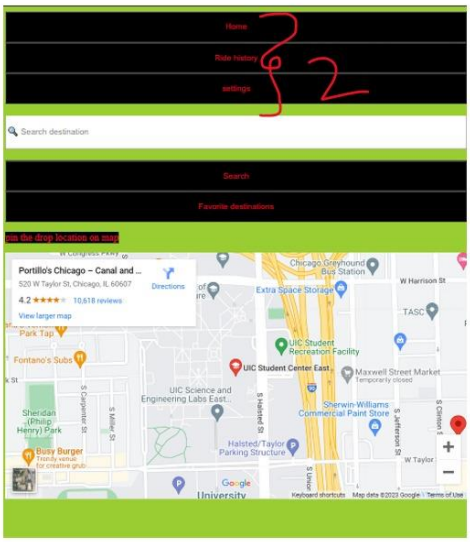


9 Responsive Wireframes

In this section we will be discussing what is a responsive wireframe and the need to create a responsive wireframe. We have designed the responsive wireframes using Balsamiq. Responsive wireframes are simple web pages, created with HTML and CSS. These wireframes are dynamic, which take device resolution and dimensions into account. The main reason for creating these responsive wireframes is to use principles of responsive web design to illustrate the layouts.



Phone

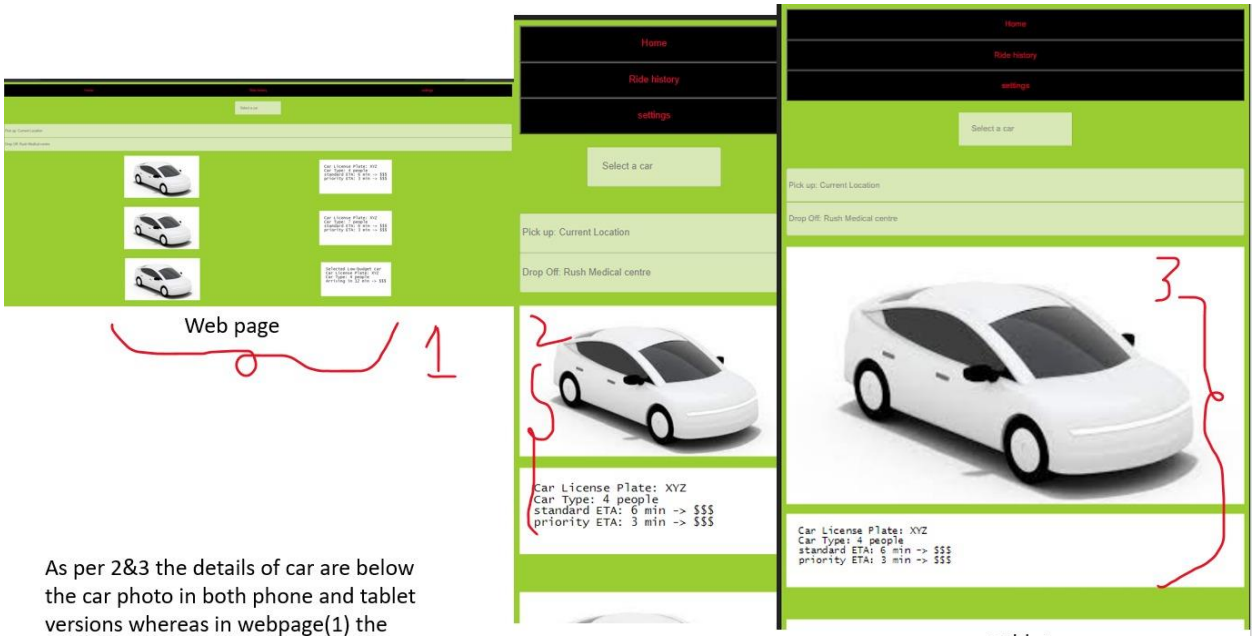


Tablet

Web Page

As per 1&2 the Home screen in Phone and Tablet version is almost similar as we can see that the home, Ride history and settings are placed under each other whereas in web page(3) they are placed side by side.

Home page for three different screens



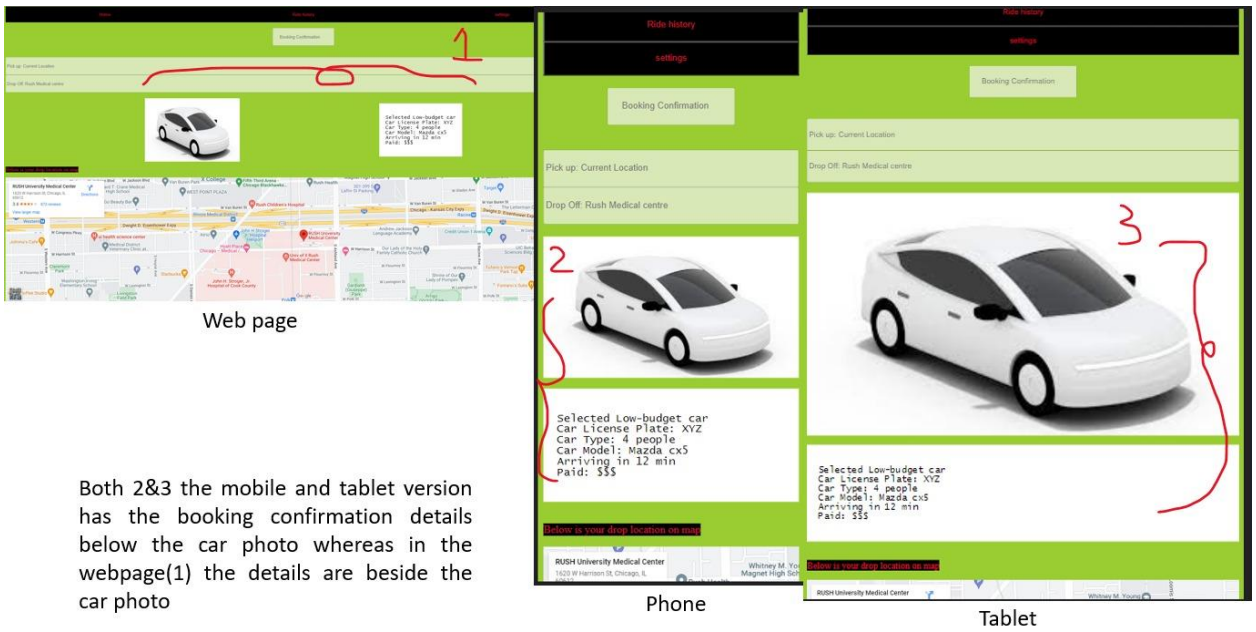
Web page

Phone

Tablet

As per 2&3 the details of car are below the car photo in both phone and tablet versions whereas in webpage(1) the details are beside the car photo

Select a Car page



Web page

Phone

Tablet

Both 2&3 the mobile and tablet version has the booking confirmation details below the car photo whereas in the webpage(1) the details are beside the car photo

Confirmation page

10 Early Design Feedback

This section talks about the feedback we received from our peers and the necessary steps that need to be taken to improve our design.

10.1 In-Class Critiques

Six students interacted with the wireframes and gave their feedback. The first classmate suggested changing the icon for the profile/account information from a 23-question mark to a person icon, since most people are familiar with seeing that instead. The second one thinks that they could add a help icon to explain some of the non-obvious aspects of the app. The third classmate suggested adding a menu bar, in case the user is later in the ride ordering process and wants to select a new location. The fourth classmate made a suggestion on adding a navigation menu bar to change between the different tabs. The fifth classmate noticed that there is an excess of information on the "Select Car" screen in each of the cards and felt that they could minimize the information to be displayed and give a more info button to display the other details. Lastly, the sixth classmate suggested changing the icon for the account button and increasing the size of it.

10.2 Next Steps

As a team we are going to analyze the feedback given by our peers and make necessary changes to the existing design.

Planned change #1: We will update the question mark to a person icon for the personal/account information.

Planned change #2: We will add a menu bar to change between the different tabs.
Planned change #3: We will narrow down the information in the "Select Car" screen and have a pop up to display more information.

Planned change#4: To give more in-depth information when the user clicks on help button to explore the app.

Planned change#5: To change the size of button and placements of buttons such as account information etc

11 Low-Fidelity Prototyping and Testing

In this section we will discuss the need to create a low-fidelity prototype. In this step we are Testing if our concept is meeting user needs well. To know if our concept is working or not, we have developed a low-fidelity diagram based on paper. The reason we have chosen paper is because sketches and hand-drawn interfaces look far from computer-generated ones. We have developed the design for our app and drew our design for each screen and started to link each screen to develop a functional app.

https://nomadrides.invisionapp.com/console/share/QRZMXNVKUJC/982151254

11.1 User Feedback on Low-Fidelity Prototype

The users were asked to use the app as commonly as they use regular ridesharing apps available in the market. We told the users to ask a question if they struggled with any of the screens or if the users don't know what's the next step. After conducting a user feedback session with 3 users, we have made quite a few improvements to increase user experience and also make users stay connected with our application throughout their interaction. We have prepared the low-fidelity prototype with a total of 16 screens and then based on the user feedback we have made the interactive pixel-perfect prototype to 29 screens to make the app more interactive from one screen to another. And we will be mentioning the changes in increasing order.

There were three key-tasks to perform for the users.

1. The user should navigate through the application and add a payment option.
2. Users should navigate through their rideshare options and book a ride.
3. User should reach out to customer support through the application.

The first two users successfully completed the first two tasks but surprisingly both of them faced some hassles in accomplishing task three which is reaching out to customer support. Both these users accomplished the first two tasks in around 15 - 20seconds whereas the third one took longer than 30 seconds. for the third and fourth

users both the users found every task easy and completed the task within a 10-25 second time frame. User 4 had taken some time to go to the car selection page as the user took some seconds to analyze what is there in the home page of the app.

11.2 Resulting Design Changes

Here are some of the changes that Users have suggested to the app after their interaction with the app.

Change #1: User 3 had suggested us to change the background color of the app so that it doesn't affect the color of the car. This will be even easier for the users to view the car they have selected.

Change #2: User 5 and 6 have pointed out some issues with task 2 that is select a car page. The issue they pointed out is that to change the font and background color of that screen because the images of cars are blending into the background color and the font is too small, so it took them around 40 seconds to understand what exactly is that screen supposed to do. However, user 5 had difficulty in navigating to task 3 that is to go to the customer support page. Therefore, it took him 40 seconds to navigate to task 3.

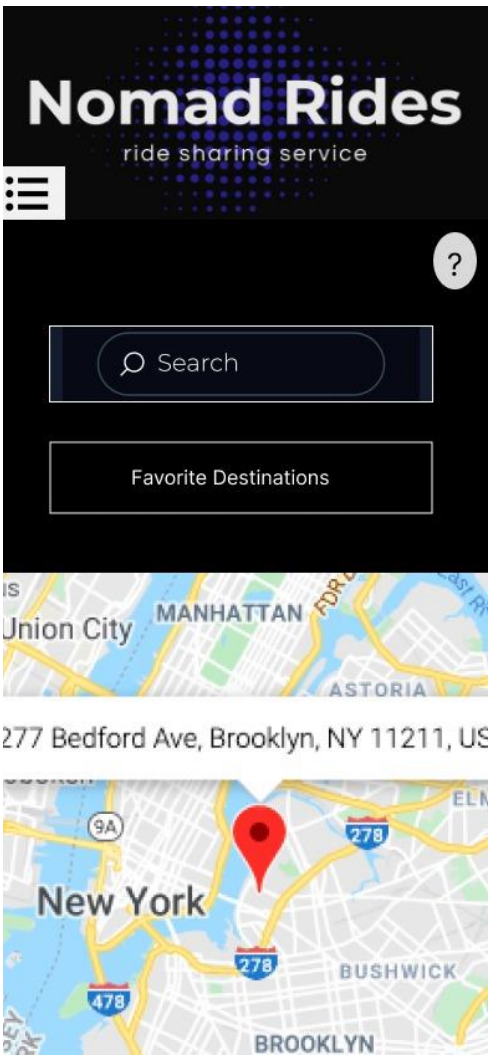
Change #3: Some suggestions we received for improvements were that the menu option position could be moved up a bit higher as it feels distracting.

Change #4: After some discomfort faced by users in task 3 and the trend in the error, we also understood that users are accustomed to finding chat support within the menu options, but we added a “?” on the right side rather than the menu option. We plan on implementing a chat support option inside the menu as well along with the “?”.

12 High-Fidelity Prototyping and Testing

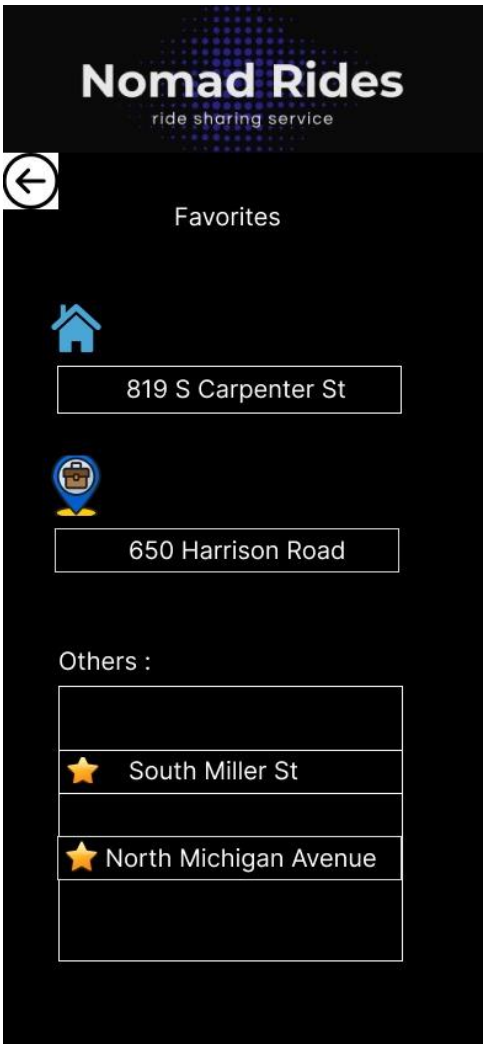
In this section we will discuss how high- fidelity prototypes are created and how it is important to finalize the final design for our app. In order to create our high- fidelity app we have used Invision app to create a high- fidelity prototype.

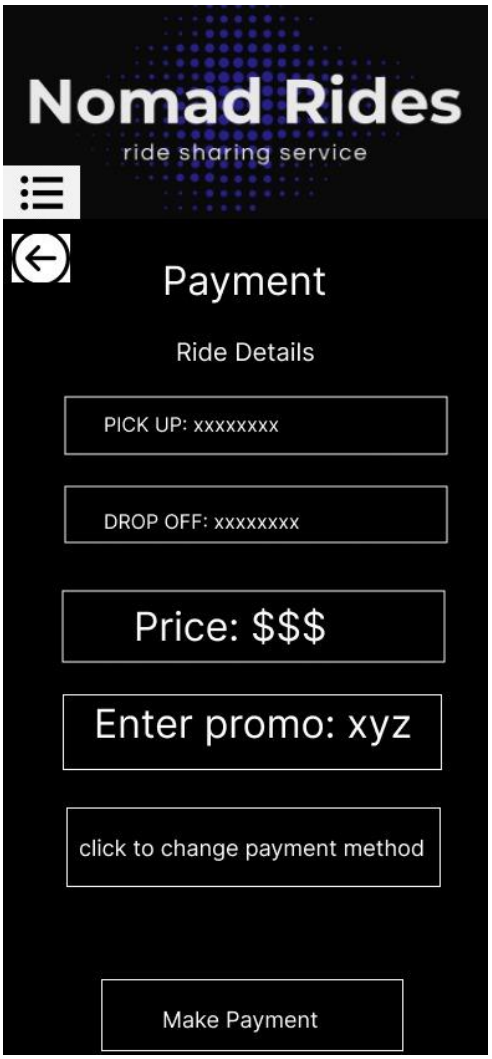
12.1 High-Fidelity Prototype



Home page

Select a car





Favorites Page

Payment Page

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12.2 Implementing Design Changes Based on User Feedback

User Feedback based on Low-fidelity prototyping and the improvements in Interactive Pixel-perfect Prototype :

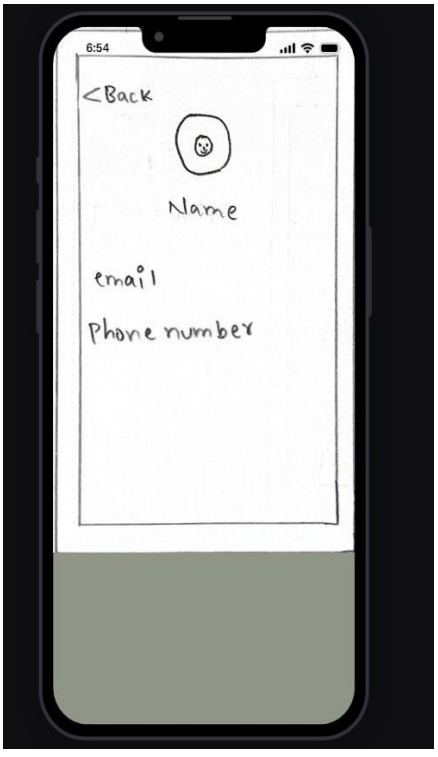
After conducting a user feedback session with 3 users, we have made quite a few improvements to increase user experience and also make users stay connected with our application throughout their interaction. We have prepared the low-fidelity prototype with a total of 16 screens and then based on the user feedback we have made the interactive pixel-perfect prototype to 29 screens to make the app more interactive from one screen to another. And we will be mentioning the changes in increasing order.

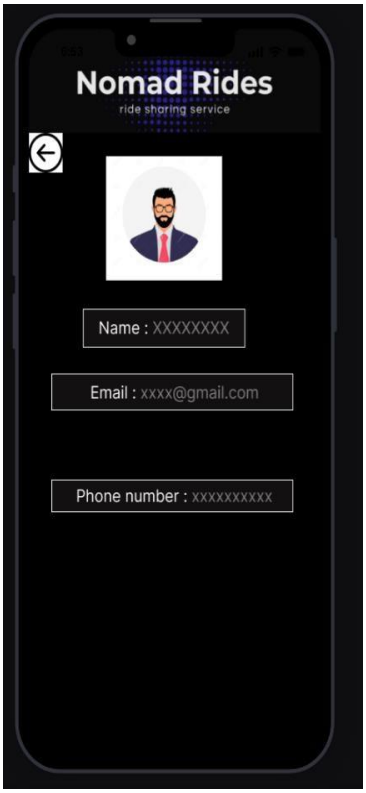
Note: Based on the user feedback we have only mentioned the screens that have changed.

We have prepared the Interactive Pixel-perfect Prototype with 29 screens. Below are the changes that we have made:

Based on user feedback we have added an app bar and a menu button which makes it easy for the user to navigate through the application into our Interactive Pixel-perfect Prototype. (This feature is implemented in all the screens after user suggestion).

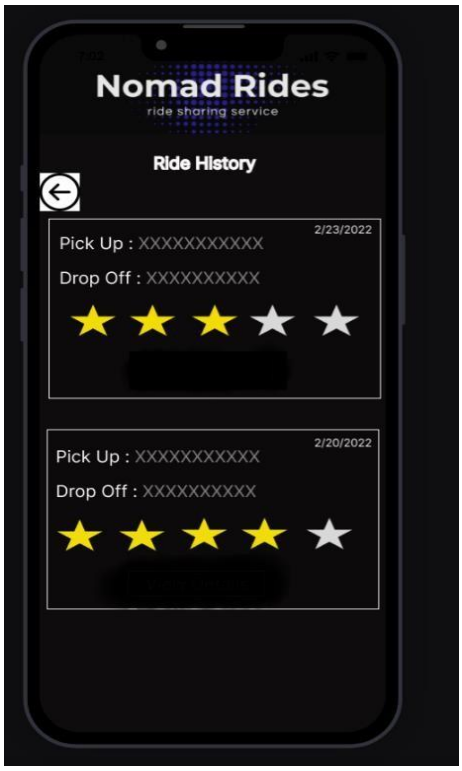
Users suggested the data to be confidential even if they are the ones using the application and to make it only accessible after face identification or something similar. Hence we added “XXXXXX” for name, email and phone number to respect the privacy of the user and this data can only be viewed after identification.



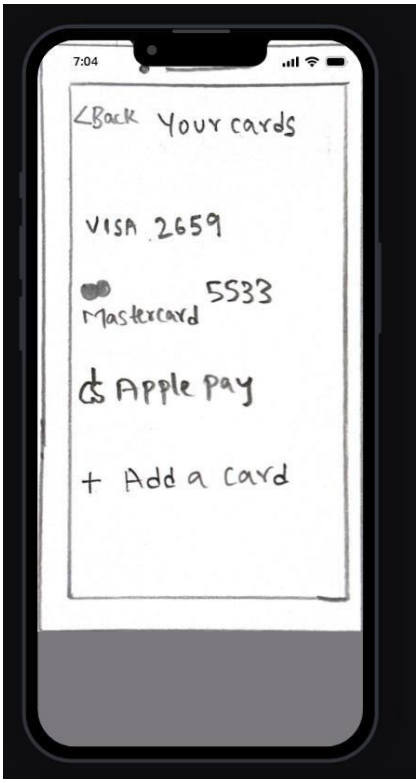


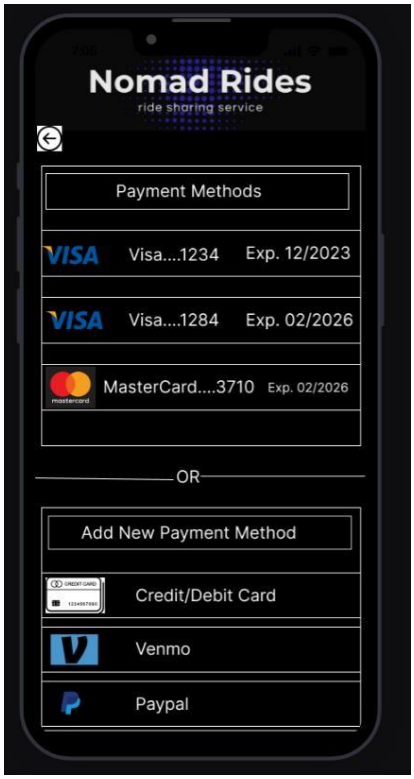
In the low fidelity prototype we did not have the date mentioned for the ride history and also user’s rating for that ride. User’s suggested we let them know when the ride was and something to remind them of their ride experience . Hence we added

date and user's rating in the form of "5 stars" in our Interactive Pixel-perfect Prototype.

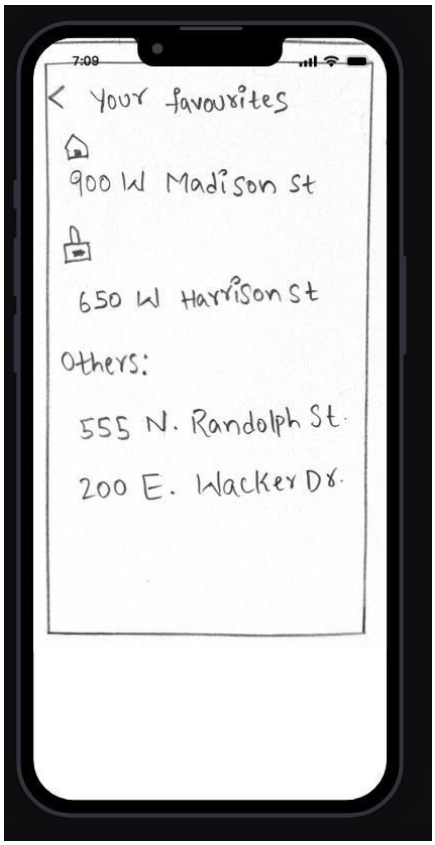


In our low fidelity prototype we have provided user's with the option to add a new debit or credit card. After user's feedback we have provided more flexibility to the user in the forms of payment. Therefore , in our Interactive Pixel-perfect Prototype we have added other payment options like "Venmo" and "PayPal", providing more options for the user to choose.



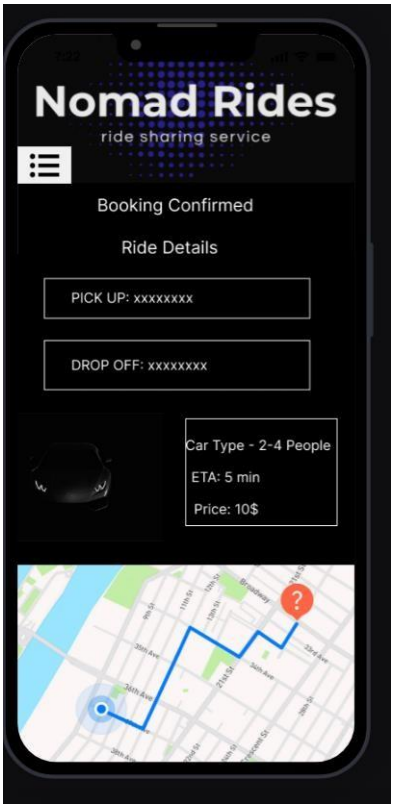


In the “favorites” screen, previously in our low fidelity prototype we did not add the star symbol to the user's “other” favorite destinations. To have a much cleaner look and easy to understand for the user , we have added star symbols to the favorite locations of users.



In our Low fidelity prototype we didn't have proper navigation to the options that are available in the "help" section. But we have added more screens in Interactive pixel-perfect prototype to enhance the user experience.

In the Low fidelity prototype we have just mentioned the car options in the car section but when the user is on the "Payment page", the user feels confused on what car they booked as the design did not show the selected car option. In order to avoid this confusion we have incorporated the selected car option in the payment page in the Interactive pixel-perfect prototype. The Interactive pixel-perfect prototype will display the car type which the user have selected. This has improved the user experience.



13 User Testing

This section is about user testing, which is a process of evaluating a product, service, or system by testing it with real users. In the following discussion, we will talk about the importance of user testing, how to plan and conduct user testing, and analyze the results.

The output of user testing can provide valuable insights into user behavior, preferences, and needs. It can help identify usability issues, validate design decisions, and inform future product development. User testing can be conducted using various methods, such as moderated or unmoderated testing, remote or in-person testing, and qualitative or quantitative testing.

We have conducted something called usability testing and also followed something called think aloud protocol. Usability testing is important because it provides valuable feedback and insights on user behavior, preferences, and needs. By conducting usability testing, someone can identify any usability issues, validate design decisions, and improve the overall user experience of a product. Usability testing can help a product team understand how users interact with a product and where they may struggle. It can also help identify areas where users may not find a product intuitive or easy to use. With this feedback, product teams can make

necessary adjustments to improve usability, which can ultimately lead to higher user satisfaction and adoption rates.

By conducting usability testing with the think aloud protocol, someone can learn about the user's thought process and understand how they interact with a product. This method involves asking users to verbalize their thoughts and actions as they navigate through a product, which can provide valuable insights into user behavior and decision-making.

Through usability testing with the think aloud protocol, someone can identify usability issues and pain points in a product that may not be apparent from other testing methods. They can also validate design decisions and gain a better understanding of user preferences and needs. Overall, from this method we have learned improve the usability and user satisfaction of a product by addressing user feedback and making necessary adjustments.

13.1 Participants

6 Participants have participated in the user testing. In those 6 participants five are male and one is female.

13.2 Method

Before we get into the improvements that need to be implemented, here are some stats of our users and the evaluation. The first two users successfully completed the first two tasks but surprisingly both of them faced some hassles in accomplishing task three which is reaching out to the customer support. Both these users accomplished the first two tasks in around 15 – 20 seconds whereas the third one took longer than 30 seconds.

When we conducted the user testing for the third and fourth users both the users found every task easy and completed the task within a 10-25 seconds time frame. User 3 had suggested us to change the background color of the app so that it doesn't affect the color of the car. This will be even easier for the users to view the car they have selected. User 4 had taken some time to go to the car selection page as the user took some seconds to analyze what is there in the home page of the app.

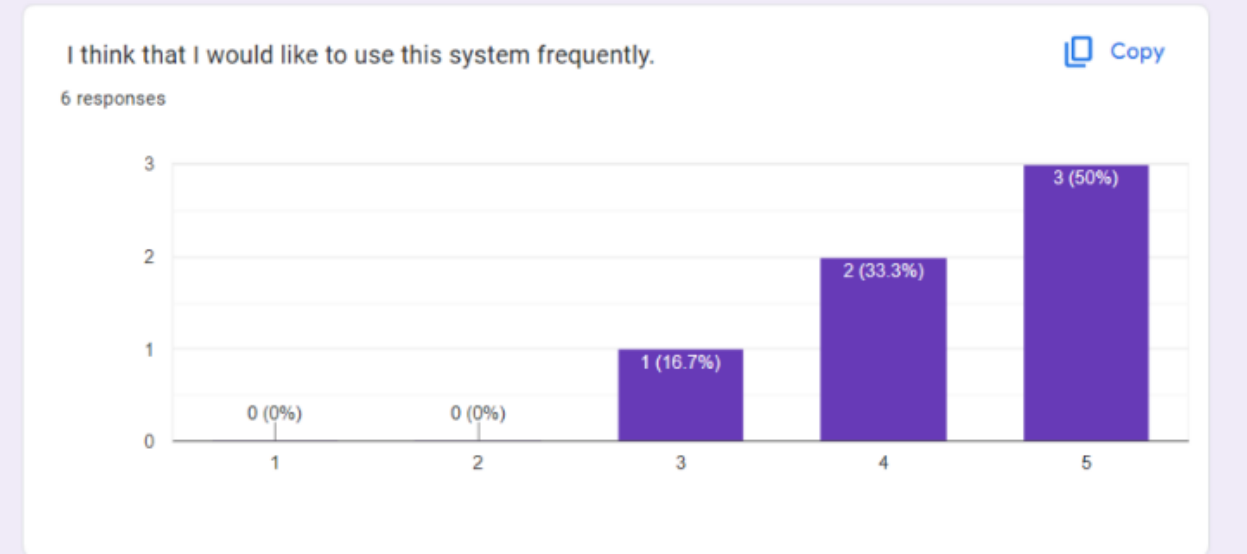
Also, user 5 and user 6 had no problem in navigating to task 1 that is to add a payment method screen. And both of them find it easy to use since they have already been using some apps which follow a similar interface structure in order to

add a new payment method. Whereas user 5 and user 6 have pointed out some issues with task 2 that is select a car page. The issue they pointed out is that to change the font and background color of that screen because the images of cars are blending into the background color and the font is two small so it took them around 40 seconds to understand what exactly is that screen supposed to do. However, user 5 had difficulty in navigating to task 3 that is to go to the customer support page. Therefore, it took him 40 seconds to navigate to task 3.

From our questionnaire I can conclude that the majority of the people did not find our system to be complex and in fact all of them found it easy to use. But not many people strongly agreed on using our application frequently.

13.3 Findings

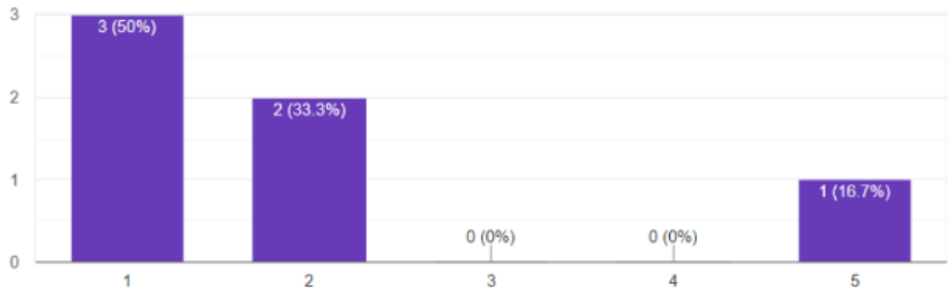
The total success rate of our entire list of task assignments was 73%. Around 80% of users were willing to use this application as their default rideshare go-to. One concerning statistics we received 60% were moderately leaning towards having technical assistance whilst using this application. These were some of the highlighting statistics which we will take a deeper look at and add in our improvements mentioned below effectively.



I found the system unnecessarily complex

Copy

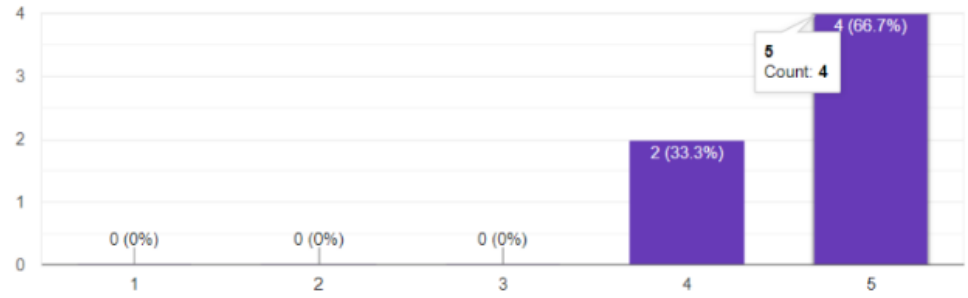
6 responses

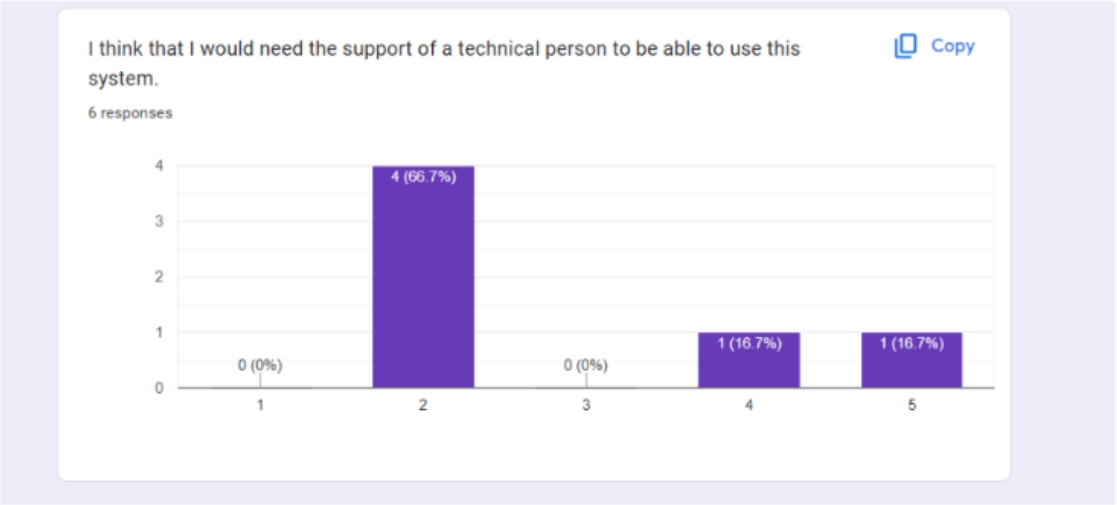


I thought the system was easy to use.

Copy

6 responses





13.4 Design Changes

Suggestions and improvements:

Some suggestions we received for improvements were that the menu option position could be moved up a bit higher as it feels distracting. From user 3 we have received a suggestion of adding a password section when users are trying to sign up for the app. Also, another suggestion we got is to change the font and font size and also change the background color of the “select a car” page. After some discomfort faced by users in task 3 and the trend in the error, we also understood that users are accustomed to finding chat support within the menu options but we added a “?” on the right side rather than the menu option . We plan on implementing a chat support option inside the menu as well along with the “?”.

14 UI Implementation

In this section we will discuss how we have implemented the UI for our app. UI Implementation is a crucial step in the development process that involves turning the visual design of the user interface into an interactive and functional interface that users can interact with. In this section, various aspects of the UI design, such as layout, typography, color, graphics, and animations, will be discussed, and the

implementation process will be explained. The output of the UI Implementation section will be a fully functional and user-friendly interface that meets the user's needs and satisfies the design requirements.

In order to develop this app, we did not use any specific web framework to implement our web application's user interface, we have relied on HTML, CSS and JavaScript as the core technologies. We as a group believe that this approach is perfectly valid and common for building web applications, as these technologies offer a robust foundation for creating dynamic and responsive user interfaces.

The internal implementation of a web application's user interface involves various architectural decisions that can significantly impact the application's performance, scalability, and maintainability. To build a robust and responsive user interface, we used the Model-View-Controller (MVC) design pattern.

The MVC pattern is a software design pattern that separates an application's logic into three interconnected components: the Model, View, and Controller. The Model represents the data and business logic, the View represents the user interface, and the Controller handles user input and updates the Model and View accordingly. By separating these components, the MVC pattern promotes modularity, flexibility, and reusability, making it easier to maintain and update the application over time. In our implementation, we followed the MVC pattern by separating the application's logic into these three interconnected components. The Model contained business logic, which was responsible for handling data requests. Since we are not working with backend, we did not worry much about the model component of the MVC pattern. The View was responsible for rendering the user interface using HTML, CSS, and JavaScript, and the Controller handled user input and updated the Model and View accordingly. To situate our discussion, we can refer to the concepts discussed in the UI Software Architecture class slides. The MVC pattern is one of the most widely used software design patterns for building user interfaces. It offers a clear separation of concerns between the data,

presentation, and user interaction layers, making it easier to modify and maintain the codebase.

Overall, we chose the MVC pattern because of its proven effectiveness in building scalable, maintainable, and flexible user interfaces. By separating the application's logic into three interconnected components, we were able to create a robust and responsive user interface that met the project's requirements

Appendix A: Discussion Guide

Discussion Guide

Madhava Sai Yamike, Anurag Reddy Yerrabotula, Sai Varshith Reddy Kuruguntla

Focus Statement (include research context and target users)	Understanding the financial exchange trends between a rideshare application company and a key stakeholder the driver. Understand the current thought process of rideshare application users by conduction of proper research analysis and to gain information if the hike in price for rental rides have been acting as a catalyst for the users to drift away from these rideshare applications. Also find out the modifications the users would prefer from an application of this type per say.
Discussion Guide	
- Introduction	Hello, we are a group of 3, Madhava Sai Yamike, Anurag Reddy Yerrabotula, Sai Varshith Reddy Kuruguntla. Today we're here to do a focus group for our User Interface Design class project. This focus group is here to discuss your rideshare experiences and opinionate on the unusual trends of ride surges. Anurag and Madhava will facilitate the conversation, while Varshith will record your answers. If it is okay with all of you, we will also be audio recording this focus group so that we can refer to it later. The audio recording will be kept confidential. This focus group will be about 45 minutes long. Please share your experiences and thoughts, and feel free to add on to others' thoughts as well. Are there any questions before we get started?
- Key demographic questions	Can you introduce yourself including: 1. Name 2. Gender 3. Age 4. Profession (What do you do for a living? Or are you a student?) 5. Annual Income (Based on your preference)
- Warm-up questions (factual answers)	1. How often do you commute? What is your preferred mode of transportation? 2. How strict is your budget for using a rideshare application? 3. What are the current apps that you use for ridesharing that you use or know of? 4. Would you prioritize reaching the location on time or the price offered for the ride?

- Main questions (open-ended discussions)	1. Tell us about how you commute from one place to another? 2. What do you prioritize when choosing a rideshare application? 3. Tell us about a time when you had an easy time finding the appropriate ridesharing app for you. 4. What are the factors that helped you make good decisions about your rideshare? 5. Tell us about a time when you had a difficult time finding the right ride for you. 6. What hindered you from finding the right rideshare application? 7. How do you save money on ridesharing apps? What rewards programs or membership programs with any ridesharing apps you use, if any?
Design Probe(s)	Uber, Lyft - Have you used any of the above apps and what was your experience?

Appendix B: Transcripts and Signature Sheet

Focus Group 1

Modulator: Anurag Reddy Yerrabotula, Varshith Reddy Kuruguntla

Transcriber: Madhava Sai Yamike

Anurag (Modulator) [0:00] Hello guys so we are group of three and currently we are doing CS422 discussion guide which is the deliverable 2 for the course project we are a group of three our team members include Madhava Sai Yamike, Anurag Reddy, Sai Varshith Reddy today we are here to do a focus group for our user interface design class project this focus group is here to discuss your right share experiences and opinionate on the unusual trends of fried surges so first we'll understand the focus statement so our focus statement here is understanding the financial exchange trends between application between a rideshare application company and the key stakeholder and the driver understanding the current thought process of rideshare application users by conduction of proper research analysis and to gain information if the icon price for rental rates have been acting as a catalyst for the users to drift away from the rideshare application also find out the modifications the users prefer from an application of this type person so now first we'll be starting with the introduction of the focus group here we have like three members in our focus group Hisham, Surya and Apoorva so first we'll start with their introduction.

Hisham [1:12] Hello my name is my name is Mohammed Hisham and I am currently a student at University of Illinois at Chicago my gender is male and I am 21 years old right now I am currently a student however I work on campus as a TA and as an IT specialist and my annual income as a student worker would be around $12,000 to $13,000 U.S. dollars

Surya Gowda [1:34] uh my name is Surya Gowda I'm a male my age would be 22 my profession is a student and I don't have any annual income.

Apoorva [1:41] Hi my name is Apoorva I'm a female my age is 21 uh my profession is a student and I don't have an annual income

Anurag [1:52] OK now we got the introduction of the focus group now we'll be getting into the warm up questions so Hisham tell me how often do you commute what is your preferred mode of transportation

Hisham[2:01] So being a student I commute pretty often in the week and my most preferable mode of communi.. mode of transportation for commute be uh taking the train or the bus public transport basically but at times I usually also tends to I usually also tend to you know take use Uber or basically all those kind of rideshare applications as well

Anurag [2:22] so how often do you commute what is your preferred transportation method

Surya Gowda [2:27] I usually commute like two to three times a week whenever I go back to the suburbs or anything and my preferred mode of transport to either be the CTA or the metro and then in the city I'll use like the bus or like lyft or Uber

Apoorva [2:41] so I do not have classes on Mondays and Fridays I just commute during the rest of the week I normally drive from the suburb and whenever I'm not able to that's when I just take Uber

Anurag [2:53] OK so guys now how strict is your budget for using the ride share application like Uber or Lyft or any other application like how strict is your budget

Hisham[3:02] honestly being a student and then paying for more than half of my expenses myself I would say the budget is pretty tight on my end personally but again usually at times when it's late in the night or when it's not feasible to use you know the public transport at odd times of the day I anyways tend to use it and you know sometimes it's a little inconvenient but you know resort to it sometimes

Surya Gowda [3:28] I keep aside like around $20 - $30 per week from any use of Uber Lyft

Apoorva [3:38] I'm pretty flexible with my budget because uh I think safety is the most important thing to me and it's important of like get home safe and public transportation isn't always the best means for that so I'm pretty flexible with my budget

Anurag [3:53] OK so guys now what are the current apps that you guys are using for the right sharing

Hisham [3:59] I personally just use either Uber or Lyft

Surya Gowda[4:02] yeah same I just use other Uber Lyft

Apoorva[4:05] Either Uber or Lyft

Anurag[4:07] Would you prioritize reaching the location on time or the price offered for the ride

Hisham [4:12] honestly I would prioritize reaching the location on time and I would be ready for compromise and the price for that

Surya Gowda [4:19] yeah I prefer like prioritizing the location over the price as well

Apoorva[4:23] I think are reaching at the location and time is most important to me as well

Anurag [4:29] OK now can you guys tell us about how you commute from one place to another

Hisham [4:34] as I as I mentioned again mostly use public transport and you know at times I also resort to Uber and Lyft

Surya Gowda[4:44] yeah I used public transport as like my primary method of transportation or I just ask a friend for a ride or something

Apoorva [4:52] I do own a car so if I don't I don't have my car on me I just use public transport or Uber

Anurag[5:00] So what do you guys prioritize when choosing the right share application what are the factors you consider like what are the prioritizations when you guys are choosing a particular rideshare application

Hisham[5:09] personally I would say that having more information on the driver and being able to connect directly and having uh you know more driver reviews more ratings is what really matters to me because that that signifies safety and anything that seems a little shady I tend not to you know attend not to resort

Surya Gowda [5:29] i was just like look between both the apps like uber and lyft riders prioritize which ones cheaper and then i just book it

Apoorva [5:36] I tend to use Lyft because they have the wait and save option but if the Uber is cheaper then I just go for that and for me safety is very important, so I do tend to check like the driver ratings

Anurag [5:49] OK guys now tell us about the time when you had an easy time finding the appropriate rideshare app for you

Hisham [5:56] oh this was one time when I actually most of the time when I usually book book a cab using Uber or Lyft within the city it's much faster because people are because drivers honestly tend to you know take up short rides for higher tips or no tips at all and that those were times you know when it was a short like 10 to 15 minute right my easiest time booking a cab like having an experience

Surya Gowda[6:20] yeah I find the easiest to book it whenever I'm like in like downtown and the downtown part of the city because they usually just like a minute or two minutes away

Apoorva[6:29] If I'm moving around in the city like on campus to downtown or something like that I feel like that's the easiest time

Anurag[6:36] so guys what are the factors that helped you make good decisions about the right share application

Hisham[6:45] The two factors as I mentioned once before uh the information about the driver and the more transparent the application is with the user and secondly obviously you know the pricing as Apoorva mentioned you know the pricing on either of the absolute whichever is lower and feasible that's what I check

Surya Gowda[7:01] I just check like how like the reviews are unlike the apps and whichever one I prefer to use would be the factor that I would make

Apoorva[7:16] sometimes if I do like book on lyft they do have a wait time so um if it's faster on Uber and really to get somewhere on time then I switch between both the apps and then just cancel whichever right is slower and I think pricing is also very important to me

Anurag[7:32] can you guys tell us about a time or a situation when you had a difficult time finding the right ride for you

Hisham[7:40] ohh yeah so I was visiting a family this one weekend back in the suburbs which was about an hour and a half away and I had to come back home this was Sunday night which was around around close to midnight and I had a very hard time finding a driver ready to drop

me from the suburbs to the city during the midnight and you know my rides kept on getting cancelled times but mostly this scenario usually never happens it's a very rare scenarios

Surya Gowda [8:06] so one time I um a job interview for Amazon and it took me around 30 to 40 minutes to find the correct Uber so that will be like one of my hardest times finding ride

Apoorva[8:21] this one time I was at a concert in the city and right after the concert there was a lot of people trying to get a ride share app as well I mean using the ride share app to book a ride as well and it was hard for me to like find a ride on time like get home at a reasonable time as well

Anurag[8:37] OK uh what hindered from finding the right rideshare application

Hisham[8:42] could you repeat the question

Anurag [8:43] what hindered you from finding the right ride share application

Hisham[8:49] um basically uh I mean I didn't quite understand the question

Anurag [8:54] yeah so basically what hindered you from finding the right ride share application

Hisham[9:00] OK so I would say basically at times you know when you're at hotspot like an airport or a restaurant where there's an event happening or something and there are multiple people booking the cab at a time the price surges up so prices that are usually on an average around like $20 to $30 for example go up to $120 -$130 and there have been times where I have you know been like not you know that's that's I'm not I'm not gonna settle for that and I have so this is like public transport measures and stuff so I would say that would be one aspect that you don't like about the ride share applications

Surya Gowda[9:35] yeah as hisham stated that it will be the same case for me when I was just like a price surge that endures me for making it the right choice on my ride share application

Apoorva[9:43] yeah I agree with both Hisham and Surya yeah I think that's the same reasoning for me as well

Anurag[9:48] OK so guys how do you save money for your ride sharing apps like are the current ride sharing apps or providing any membership programs or any promos that you can use or you directly saving money

Hisham[10:00] for for instance like actually being a student being an undergraduate student lyft happened to offer a discounted price for their premium membership last year and I would say that's probably the only promo I've ever come across in one of the ride share applications but apart from that you know depending upon your usage they keep they keep sending you $5 to $10 of promo code every now and then so I think yeah that's pretty much it

Surya Gowda[10:27] yeah I get some promo codes as well sometimes from like lyft and for some time I had the Uber one membership as well so I was getting like discounted prices on my rides as well

Apoorva [10:39] yeah, I have the Uber one membership which also offers me a discount on Uber eats they also offer like top rated drivers only and a 5% discount on all rides

Anurag [10:50] guys now I'll be telling the few common applications that we have encountered so as you guys already told so basically there are two rideshare applications that are currently trending one is Uber and the other is lyft so tell me have you used any of the above apps and what was your experience with those applications

Hisham[11:10] yes as I mentioned I have used Uber and Lyft both for for for multiple events and stuff and I would say with personal experience that lyft tends to have higher prices compared to Uber most of the time and the drivers also have I have personally encountered on lyft there's not much information as much as compared to the one that Uber provides you with so Uber has more transparency I feel like I tend to mostly use end up using Uber for my travel

Surya Gowda[11:43] yeah I've used both Uber and Lyft and I prefer Lyft most times because they have good offers on even black like their premium versions of the rides rides as well

Apoorva[11:57] I use both Uber and Lyft and right now have Uber once so I tend to use Uber Uber more but previously I used to like check how much the wait and save was for lift and if that was cheaper I would just take that and if Uber was cheaper I would just do that

Anurag[12:11] OK guys thank you for your time and your time will be compensated

Hisham[12:16] thank you so much

Surya Gowda[12:17] thank you

Apoorva[12:18] thank you

Focus Group 2

Varshith (Modulator) [00:00:01] Alright, welcome to CS 422 Discussion group play. So, this is for my project which we are going to implement in a couple of months. So, I just want to ask a few regular questions to all three of you. And based on that, we will improve on our research work. So, starting off, could you introduce yourselves, including your name, gender, age and profession, starting with Umair.

Umair [00:00:32] Profession. My name is Umair and I am identified as male. My profession is a designer, industrial designer, and what is the last question again.

Varshith (Modulator) [00:00:46] What's your age?

Umair [00:00:48] My age is 28.

Varshith (Modulator) [00:00:50] Right. And Mehul. What is your name? Mention your name. Gender, age and profession, please.

Mehul Gupta [00:00:57] Hi. So my name is Mehul Gupta, and I'm, like, majoring in mechanical engineering. And I'm a student at UIC and my age is 22. And identify myself as a male.

Varshith (Modulator) [00:01:09] And you ?

Alvar [00:01:11] Hi, my name is Alvar. Identify as a male. I'm a student. My age is 22.

Varshith (Modulator) [00:01:18] All right. Let's start the conversation now. So starting off with a basic question. So I just want to know, like, how often do you guys commute to the university? So, Umair.

Umair [00:01:34] Pretty much every day. And what do Friday?

Varshith (Modulator) [00:01:37] What is your preferred mode of transportation?

Umair [00:01:42] Public transportation.

Varshith (Modulator) [00:01:43] Yes. Okay. And do you prefer using rideshare applications?

Umair [00:01:51] Huh?

Varshith (Modulator) [00:01:51] Or public transportation.

Umair [00:01:55] Repeat the question again.

Varshith (Modulator) [00:01:57] Do you prefer rideshare applications or public transportation more? Applications like Uber and Lyft?

Umair [00:02:07] Uh huh.

Varshith (Modulator) [00:02:08] Which mode of transportation do you prefer?

Umair [00:02:13] I guess, public transportation because they're reliable. I'm not really sure about the ridesharing.

Varshith (Modulator) [00:02:20] Right. And Mehul.

Mehul Gupta [00:02:22] So I commute almost daily to campus. Like my house is right behind the campus I usually walk. And regarding rideshare apps, I don't really use rideshare much, but sometimes I do use them for basic goods and stuff because they have a membership. So yeah, and I usually use public transportation.

Varshith (Modulator) [00:02:45] So. Yeah. All right. And Alvar.

Alvar [00:02:48] I use public transportation a lot. And the other question?

Varshith (Modulator) [00:02:54] Would you prefer using rideshare applications or a public transportation?

Alvar [00:02:59] Public transportation, Because for the ridesharing application, it costs a lot and the public transport is cheaper.

Varshith (Modulator) [00:03:06] All right. Sounds good. So how strict are you with your budget just for traveling and stuff? Rideshare or commuting?

Umair [00:03:18] And. To only USC or anywhere.

Varshith (Modulator) [00:03:23] A commute anywhere. Lake Orion, Chicago.

Umair [00:03:27] Uh. The open question I never really thought about by sitting it out as much as I do for other stuff like groceries and my shopping. I think it's pretty open. Whenever needed. I don't really have a specific budget for my commute and I don't want to spend a lot as well. So I do have a budget in mind, but never on a sheet that I'm doing.

Varshith (Modulator) [00:03:53] All right. Sounds good. And would you prefer using budget? Like having a budget? Do you have a budget for write your rideshare application use or commuting?

Mehul Gupta [00:04:04] So for me, like, I don't I don't really have a budget, but like we have a lot of options in today's time. So whatever is the cheapest, I usually go with that and other.

Alvar [00:04:18] But I don't have a budget of natural as announced that I go for the cheapest.

Varshith (Modulator) [00:04:23] Yes. So one thing I observed as all the three people here prefer using public transportation. And I understand that. Right. Transactions are expensive at some point. So would you guys move to rideshare applications using it more often if the price is lower by 50%, you may?

Umair [00:04:51] I think I have enjoyed venturing out and all that I can think of my experiences with that compared to my public transportation experience. And if it was cheaper, I would definitely get my ride sharing because it offers a personalization experience to you, honestly. But yeah, if the prices were competitive, I would definitely be down for sure. Ah yeah, right.

Varshith (Modulator) [00:05:15] And um.

Mehul Gupta [00:05:16] I think I agree with Umair because our first preference is definitely safety and like a clean environment to travel and definitely rideshares are clean. So yeah, if it's cheaper then I'll go with Ride, Share and others.

Alvar [00:05:32] I guess I definitely use my rideshare applications if it is cheap.

Varshith (Modulator) [00:05:36] Right. So could you name it? I know you guys are not using rideshare applications as of now like a lot but could you name one rideshare application that you would prefer over others maybe.

Umair [00:05:50] I have only used Uber and Lyft, so I would always prefer it over others. I always found Uber cheaper than Lyft. Almost always.

Varshith (Modulator) [00:06:01] Right. Would you prefer reaching the location on time or the price of a leg for the commute?

Umair [00:06:13] That's a situational question to me. Sometimes I needed to be there on time, so I did not mind paying extra. And sometimes if I'm not in a hurry, I don't mind about the times. I would wait and see if there's. There was an option that is like, Wait a slave check. I'm not in a hurry. I would just wait there. But if I am, then I don't mind being extra.

Varshith (Modulator) [00:06:36] Right.

Mehul Gupta [00:06:37] And for me, I usually use Lyft instead of Uber because in Lyft there's bicycles as well. So I use Lyft more.

Varshith (Modulator) [00:06:51] And Alvar.

Alvar [00:06:52] I use Uber a lot because it's cheaper for me.

Varshith (Modulator) [00:06:56] Right. And would you prioritize reaching the location on time or just the price offered for the commute?

Alvar [00:07:05] Well, it depends on the situation. If I want to be on time, I would not pay heed to the price.

Varshith (Modulator) [00:07:13] All right. So moving on to the next section of questions. Tell us one time when you had an easy opportunity, like easy time finding the appropriate ride sharing app for you. So, like, tell me about a time when you guys found, like, good deals cheaper than usual.

Umair [00:07:37] Huh? I think it was from Niles and it's not a rush hour and the weather is good and not too bad. So I think that's when I found it mostly suitable and very convenient in terms of price. So I think when it's not rush hour and the weather was good, that's when I found it was mostly cheaper.

Varshith (Modulator) [00:07:57] Right.

Mehul Gupta [00:07:58] And for me, the prices are usually the same for the same destination. Like, whenever I check the prices, they say it's the same. But yeah, sometimes if it's not the rush hour, it's a bit cheaper.

[00:08:17] Usually during evening I find Uber cheaper and get good deals

Varshith (Modulator) [00:08:18] Oh, Did you ever experience, like, a heavy surge in prices? Any moment when you had that, like, shock when you looked at the price, Umair?

Umair [00:08:30] I think most of the time the surge was not super shocking, but I think once it was two and a half as much then I would usually get.

Varshith (Modulator) [00:08:46] And what do you think the reason could be for that?

Umair [00:08:51] Yeah, I think it was just a terrible time. I think it was past midnight.

Varshith (Modulator) [00:08:56] Right. And was the location right or sketchy or busy or were there any other factors like that?

Umair [00:09:05] That is a good question. It was actually the West suburbs I was commuting from Niles to my dorms. So, um, I think the neighborhood was cool, but it was just terrible timing and kind of far too.

Varshith (Modulator) [00:09:20] Right.

Mehul Gupta [00:09:21] And yeah, so for me, even I experienced something similar. So when I was traveling from neighboring suburbs to Chicago, the prices were very high. Like, I did not expect that. And the reason for those certain places, I think, is the distance as well as the time at which I was traveling.

Alvar [00:09:42] Yeah, I've experienced the same thing too, from previous rides too. Uh, it was about a movie called Showtime and the rush was heavy.

Varshith (Modulator) [00:09:48] Oh, right. And did it take, like, a lot of time for the ride to be there?

Alvar [00:09:55] To the Location? A lot.

Varshith (Modulator) [00:09:57] So what exactly hindered you from Finding the right rideshare application? Question is pretty much open-ended. You can answer, like, anything. Any point.

Umair [00:10:12] I'm sorry. Could you repeat that again?

Varshith (Modulator) [00:10:14] Like, what hindered you from finding, like, the right rideshare application? Because I see all three of you prefer public transport. So just like you said, other

than prices, were there any other reasons that hindered you from using, like, a rideshare application or why you don't think a specific application is not right?

Umair [00:10:34] Apart from price? I. I. I don't see any reason I would not use it if it was as competitive as public transportation. I love my experience every time I actually ride using the apps. But other than that, I. I don't know. Other than that, um. Yeah. Being too pricey compared to public transportation. I don't think there is any reason I would not choose uber or Lyft.

Varshith (Modulator) [00:11:12] So it's just like you said, crazy. Do you know of any ways you could, you know, slip through and save money on these rides? Or did you ever use things like promos and so on. Um.

Umair [00:11:29] Oh, I lost you. Could you repeat that?

Varshith (Modulator) [00:11:35] So I'm asking you, like, did you ever try to, you know, use promos and try to save money on these rides ? . Did you find any of those promos valuable?

Umair [00:11:48] Oh, yeah. Yeah. For example, for the first time you use it, you get a really good promo click on a new customer. I remember that one was really good. And then there were like 50% off promos, which I took advantage of and use that instead when I had to commute quite late at night from UIC to my dorm. Um, but then there it, it's a normal day, daytime, it is safer to commute using public transportation, so I would just choose that instead of uber though.

Mehul Gupta [00:12:26] And yeah so a lot of times I see like promo codes popping on rideshare apps because it's so competitive. these apps like Uber and Lyft, they give certain promo codes, so I definitely use them

Varshith (Modulator) [00:12:56] So my question this time is tell me a time where it was really difficult to find a Uber or lyft ride.

Umair [00:13:11] I think I can recall one experience. It was morning Snowy and I wanted to go somewhere, but the ride was taking lot of time . I discussed with the customer service but it was still taking so much time, like about 20 minutes to come over. That would not actually be any better for me. So I actually chose public transportation instead just for the reason they were taking so much time, because it was I think it was super snowy. It was morning of Sunday.

Varshith (Modulator) [00:13:51] Oh, did it? So as you said, like it was really taking a long time Did you get any compensation for the time taken, in some form?

Umair [00:14:06] Oh, no, no, no. I was still charged the same amount I was shown at the beginning.

Varshith (Modulator) [00:14:12] Okay.

Mehul Gupta [00:14:13] I experienced something similar. So once I got to the airport and I booked an Uber, but it was taking lot of time to find the ride and the drivers kept on canceling on me, so I couldn't use it that day. And that was public transportation over here.

Varshith (Modulator) [00:14:33] Did you get any compensation for all the wait and ride cancellations?

Mehul Gupta [00:14:38] No, I didn't get any compensation for that. Like they just canceled my ride. And even the customer service, they told me, like, you can book another one, but they did not give any compensation for it .

Varshith (Modulator) [00:14:49] And you Alvar?

Alvar [00:14:51] The other same thing happened to me during the rainy day and the prices were actually higher than usual.

Varshith (Modulator) [00:14:59] So that's that. Okay. And did you get any promos during that time?

Alvar [00:15:06] No.

Varshith (Modulator) [00:15:07] All right. So finally, my last question to you guys would be, so as you guys mentioned about few times you used rideshare applications, Uber and Lyft , could you rate each application?

Umair [00:15:21] So wait, oh, rate.

Varshith (Modulator) [00:15:27] Scale of five star, huh?

Umair [00:15:34] I would say four out of five for Uber and three and 4 & half out of five for lyft.

Mehul Gupta [00:15:42] And I would say three and a half for Uber and 4 for Lyft

Alvar [00:15:53] I'd say four for Uber or five to Lyft

Varshith (Modulator) [00:15:57] All right. So these are two set of questions I wanted to ask, and I just wanted to let you guys know, like, the purpose of this was we are actually building an rideshare application, which actually does reduce prices. So, one way which we are thinking to do this is having a membership plan for the drivers instead of having their cut taken for each ride. So usually what happens with Uber and Lyft is that, let's say it is for $15 for a ride , out of that driver has a cut , which is obviously $5 or $6 and the rest goes to the Uber or Lyft company. So what we are aiming to do is just have the $9 which are going to pay for the company, and the $6 that you're paying for the driver be left out, you won't be paying that because they'll be having a membership. So they will be paying a membership fee and hence this would also result in reduced prices. So would you guys prefer using an application like this over Uber and Lyft .

Umair [00:17:03] Sounds exciting. Yeah. I would want to try that.

Varshith (Modulator) [00:17:07] Almost half the price.

Umair [00:17:09] Wow. That's. That's a good deal, actually.

Varshith (Modulator) [00:17:13] Right. All right, so you're on board with our application then . Sounds good. And.

Mehul Gupta [00:17:18] Well, I'm. Yeah, This is something new. Like, I've never heard of this thing before, so definitely I'd be interested, I'm excited to try this thing when it comes out.

Varshith (Modulator) [00:17:28] All right? And Alvar .

Alvar [00:17:30] Yes, I definitely use it.

Varshith (Modulator) [00:17:32] Yeah. All right. So that's all. Once the application is ready and done, you guys would be the first people to test out the prototype.

Mehul Gupta [00:17:42] Let's go.

Varshith (Modulator) [00:17:43] Along with the buddy up.

Umair [00:17:45] Test.

Varshith (Modulator) [00:17:47] All right.

Mehul Gupta [00:17:47] Sounds good.

CS422 User Interface Design and Programming
Participant Signature Sheet

Submitted by:
[group designation]: [group member names here]

Participants: By signing this form, you acknowledge that you have participated in a focus group or user test for the above group related to the above course on the date indicated below.

Printed Name of Participant	Signature of Participant	Date of Participation	Printed Name of Participant	Signature of Participant	Date of Participation
Umair Yusufi		2/9/2023			
Mehul Gupta		2/9/2023			
Alvar Helmes		2/9/2023			

Group Members: please initial below to indicate that your group members acknowledge that you are aware that you are bound by UIC's honor policy in letting participants sign this form only if they have actually participated in a focus group or user test for the class as required.

(group members' initials)					

CS422 User Interface Design and Programming
Participant Signature Sheet

Submitted by:
[group designation]: [group member names here] Madhava Sai Yamike, Anurag, Varshith
17

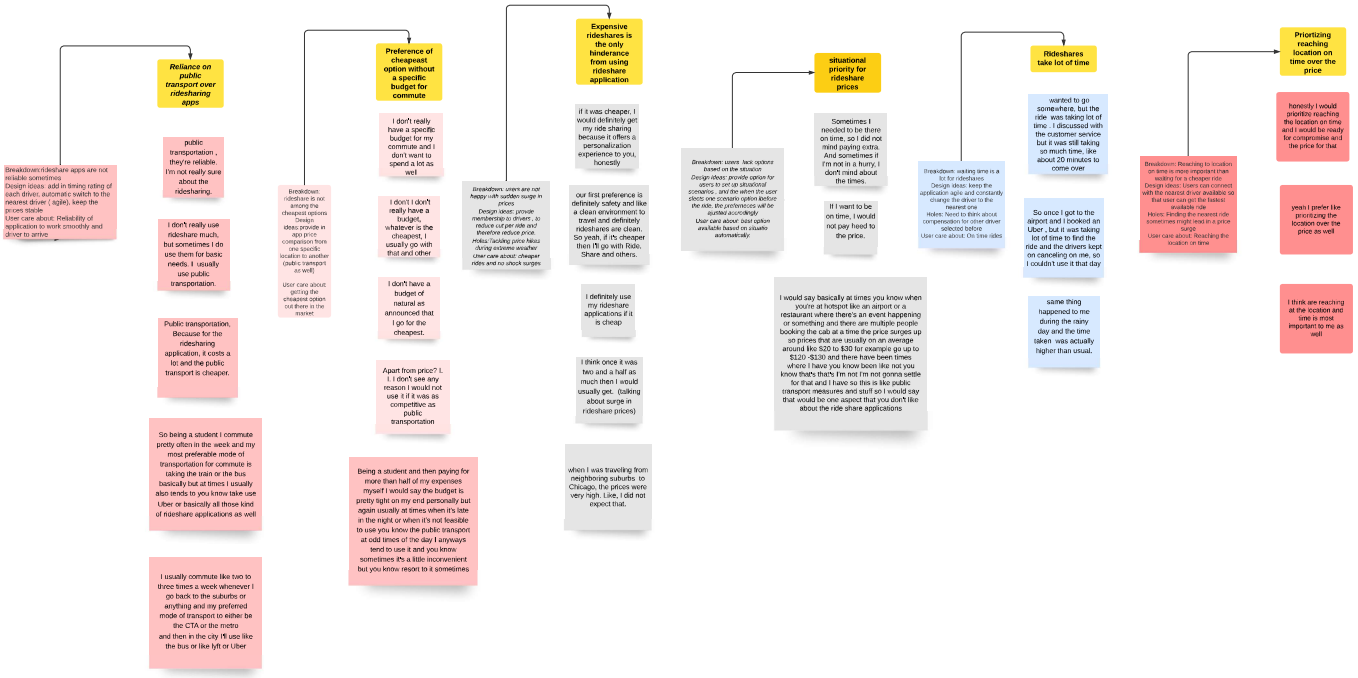
Participants: By signing this form, you acknowledge that you have participated in a focus group or user test for the above group related to the above course on the date indicated below.

Printed Name of Participant	Signature of Participant	Date of Participation	Printed Name of Participant	Signature of Participant	Date of Participation
Surya Gowda					
Apoorva Tatinani					
Hisham					

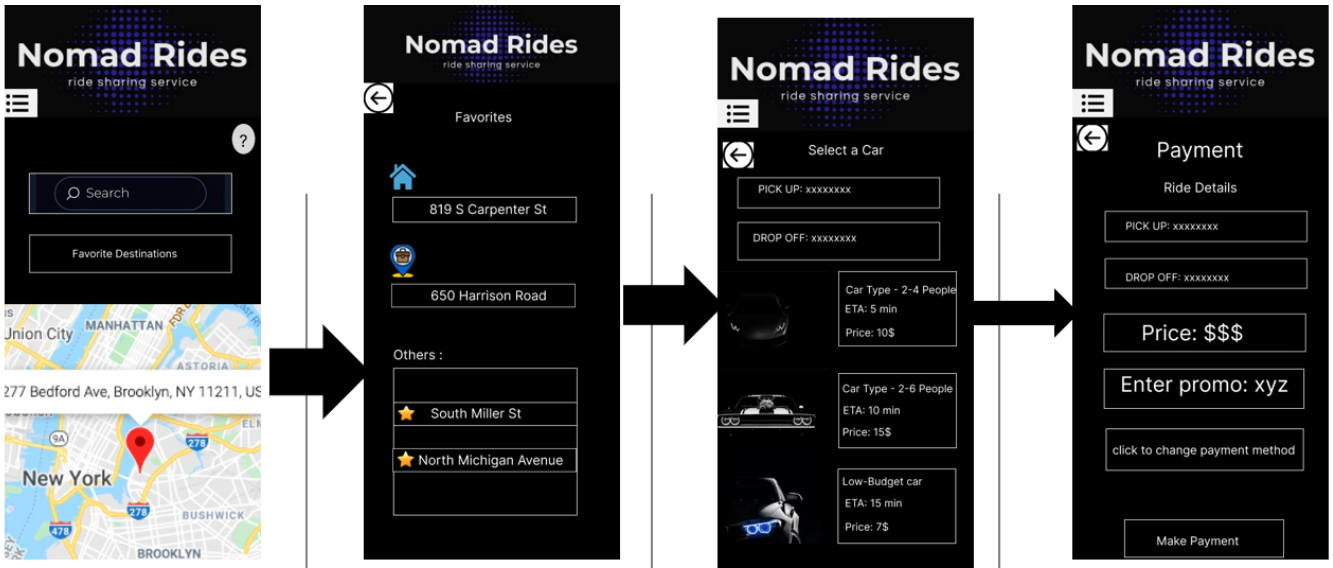
Group Members: please initial below to indicate that your group members acknowledge that you are aware that you are bound by UIC's honor policy in letting participants sign this form only if they have actually participated in a focus group or user test for the class as required.					
(group members' initials)					

Affinity diagram

Group 17: Madhava Sai Yamike, Anurag Reddy Yerrabotula, Sai Varshith Reddy Kuruguntla



Appendix D: Annotated High-Fidelity Prototype



Home Page

User clicks on Favorite Destinations

Favorite Page

After clicked on a Favorites destination we will select a car

Select a Car

The user will select a car based on his preference

Payment

User reviews the ride details and clicks on make payment

Appendix E: User Testing Script

Below is the table which shows the tasks that used during the user testing :

- **Introduction**	Hello, I'm Madhava , Anurag and Varshith. Today we are going to test Nomad Rides Application, which is focused on providing a fair priced rideshare application which mutually benefits the driver and customer through a monthly subscription . We will also be recording or taking notes of this user test to refer to later. All the records will be kept confidential. This user test will be no more than 10 minutes long. This app is an early prototype of a design concept. You're helping us by trying out this product in its early stages. We're looking for places where the product may be difficult to use. If you have trouble with some of the tasks, it's the product's fault, not yours. Don't feel bad, that's exactly what we're looking for. If we can locate the trouble spots, then we can go back and improve the product. **Remember, we're testing the product, not you.** Do you have any questions for me before we get started?
- **Task 1: [Add Payment]**	**Task description**: The user should navigate through the application and add a payment option . **Task deemed completed**: User should find the payment screen and finally click on the add payment button
- **Task 2: [Car Selection task]**	. **Task description**: Users should navigate through their rideshare options and book a ride . **Task deemed completed**: Booking confirmation screen needs to seen in order to deem the task complete
- Task 3: [Customer Support]	**Task description**: User should reach out to customer support through the application **Task deemed completed**: Deemed complete when the support specialist chat screen is seen .

Reminders and Prompts:	- if the user stops talking for more than 10 seconds, prompt them: “Please remember to think aloud.” - if a user can’t figure out what to do and seems unable to make progress for more than 30 seconds, prompt them: “Can you tell me what you are trying to do?” - if the user can’t figure out what to do and seems unable to make progress for more than 90 seconds, end the task and move on to the next one: “Ok, thanks for giving this a try. Let’s move on to the next task.”

Usability Testing (Think-Aloud Testing)

User 1 - Alvar

Sai: Hello, I'm Sai I'm here with Anurag and Madhava along with me is the user Alvar. So today we're going to test our application Nomad rights, which is focused on providing a fair price, rideshare application, or mobile mutually benefiting the driver and the customer to a monthly subscription. We will also be recording or taking notes of this user test to refer to later. As of now, I'll be recording it, all the records will be kept confidential, and the user test will be no more than 10 minutes long. This app is an early prototype of a design concept, you're helping us. Although you're helping us try out this product in its early stages, you're looking for places where the product may be difficult to use. If you have any trouble with some of the tasks, you could ask me or even if it's the product's fault, or the interface, you can just let me know. And you have to think aloud testing, which means you have to speak out loud of whatever you're doing, or whatever you want to do. And remember that we are testing the product and not you. So do you have any questions?

Alvar : No, I don't have any questions. Okay,

Sai: Let's start with the first task. So I want you to. .....as far as the first task comes, I want you to navigate through the application and add your payment.

Alvar : So I'm logging in to the given username and the password. So right now I'm going into the menu option. And I should add the account, right?

Sai: You have to add a card.

Alvar : Okay, so I'm going to the card info. And there's an option called add new payment method. So I'm choosing that. And I added my card right now.

Sai: Okay, that's task one. And the user is successfully able to add the card. And now Alvar I want you to add.....so I want you to go to go to the menu option of cars and book a ride

Alvar : Okay. So I think I'll just go to the place where I want to be like, there's a search option. So I'll choose my budget, and then take the car I want to. So there's the car type for two to six people. And I chose that and I'm making the payment now. So yeah, the booking is confirmed.

Sai: Okay. So the user was successfully able to accomplish task two as well. Okay, as far as the user task is Alvar, our application also has the customer support. So I want you to reach out to the customer support through the application by navigating so could you try doing that?

Alvar : Yes. Right now I'm going to the menu bar menu option, and I can't see the option to contact support. So I think I'll go back home. And yeah, on the right hand side there is a help like the question mark. So there is an option called chat with the customer okay. Yeah. So I can contact the customer service.

Sai: Okay. So the user was able to accomplish task three with a few problems like he had a few confusions, but he was successfully able to do it. So this is a user testing for user number one

Alvar: Thank you.

User 2 - Mehul

Sai Varshith Reddy Kuruguntla: Hello, this is deliverable six for CS 422. My name is Sai. And today with me is user Mehul Gupta. So we will be asking him the tasks and going through the interface. So we're going to test the application known as Nomad rides, which is our semester project, which is focused on providing a fair price rideshare application, while also mutually benefiting the driver and the customer as well. So we will also be recording this user test just so that we can look at it and improve on it later on. And this will be entirely confidential, the user test will be no more than 10 minutes at max. And we look to finish it quicker than that. So this application is an early prototype of a design concept which we're trying to build on and improvise on. So Mehul, you'll be helping us in trying out this product in the early stages, and helping us develop the interface to make it more user friendly. So we're looking for places where the product might be difficult to use. And if we have not paid attention to that, or we have missed

it somehow, so that we could improve on that. And if you have trouble with some of the tasks, it's a product fault and not yours. So don't feel bad. That's exactly what you're looking for, to find out the faults in the interface. So if we can locate the trouble spots, then we can go back and improve that product. Essentially, remember that we are testing the product and not you. Do you have any questions? For me before we get started? No, I don't have any questions. Okay, well, let's start with the prototype. And I'll be asking you the very first task. So this is our application just a second.Okay, now, as far as the first task, you will have to log in into the application and add a payment of your choice.

Mehul :- Right, so there's an option for the login. So I'm logging in and looking for the menu option right now, I found it. So there is an option called card info. And I went to it and this option, also called add new payment method. So I'm choosing that. Add card

Sai Varshith Reddy Kuruguntla: The user was successfully able to address payment without any hassles. So we'll move to task number two. So as far as task number two, we want you to select the car of your choice and book the ride for you.

Mehul : Right, so I'm going to the home home option and searching for the available cars. And there's three options for me to choose the ride I want to, and I'm choosing the low budget car. And I'm making the payment right now. So there, the booking is confirmed.

Sai Varshith Reddy Kuruguntla: Okay, so the user is successfully able to book a ride, we've only provided three options. So the user was able to select between among those and successfully completed the task for the user for the user task three Mehul, could you please reach out to the customer support of our application?

Mehul : So I'm going to the menu option again. So there's no available option as a contact support. There's an option, account info. So I'm looking into it, and I can't find a contact support option. So I'm going home again. There's a question mark right here on the right hand side and start with the customer care option and choose that and yes, I can contact the support now.

Sai Varshith Reddy Kuruguntla: Okay. The user successfully completed task three as well with a few hassles and we will be working on that. Thank you so much.

User 3 - Krish

Madhava:- Hello there says CS422 deliverable 6 today we'll be having two users so this is a user testing session my name is Madhava Sai and I have my teammates here uh Anurag and Varshith and today we are going to test nomad ride share application which is focused on providing a fair priced rideshare application which mutually benefits the driver and customer through a monthly subscription we will also be recording or taking notes of this user test to refer to refer it later and all the records will be kept confidential so this user test will no more than like 10 minutes long and so basically the app is an early prototype of a design concept so you are helping us by trying out this product in it's really very early stages uh so we are looking for places where the product may be difficult to use so if you have trouble with some of the task uh it's the product fault not yours so don't feel bad that exactly like what we are looking for and if we can locate the trouble spots then we can go back and improve the product so remember we are testing the product not you alright do you have any questions me before we get started

Krish: - No I don't

Madhava: - OK cool

Krish:- I did go through your app firstly I loved how basic it was with the design so it was easy to navigate I always follow the three click rule pretty much I think you were able to achieve the three click three click rule very well firstly let's talk about how to sign in into the page I liked everything about the sign-in except I think the only thing which missed was the password criteria apart from that everything else was good and also coming to the login it was very simple and then the next part was when we're adding the methods payment methods it was very easy because it also had the other options like Venmo , Apple Pay and even adding applications seemed very smooth and finally talking about the customer service that was good too and also the search was very easy the only suggestion that I would probably give is maybe make sure to add like another background color so that the cars seem stand out right now they kinda don't seem flowing well and I love how you're able to keep the same car at the end I was able to easily navigate quickly um as I've mentioned before three click roll worked out very well and finally the customer service was easy

Madhava:- Ok Thank you so much for your feedback

User 4 - Bhavana

Madhava: Hello there says CS422 deliverable 6 today we'll be having two users so this is a user testing session my name is Madhava Sai and I have my teammates here uh Anurag and Varshith and today we are going to test nomad ride share application which is focused on providing a fair priced rideshare application which mutually benefits the driver and customer through a monthly

subscription we will also be recording or taking notes of this user test to refer to refer it later and all the records will be kept confidential so this user test will no more than like 10 minutes long and so basically the app is an early prototype of a design concept so you are helping us by trying out this product in it's really very early stages uh so we are looking for places where the product may be difficult to use so if you have trouble with some of the task uh it's the product fault not yours so don't feel bad that exactly like what we are looking for and if we can locate the trouble spots then we can go back and improve the product so remember we are testing the product not you alright do you have any questions me before we get started

Bhavana: No I don't

Madhava : OK cool, alright so today uh so now we'll be like the user will be navigating through the application and add a payment option so yeah go ahead

Bhavana: Right now I am able to log in and I am able to open the menu options and I am able to add a payment option and there's multiple options of payment method and I am currently adding the credit card and debit card information and I have added the card

Madhava: so I think yeah so good alright let's go to another test user test case so let's assume that you can navigate through the rideshare options and book your ride so were you able to go to it

Bhavana: um I am able to go through the search bar and be able to look up a car and I was able to successfully find car type with the number of people and estimated time in the price and I have clicked on it and I was able to see the right details along with payment methods and make a payment for my ride and be able to see the booking information there are details and the estimated arrival to my destination

Madhava: alright uh alright that's good alright so the next is case would be like can you reach out to the customer support through the application so let's go ahead and check it out

Bhavana: umm yes I am able to see the customer support information I was able to find the chat with customer care and able to see the customer service and customer support page along with a formal prompt

Madhava : OK cool alright thank you so much for your time bhavana yeah your insights are helpful for us thank you

User 5 - Roushan

Anurag Reddy Yerrabotula: Hello, I'm Anurag , and my team mates here are Varshith, and Madhava Today we are going to test Nomad Rides Application, which is focused on providing a fair priced rideshare application which mutually benefits the driver and customer through a monthly subscription . We will also be recording or taking notes of this user test to refer to later. All the records will be kept confidential. This user test will be no more than 10 minutes long. This app is an early prototype of a design concept. You're helping us by trying out this product in its early stages. We're looking for places where the product may be difficult to use. If you have trouble with some of the tasks, it's the product's fault, not yours. Don't feel bad, that's exactly what we're looking for. If we can locate the trouble spots, then we can go back and improve the product. Remember, we're testing the product, not you. Do you have any questions for me before we get started?

Roushan: No

Anurag: Can you introduce yourself?

Roushan: My name is Roushan and I'm a PHD student at UIC

Anurag: Ok let's get started, first I want you to test the add a payment page of the application

Roushan: So from this I will go to the card info or these are the payment methods yeah so like I can select credit card debit card depending on that and I can make the payment so like over here like it's looks very nice compact like all the details are there and like different options are also there yeah I like this page let's go back like what should I do next

Anurag: So, Now the task 2 is to navigate and use the select a car page.

Roushan: Over here from my favorite destination I can go to select a car page by selecting the destination. This is a very important feature to save the more frequently used destinations so that's nice so I will go over here. In the select a car page the images of the cars are binding with the background color which is black which is making me to close and use the other app. and use something else so like this can be improved apart from that like everything is well suited for this app and like next what should I do can you go to

Anurag: Now, the task 3 is going to the customer support page

Roushan: let's go here like this is the customer support so it's slightly difficult to find customer support so if there would be some other icon made it will be much more easier like finding it here so chat with customers so yeah this is nice yeah but like having this feature on like first or like on front page will be like much more helpful than like hidden somewhere behind

Anurag: OK thank you

User 6 - Pinku

Anurag Reddy Yerrabotula: Hello, I'm Anurag , and my team mates here are Varshith, and Madhava Today we are going to test Nomad Rides Application, which is focused on providing a fair priced rideshare application which mutually benefits the driver and customer through a monthly subscription . We will also be recording or taking notes of this user test to refer to later. All the records will be kept confidential. This user test will be no more than 10 minutes long. This app is an early prototype of a design concept. You're helping us by trying out this product in its early stages. We're looking for places where the product may be difficult to use. If you have trouble with some of the tasks, it's the product's fault, not yours. Don't feel bad, that's exactly what we're looking for. If we can locate the trouble spots, then we can go back and improve the product. Remember, we're testing the product, not you. Do you have any questions for me before we get started?

Pinku: No

Anurag: Can you introduce yourself?

Pinku: My name is pinku and I'm a PHD student at UIC

Anurag: Ok let's get started, first I want you to test the add a payment page of the application

Pinku: so from hamburger icon here I can see that I can add multiple payment options and I think it's a great feature to have especially when I can add my other payment options it gives me different modes of transaction and yeah I can also add several other payment options as well I can see by going to the add card and yeah everything is very straightforward as of now .

Anurag: So, Now the task 2 is to navigate and use the select a car page.

Pinku: so here I'm going to select a car and I put my destination so I choose one of the destination for myself so here I can see different available cars for the destination that I would prefer and destination I would prefer however uh this looks like the screen is little dark which may be a little confusing and other than that how many people can be accommodated that's written very clearly estimated time of arrival that's also mentioned perfectly so I don't know if there is any way I can know if the price will be searched or something at any other time other than that I think it looks very convenient and yeah I think I'm good here.

Anurag: Now, the task 3 is going to the customer support page

Pinku: go to the account home there's a question mark which essentially means you are asking questions so here on ask the customer care officer about certain questions I have maybe why the car is late why it's not arriving on time and I can see this page is perfectly portrayed and there are certain frequently asked question as well which would be yeah it's there are several questions that would actually answer my part and I can also chat with the customer service officer as well and yeah I think this pretty much summarizes all the part.

Anurag: OK thank you

Summary and statistics:

Before we get into the improvements that need to be implemented, here are some stats of our users and the evaluation. The first two users successfully completed the first two tasks but surprisingly both of them faced some hassles in accomplishing task three which is reaching out to the customer support.Both these users accomplished the first two tasks in around 15 - 20 seconds whereas the third one took longer than 30 seconds.

When we conducted the user testing for the third and fourth users both the users found every task easy and completed the task within a 10-25 seconds time frame. User 3 had suggested us to change the background color of the app so that it doesn't affect the color of the car. This will be even easier for the users to view the car they have selected. User 4 had taken some time to go to the car selection page as the user took some seconds to analyze what is there in the home page of the app.

Also, user 5 and user 6 had no problem in navigating to task 1 that is to add a payment method screen. And both of them find it easy to use since they have already been using some apps which follow a similar interface structure in order to add a new payment method. Whereas user 5 and user 6 have pointed out some issues with task 2 that is select a car page. The issue they pointed out is that to change the font and background color of that screen because the images of cars are blending into the background color and the font is two small so it took them around 40 seconds to understand what exactly is that screen supposed to do. However, user 5 had a difficulty in navigating to task 3 that is to go to the customer support page. Therefore, it took him 40 seconds to navigate to task 3.

From our questionnaire I can conclude that the majority of the people did not find our system to be complex and in fact all of them found it easy to use. But not many people strongly agreed on using our application frequently .

The total success rate of our entire list of task assignments was 73%. Around 80% of users were willing to use this application as their default rideshare go-to. One concerning statistics we received 60% were moderately leaning towards having technical assistance whilst using this application. These were some of the highlighting statistics which we will take a deeper look at and add in our improvements mentioned below effectively.

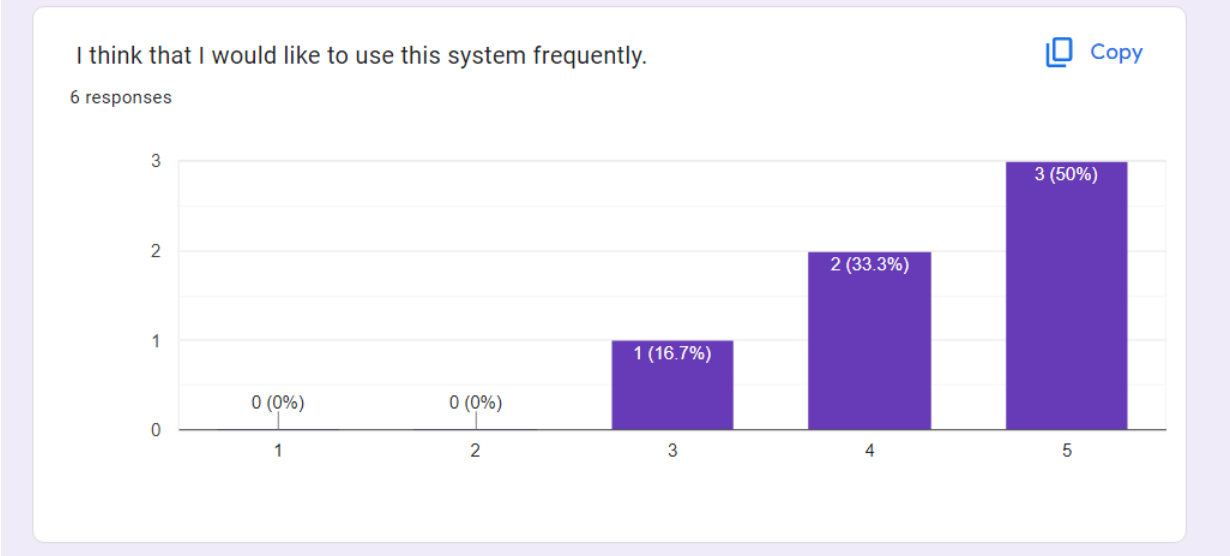
Suggestions and improvements:

Some suggestions we received for improvements were that the menu option position could be moved up a bit higher as it feels distracting. From user 3 we have received a suggestion of adding a password section when users are trying to sign up for the app. Also, another suggestion we got is to change the font and font size and also change the background color of the "select a car" page. After some discomfort faced by users in task 3 and the trend in the error, we also understood that users are accustomed to finding chat support within the menu options but we added a "?" on the right side rather than the menu option . We plan on implementing a chat support option inside the menu as well along with the "?".

Link to our data-logging sheet : data logging sheet

Link to our google form: google form

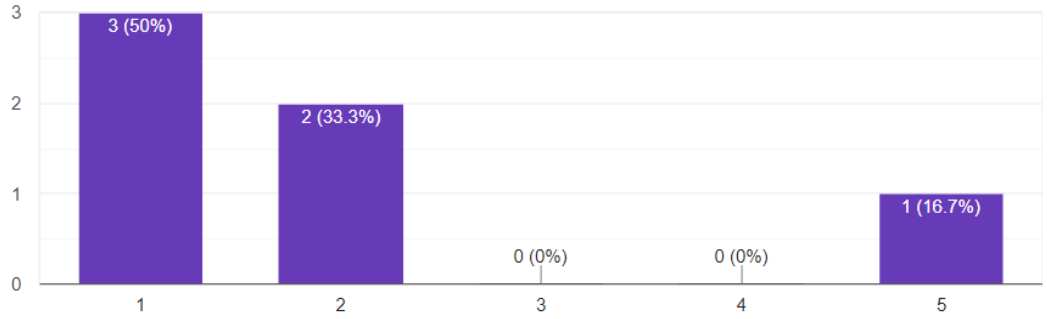
Statistics of User Testing



I found the system unnecessarily complex

Copy

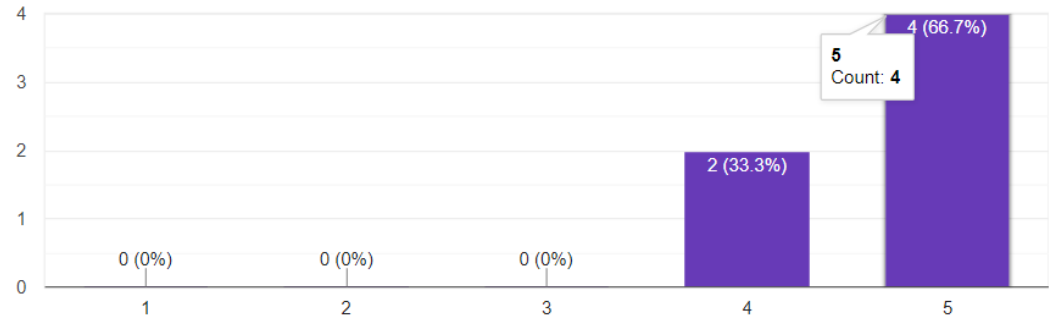
6 responses



I thought the system was easy to use.

Copy

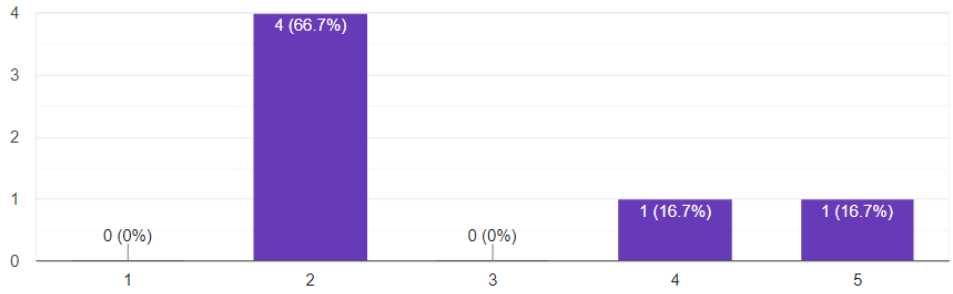
6 responses



I think that I would need the support of a technical person to be able to use this system.

Copy

6 responses



Appendix F: Data Logging Sheet

User ID	Task ID	Success	Failure	Amount of time (in seconds)	Behaviors	Intention	Error
Alvar	**Add Payment**	X		15	user was able to navigate the app appropriately and add the payment accordingly		
Alvar	**Car Selection**	X		20	user selected a car from the list of options and then was able to confirm the booking		
Alvar	**Customer Support**		X	35	User went to the menu option for customer support help instead of tapping on "?"	Trying to contact customer support in the App	Customer support help was not available in the menu option
Mehul	**Add Payment**	X		20	user was able to navigate the app appropriately and add the payment accordingly		
Mehul	**Car Selection**	X		20	user selected a car from the list of options and then was able to confirm the booking		
Mehul	**Customer Support**		X	40	User could not find customer support in the menu option	Trying to contact customer support	Customer support help was not available in the menu option
Krish	**Add Payment**	X		12	User was able click the hamburger menu icon and able to navigate to add payment page		
Krish	**Car Selection**	X		15	User had came to select a car page but had a problem with background color and icon color of car		Font is small and car images are binding with background color which is something user had a problem with
Krish	**Customer Support**	X		10	User was able to find the customer support by clicking the question mark arrow and navigate to customer support		
Bhavana	**Add Payment**	X		15	User was able click the hamburger menu icon and able to navigate to add payment page		
Bhavana	**Car Selection**	X		20	User had came to select a car page but had a problem with background color and icon color of car		
Bhavana	**Customer Support**	X		10	User was able to find the customer support by clicking the question mark arrow and navigate to customer support		
Roushan	**Add Payment**	X		20	user directly clicked on the hamburger menu icon and was able to go to add payment page		
Roushan	**Car Selection**		X	40	user came to the select a car page but had a problem with the background color and font		Font is small and car images are binding with background color which is something user had a problem with
Roushan	**Customer Support**		X	40	user tried to find customer support in hamburger menu icon instead of ? icon	Trying to contact customer support in the App	Customer support help was not available in the menu option
Pinku	**Add Payment**	X		22	user directly clicked on the hamburger menu icon and was able to go to add payment page		
Pinku	**Car Selection**		X	45	user came to the select a car page but had a problem with the background color and font		Font is small and car images are binding with background color which is something user had a problem with
Pinku	**Customer Support**	X		25	user directly clicked on the question mark icon and navigated to customer support		