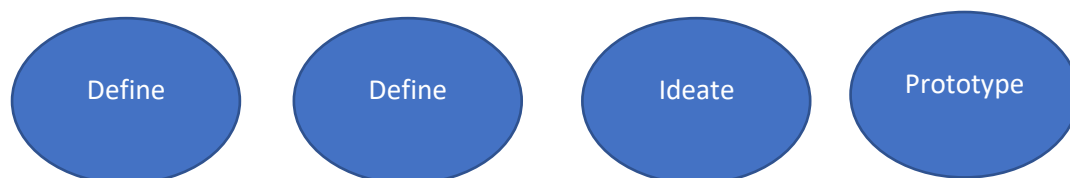


The interface that I have selected to work on is from Homework 2. The location I had picked to do the activity was the “Starbucks Coffee” at the Webb Center, ODU. Thus, I will be developing the wireframe considering the interface of the Starbucks Coffee.

The main reason I chose this location for HW-2 was most of students on campus before going to a recitation or class grab a coffee or drink from the Starbucks and then come to the class. But me as an international student here at ODU hadn’t seen this kind back in my undergrad in my home country. I was curious to know the reason why most students grab a coffee especially from Starbucks to the class.

The various phases that will be included in generating task scenarios, personas and the use cases is as listed below.

1. The first phase is to “Discover” i.e., conduct user research to perform analysis on the data.
2. The second phase includes “ Define” which synthesis the data that is collected and will find opportunities for design.
3. The third phase is to “Ideate” which ideates the potential features that are available in the design.
4. Finally, a prototype is developed that includes developing low-fi and hi-fi wireframes to create an interactive prototype for the users.



User Interviews are to be done in order to get accurate results for the data. According to the discussion that I had with few of students at the Starbucks, Webb Center I came up with the following conclusions.

The “**WANTS**” of a customer/student:

Paying the bill before going to the Coffee center

The various options to use their rewards/star

The option that the rewards/stars don’t expire

The “**NEEDS**” of a customer/student:

Easy and convenient payment methods

Filling most of information early i.e., using auto filling options

Various options to redeem the offers

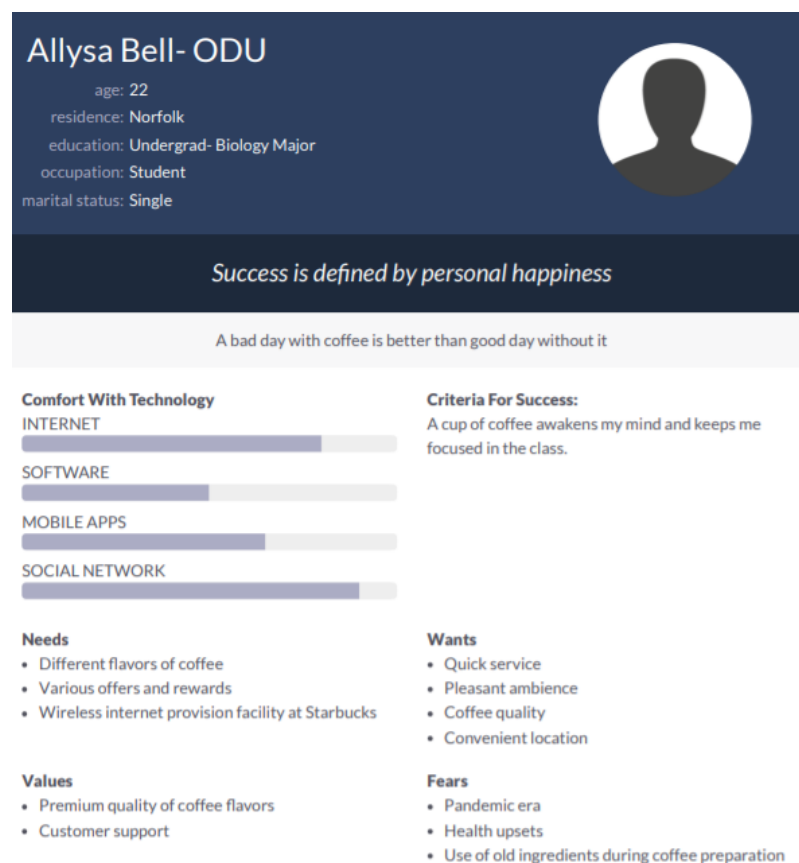
The “**FRUSTRATIONS**” of a customer/student:

The balance is not updated immediately once the payment is done

Some unnecessary information present on the app

Users to wait in long lines

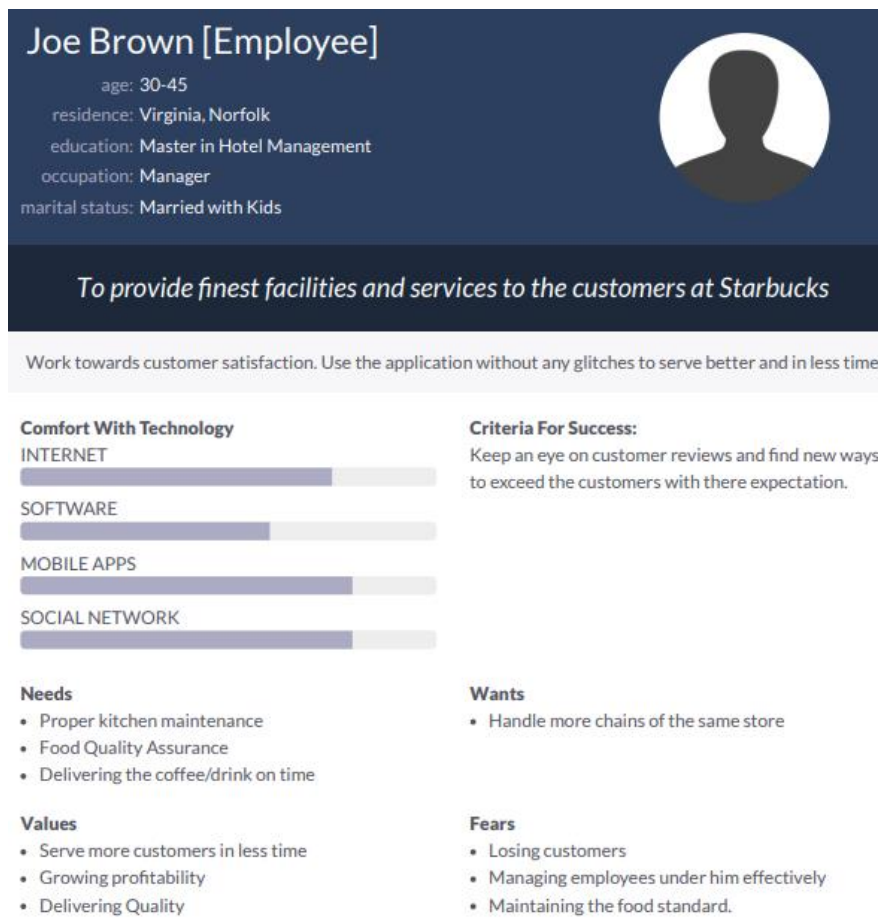
Using the interview that I conducted I developed the following **persona** below. This contains the data collected from the student interview that I conducted.



Creating personas will definitely help to understand the problems faced by the users.

The Starbucks Coffee is a trending brand in the market and if there are new features added to the app, it will be very easy for the customers to use and the only difference is there will be a new feature that will be added to the user’s expectation.

The persona developed with regards to an employee at the Starbucks is as shown below:



The entire business process in the Starbucks according to my analysis is as shown below:

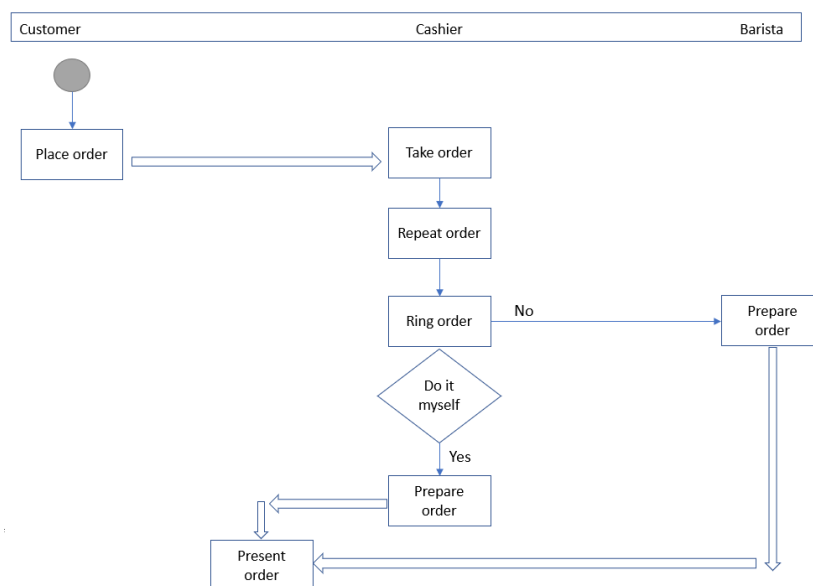


Fig 1: Business process at Starbucks

Usability test for Starbucks:

- There is no feature of a specific back button in the application, the mobile's back button had to be selected to swipe back in the list.
- Once I clicked on the Store button on the application, it was tedious to select the mobile order at the store I selected.
- If a user wanted to customize the drink with the specific ratio of the ingredients have difficulty in selecting the values.
- After using the Starbucks app for myself, I found the following difficulties and the following easiness within the application.
- The application is contented with lot of adds in them. The application should basically have features to select the store, select the drink and finish the payment.
- Sometimes the image menu was not correctly apt with the drink that is being displayed.

The **possible solutions** that I think would mitigate the above problems are:

Solution 1:

Adding a previous order button on the application, and add the adds option at the bottom of the screen, thus the inexperienced people using the application will find it easy to navigate.

Solution 2:

There are random drinks shown in the application, there should be an option to add with starring button that can help the inexperienced users to easily handle and order their favourite drink.

Solution 3:

In order to place a mobile order, the user has to click on the 'order', select the specific store a from the navigation and then place the order. Thus, a order for item pick up can be added in the application and thus user can skip directly to order the drink.

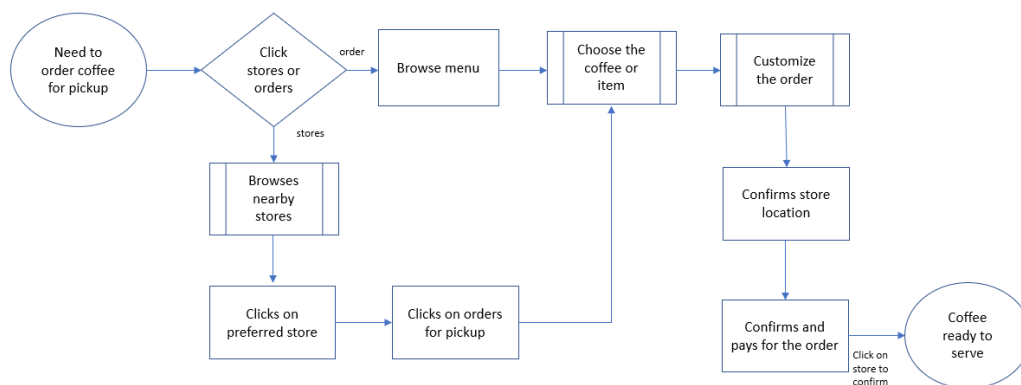


Fig 2: Usability test for Solution 3

Solution 4:

The users of the application must be provided an option to increase or decrease the font style and type within the Starbucks application, so that users will not find it difficult to read the menu.

Solution 5:

A Home icon has to be included to help the users to navigate to the home screen whenever it is necessary, as using the back button of the mobile will be tedious or difficult.

Tasks/Scenarios for Starbucks

The following tasks/scenarios are listed for the user. They will help the easy evaluation of the Starbucks app.

1. I have received a Starbucks gift card and want to upload this card onto the account of the Starbucks application.
2. Transferring the balance from the card to the new card as I decide having multiple cards will confuse me.
3. Deleting the card from the account as I have a \$0 balance on my card.

Task 1#: Uploading the card

According to my observation the Starbucks application lacks visibility because it is difficult upload the card onto the Starbucks app. If a user does not notice the 'add new card' feature on the app, it will be difficult for the users. For an experienced user, it will be very difficult to notice the slide from card option to upload the card.

Task 2#: Using the reload option before completing the Task 1#

In order to achieve this task easily, there should be proper visibility of the application. Since the naming of the various options is very unclear the inexperienced users will not know where to upload the card. Or sometimes unknowingly with the non-familiar options present, the user might reload the card twice and this shows that the Starbucks app lacks the creation of the usability components.

Task 3#: The users who noticed the plus sign

Some users will have noticed the plus sign in order to upload the card. This proves they are familiar with using the application and are experienced users.

Task 4#: Transferring the money onto the wrong card

Some users will be easily be able to transfer the money using the right card. But some users might not have clue and they may try to transfer using the \$0 balance card and this will prompt that they are following wrong steps and will prompt them "to reload the card or transfer the balance amount from a different card".

Task 5#: Experienced users who completed all the tasks given

It is only a small percentage of the users who will be able to complete all the tasks given to them using the application. This will be done by them if there are no glitches in the system and that they complete all the tasks in a timely manner.

Now I understand that the usability test will help me understand the things that are missing and to add them for the improvement in the overall efficiency and accuracy of the system.

Use case diagram showing the entire process of how the order takes place at the Starbucks:

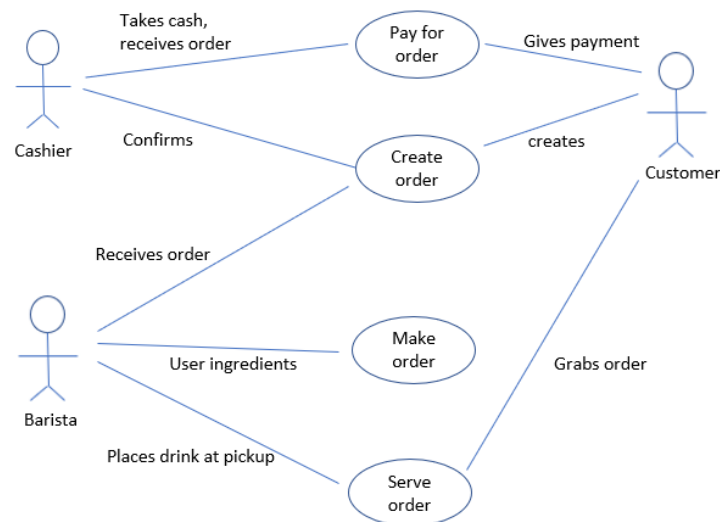


Fig 3: Use case diagram

The user case contains the end to end system considering the customer ordering their favourite drink to the time when the drink is served to them by the employee. This diagram shows the scope and the high level functions present in the system.

HTA for the Starbucks application:

The HTA describes the goals and specific subgoals in the design of the Starbucks work flow model.

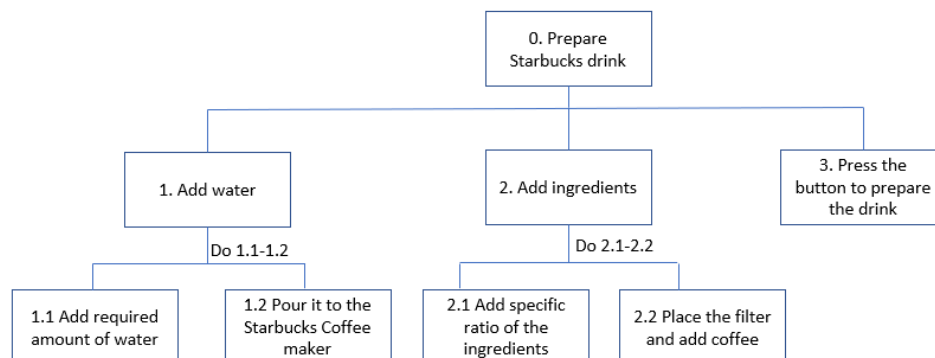


Fig 4: HTA of how Starbucks employees prepare the drink

The above HTA describes the how the drink/coffee preparation takes place after noting the orders from their customers.

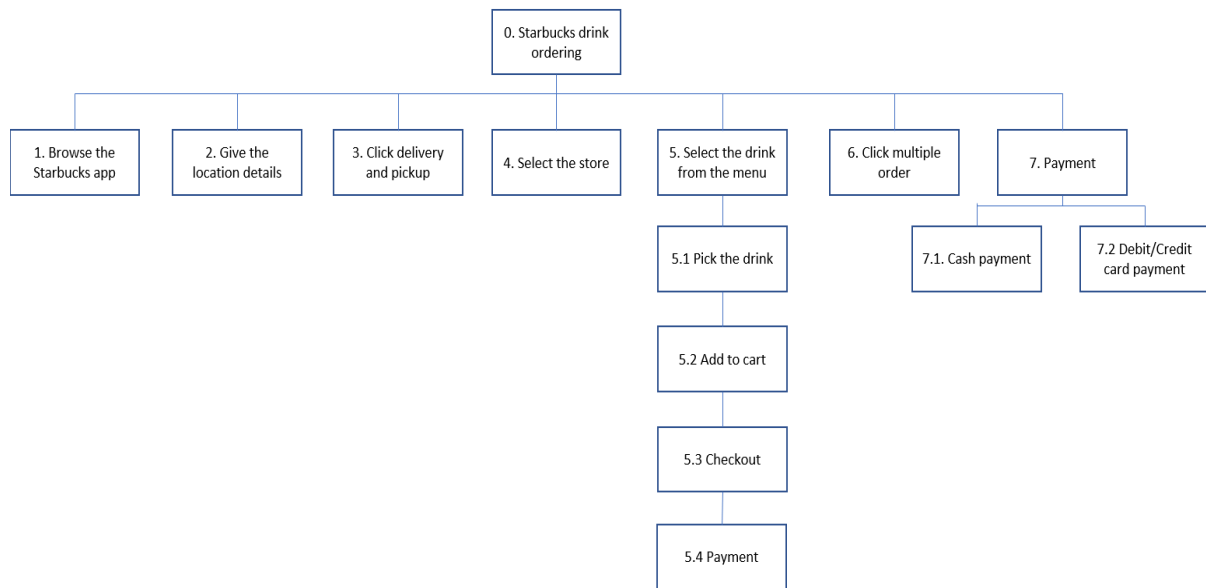
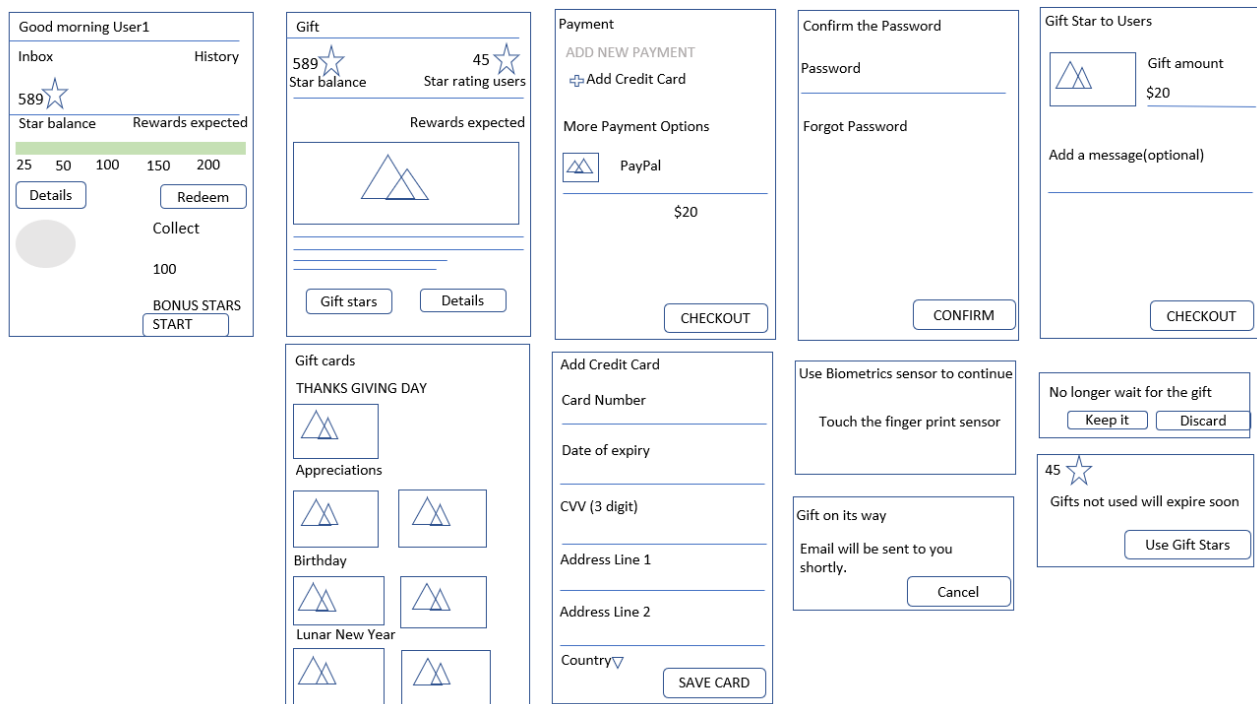


Fig 5: HTA showing how the customer's order drink through the Starbucks app

Phase 4: Prototype and developing wireframes

Wireframing is a process where designers draw overviews of interactive products to establish the structure and flow of possible design solutions. Here is a wireframe of improvement design interface and experience for Starbucks application:


I used the Smart Draw to develop the wireframe for the system. My idea is to develop a wireframe without disturbing the existing application.



I have worked on adding the components that were lacked in the application which included adding the back icon on the pages and redoing the payment confirmation modal. The usability

test will let the users know, what are some of the bad design in the UX and will help us to focus on the same.

I also designed the below prototype when there is a peak of **Covid-19 and only Drive thru** facility is provided to all the customers. The users must be notified with the wait times and a barista must be available to give the ordered item to the customer when they arrive.

<div>Good morning User1</div> <div><div>Inbox</div><div>History</div></div> <div>589★</div> <div><div>Star balance</div><div>Rewards expected</div></div> <div><div>25</div><div>50</div><div>100</div><div>150</div><div>200</div></div> <div><div>Details</div><div>Redeem</div></div> <div><div>Earn 2x for Curb side</div><div></div></div> <div><div>Start offer now</div><div>Details</div></div>	<div>Review order</div> <div>Prep time: 6-9 mins</div> <div>Driving time: 10-15 mins</div> <div>Pick up Store:</div> <div>Pick up Options</div> <div><div>Instore</div><div>Curb side</div><div>Drive Thru</div></div> <div><div>ASAP</div><div>Order ahead</div></div> <div><div>Vanilla Crème</div><div>\$3</div><div>330 calories</div></div>	<div>Done</div> <div>Curb side pickup +</div> <div>Coffee on the way !!</div> <div><div>A barista will come with your order. Do not forget to wear mask while collecting your order...</div></div> <div><div>Adds: Listen to favourite music on Spotify!!@!!</div></div> <div><div>Call store</div><div>Contact us</div></div>
--	--	--

Upcoming demand technologies that Starbucks can integrate:

Various analytical solutions can be developed to build the Starbucks application. Because of which Starbucks will be able to handle the short-term and long-term outcomes through the big data processing. This can include the Artificial Intelligence(AI) to explore the various possible solutions and innovations within the unit or the firm.

According to the study, the Starbucks has benefitted with integrating with the Google X with the use of the drones to test the testing possibilities. Thus, Starbucks should integrate to develop similar solutions as these and will lead to the success in the Mobile and Pay orders within the Starbucks app.