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**CMPT 381 Assignment 1**

**1A) Persons**

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| *Name* | Doris |
| *Demographic &  Background* | Doris is a 75-year-old retiree who each week visits their local diner with her husband where they finish off their meal with a milkshake – a tradition they’ve held since they started dating in 1955. |
| *Goals & Needs* | Stu recently suffered a stroke, and as a result finds it difficult to walk and carry items without assistance. Thus, Doris now has to do many things for him, such as build the classic strawberry milkshake that he loves so much. |
| *Motivations* | Perform simple tasks – simply. Without needing the assistance of others. |
| *Experience with*  *Technology* | Doris has minimal experience with technology aside from using her iPad as an E-Reader, which her grandchildren taught her to use last Christmas. |

**1B) Task Descriptors**

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| *Task Name*  Make Children’s Milkshakes | *Persona*  Marlon |
| *Importance and Frequency*  Marlon needs to be able to make 10-children’s milkshakes of various types, in a timely, uncomplicated fashion. This is a task they he, as well as many other parents, will perform frequently when visiting an establishment with the MSVM.  *Description*  Like above, Marlon needs to be able to navigate the MSVM interface quickly to build child-size milkshakes. In order to this he can click on a Kids Menu option which will present the user with various different type of milkshakes all sorted by type of ice cream. Finally, he needs to be able to enter quantities quickly so that they can be made quickly. | |
| *Items to Enter*  Marlon needs to enter the   * Types of milkshakes he wants * Any toppings that are desired | * the quantities of each * and finally pick any sizes |
| *Constraints and Goals*  Marlon needs to have an interface that is easy to navigate, very intuitive where things are clearly labeled and shown. This way he can navigate the wants and needs of his demanding children and can perform these actions quickly to keep the calm. | |

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| *Task Name*  Customize Existing Milkshake | *Persona*  Miriam |
| *Importance and Frequency*  The task of being able to customize their own milkshake, beyond picking any toppings, is a very important task and could potentially be used quite frequently. Being able to customize an existing milkshake or being able to build your own is appealing to many different types of users.  *Description*  As per Mariam’s persona, she likes to try variants of things she’s had before. From this we can infer that she wants to take an existing type of milkshake and have total control of the customization options. Anything from the type of ice-cream, toppings, syrups and flavourings should all be customizable. | |
| *Items to Enter*  Marian needs to be able to change   * Ice cream type * Cookie/Candy toppings * Syrup toppings | * Syrup flavourings * Desired size * Quantities |
| *Constraints and Goals*  Mariam needs to have an interface that clearly shows each customizable aspect of a milkshake. From top, to bottom, the milkshake needs to be customizable, and the UI needs to reflect that the user can accomplish this easily | |

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| --- | --- |
| *Task Name*  Select a Classic Milkshake | *Persona*  Doris |
| *Importance and Frequency*  The task of being able to select classic milkshakes such as chocolate, vanilla, and strawberry would be a quick and easy way for users to enjoy the basics. This option is perfect for those who prefer a classic milkshake. Thus, this task would be used frequently and is important as there is no need to go through the entire customization process if you just want a simple milkshake.  *Description*  As per Doris’ persona, she needs to be able to purchase a classic Strawberry Milkshake with ease. She should be able to do this by selecting a Classic menu, the classic item she desires, and finally pick the sizes and quantities she wants. The machine should then make the milkshakes and dispense accordingly. | |
| *Items to Enter*  Doris needs to be able to   * Select Classic Menu * Select the Item she desires * Select the size she desires | * Select the quantities |
| *Constraints and Goals*  We need to have an interface that is easy to read, navigate, understand, and large buttons to click on. Menus and action buttons need to be clearly labeled. | |

**1C) Interface Sketches**

Please see the attached PDFs to view my sketches.

**1D) Walkthrough Results and Design Rationale**

Sketch Walkthrough Summary

Going through the design process was simple in some ways, and much more complicated in others. The actual design of the items seemed straight forward, however, I ran into issues with processes being repeated, and with my designs leaving out system required functionality, that need to be in place for the entire ordering system to work.

*Sketch 1*

Sketch 1 represents my simplistic approach. Here a user is able to perform the basic Milkshake Functions (pick a classic, child’s menu) all using the same menus. The user starts by selecting the Start button, then they are taken to a scrollable menu that shows each milkshake available in the system. From here a user can select a milkshake and then they are free to either add it to their order or customize it. If they are adding it to their order, they are taken to another screen to select their desired size and quantities. If the user wants to customize it, they are taken to a screen to change the ice cream type, add or remove any flavourings, and add or removing any toppings. Once they go through either of these processes, they are taken back to the main scrollable milkshake menu. Now they can see a summary of the number of items in their order, as well as the order total on the top right of their screen. There is also an option to now checkout their order. Going through this process I realized that this interface might work well for Doris and Marlon, however, if Miriam wants to customize her own milkshake from scratch, this interface doesn’t really make sense

*Sketch 2*

In this sketch, I was attempting to split out the functionality to be clearer. I did this by making menus for each of the 3 major functions: Kids Menu, Classics, and Build Your Own. The positive note here is that these interfaces share a lot of the same screens, just with different data populated on them. The only difference here is the Build Your Own menu which does not use the same navigation view as the Kids and Classic menus. For this sketch I found that navigation at the end of the order was a bit cumbersome and vague. It isn’t necessarily clear the difference between the Add functionality and the Checkout functionality.

*Sketch 3*

In this sketch I wanted to combine the best elements of Sketch 1 and Sketch 2. I wanted to reuse the navigational views so that all features essentially looked the same, and I wanted to still have the 3 basic functions clearly marked. I did this by combining the Classic and Kids menu and adding the Build Your Own as its own selectable milkshake menu. I also added a navigation menu on the left-hand side to clearly mark what step of the milkshake ordering process they were on. The major issue I found with this was that the navigation menu wasn’t needed and was more confusing than anything else. I also found that having the Build Your Own as its own milkshake type on the scroll menu wasn’t clear enough.

**From these 3 sketches, I have chosen Sketch 2 as the best design.**

Interface Satisfaction

As I stated above, I chose Sketch 2 as the best design. I believe Sketch 2 is the best design, because it best addresses the needs of all 3 Personas mentioned above. Splitting out the 3 main functions into their own separate processes allows users to clearly identify the required process to their desired tasks.

*Kids Menu and Classic*

These processes are essentially the same things. They contain the same types of data, as well as the same types of data manipulators. There is a scrollable list of milkshake types available, and from this list a user can either add the item to their cart or customize the item further and then add it to their cart. Once a user has customized an item, or added it to their cart, the user is now presented with the options to select their cup size and their quantities. After this screen the user is then brought back to the scrollable menu with all the milkshake types on it. This action essential satisfies all the identified tasks from before.

*Build Your Own*

There is still one option that needs to be implemented. This both satisfies parts of Miriam’s desired tasks, as well as an essential feature. This UI looks a little different from the above, as we need to build a milkshake from scratch. Instead of the user loading into a view that shows a bunch of pre-made milkshakes, the user can go directly to that customize menu and start building their own.

Future Changes

Whilst I was designing this interface I noticed that I have missed a few elements and would be required to change others. I would need to ensure that the Order Summary information is more prominent, and I would need to ensure that all the available UI options are a little more plainly labeled, as well I would need to add more instruction pieces. I also noticed that I was missing some basic navigation methods such as Go Back and Start Over. I would need to more fully implement these in the UI in the future.