Assignment 1 – *Task Centered Design and Prototyping*

SECTION 2: First Prototype and Walkthrough

1. Prototype.

The initial screen, shown in Figure 1, is where the customer indicates whether their order will be "dine-in" or "to-go", by selecting one of the two options.
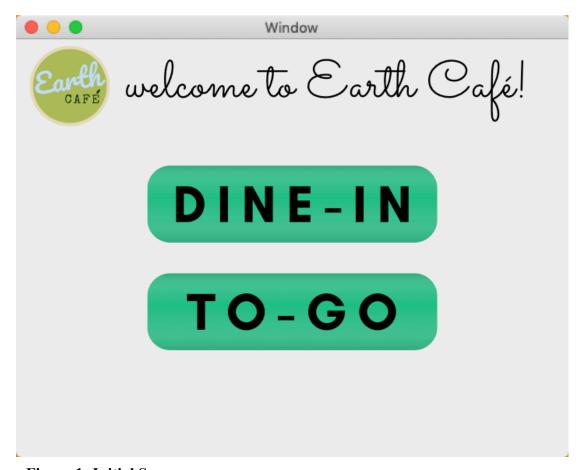

Figure 1: Initial Screen

Once the customer makes this selection, they will be taken to the "Ordering" screen (Figure 2), which displays an interactive menu, allowing them to fill out their order.

Figure 2: Unfilled Ordering Screen

The customer can fill in their desired quantity for each item, by entering a value into the input box, as shown in Figure 3.

Figure 3: Filled Ordering Screen

By clicking the "Total" button on the bottom panel, the system will calculate and display the subtotal of the order, as well as the total calories in the meal. This is shown below in Figure 4.
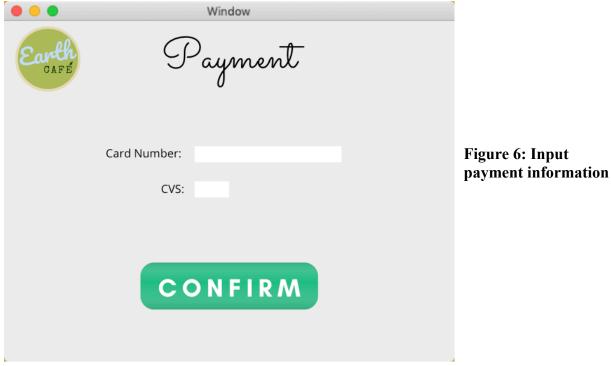

Figure 4: Total of order displayed

The customer can print the receipt by clicking the "Receipt" button, also on the bottom panel. This will also output a digital receipt, as shown in Figure 5.

Figure 5: Order receipt displayed

Before the customer can place their order, they must input their payment information — that is if they are paying with cash. This can be done by clicking the "Payment" button.

Figure 6: Input payment information

Finally, the customer can place their order by clicking the "Place Order" button, which will then take them to the "Thank you" page displayed below in Figure 7. The customer could also cancel the order, for example if they are paying with cash, by clicking the "Cancel" button. This will take them to the initial screen displayed in Figure 1.

Figure 7: Order placed, thank you page

In this step, using one of the tasks from the previous section, we will perform a task-centered walkthrough. This will provide us with a step-by-step illustration of how the user will be interacting with the system. The task that will be explored in this walkthrough is Task 3, involving Tristan and colleagues. For reference, the task description is displayed below.

Task Description: Tristan Elliot, who is on his lunch break, visits Earth Café with three of his colleagues. Tristan recently started at his new job, so he decided to treat his teammates out to lunch. He is not particularly health-conscious, but he heard that Earth Café is the "go-to" lunch spot among his colleagues. He orders three spicy black bean burgers, a hummus wrap, two bottles of orange juice, a bottle of water, and strawberry smoothie. He pays for the order using his credit card, places the "dine-in" order, and prints the receipts. When the order is ready, he picks it up and joins his colleagues at their table.

The tables below outline each step that will be taken by Tristan, from the moment he enters the restaurant, to the moment he receives his meal. Table 1 describes the initial stages before the ordering process, where Tristan locates the self-serve system. As it is his first time visiting Earth Café, this stage might be somewhat unclear for Tristan. However, since he arrives at the restaurant with his colleagues, who are regular customers at Earth Café, they guide him to the self-serve ordering system. Unfortunately, we are not certain whether the self-serve system is the only way for customers to order. This detail must be clarified with Earth Café in order to successfully implement the system, by taking into account all aspects of the restaurant.

Task Step	Knowledgeable? Believable? Motivated?	Comments/Solutions
a. Enters restaurant	Ok	
b. Proceeds to self-serve ordering system	Ok, if self-serve system is the only ordering method that can be used by the customer. But, what if the customer can order in line?	If the self-serve system is the way for customers to order their food, then no issues arise, as Tristan would only have one option. However, could potentially have the option to order their food by waiting in line. *Note:* This needs to be clarified with Earth Café.
Table 1: Entering the restaurant to locating the self-serve ordering system.		

Table 2 outlines the initial stages of the ordering process. This stage closely resembles the standard ordering process of most self-serve systems, so Tristan does not face many complications. Although, in an attempt to aid him and other first-time customers, the system should be accompanied by a small sign that highlights the main steps that need to be completed to successfully place an order.

c. Selects "Dine-In" from options on Initial Screen (Figure 1)	Ok.	The initial screen is very easy to understand, even for newcomers like Tristan. It simply asks Tristan to select from one of two options, which are fairly self-explanatory.
d. Browses digital menu, and finds desired menu items. (Figure 2)	Ok.	The format of the menu is quite standard and organized, so Tristan can browse with little to no difficulty.
e. Enters desired quantities besides each item. (Figure 3)	Knowledge lacking. Poor format knowledge.	Tristan may not be aware that he needs to manually input the quantities into the fields beside each item, as he is a first-time customer.

f. Enters his name for the order.	Knowledge lacking. Poor motivation.	Tristan might not realize that the system requires his name in order to process the order. This is because the name field is at the bottom of the screen, and may not be prominent to him. He also may not comprehend why the system even requires his name, and may be reluctant to enter this information. ***Possible solution:*** a) Put an asterisk beside the required fields b) Prevent him from proceeding to the next step without inputting the necessary information
Table 2: Entering his order information.		

In Table 3, we are exploring the path taken by Tristan to process his order, eventually leading to him picking up his food and returning to his colleagues. Again, since this is Tristan's first time at Earth Café, this process may be slightly difficult for him to grasp. Each step will take slightly longer for him to accomplish than it would for a regular customer. This stage may seem unnecessarily complicated, especially to new customers.

g. Displays total cost and total calories of order. (Figure 4)	Knowledge lacking.	Once he enters the correct values into the input fields, Tristan would not know the next step. Although the buttons are labeled, he may not which button he should click first. Should he skip straight to the "Place Order" button? ***Possible solution:*** We could attach a small sign beside the self-serve system, indicating the steps that need to be taken in order for each customer to successfully place their order.
h. Inputs payment	Knowledge lacking.	Similar to the previous step, Tristan would be unaware of what step to take next.

information. (Figure 6)	Poor format knowledge. Poor motivation.	When he realizes that he needs to input his credit card information, he may be confused as to why he needs to manually enter these numbers in himself. He would not know the correct format to use so that it is accepted by the system. Also, he may be unwilling to input this information for security reasons.
i. Prints and displays the receipt. (Figure 5)	Knowledge lacking.	This step has the same reasoning as the previous two steps, which is that Tristan would not know which step is required. He also may not know that his order number, which is on his receipt, must be provided to the kitchen staff in exchange for his meal.
j. Places his order.	Ok.	Although Tristan may not be confident of the correct sequence of events, he will most likely know that he needs to click the explicitly named "Place Order" to place his order.
k. Waits for his order.	Knowledge lacking.	Tristan is most likely unaware of how the kitchen staff will alert him when his order is ready. Until the kitchen staff eventually calls his name, indicating that it is ready, Tristan may be in a state of confusion.
l. Verifies his order number.	Knowledge lacking. Low motivation.	The system does not inform Tristan that he needs to remember his order number. He may be slightly frustrated, as he believes that the Earth Café employee calling his name is enough indication that the order belongs to him.
m. Picks up his order, and proceeds to seat.	Ok.	
Table 3: Processing and picking up his order.		

The following table, Table 4, highlights the actions taken by the system in the event of an error or an unexpected interruption.

1 Event: interruptions and timeout		
a. Tristan and his colleagues take a long time to decide what they would like to order.	Low knowledge.	The system provides customer with a sufficient time limit, before resetting the system for the next customer.
2 Error: incorrect / missing field value		
b. Forgets to enter a name for his order.	Low knowledge. Low motivation.	The system does not allow the customer to proceed to the next step if they do not input a value in the "Name" field.
c. Enters an invalid character in quantity field.	Low knowledge.	In the quantity field, the system will not accept any characters that do not identify as digits.
3 Error: omitted step		
c. Forgets to input his payment information.	Low knowledge. Low motivation.	The system will not let the customer place their order without entering their payment information. The "Place Order" button will be hidden until this information has been submitted.
d. Forgets to display his receipt, and order number.	Low knowledge.	Without displaying the order receipt, the customer will not know their order number. For this reason, the system will not let the customer place their order without clicking the "Receipt" button.
Table 4: Processing and picking up his order.		

Tables 1-4 effectively highlight each of the significant steps that will be taken by the majority of Earth Café customer. The tables indicate potential issues that may arise,

as well as steps that can be taken to overcome these issues. Through iteration and stepwise refinement, our team will ensure that the system is capable to handle new requirements as they are encountered.