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COMP 3008

Assignment #5

Part 1: Cognitive Frameworks

Section A

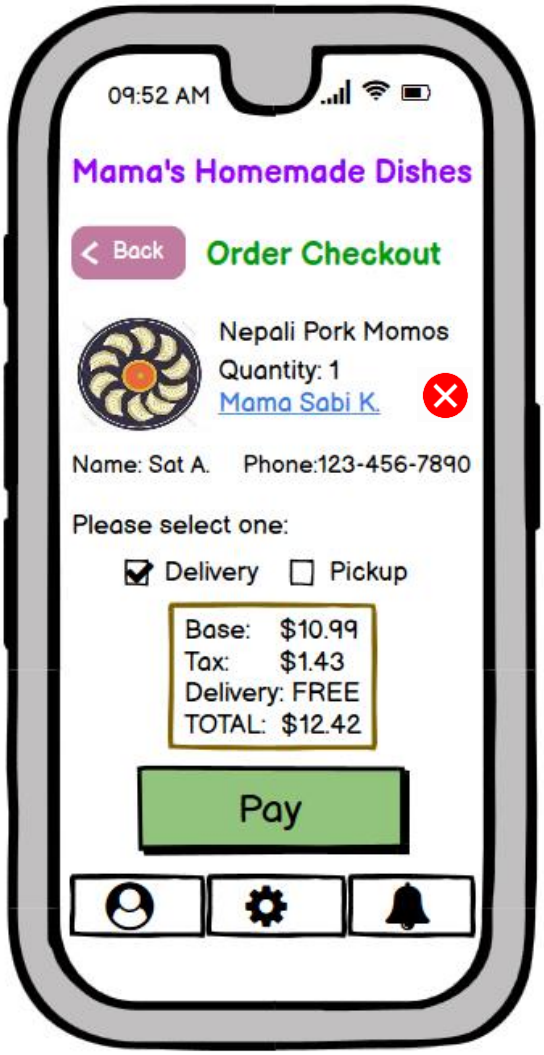
The website chosen for this project is Skip the Dishes. Skip the Dishes is an online food ordering platform that allows users to order food from restaurants and have it delivered at their door via browser or mobile application. The proposed software project falls under the same general domain as Skip the Dishes. However, it has more neighbourhood-focused and healthy-eating aspects to it.

The project is titled *Mama's Homemade Dishes*. It is a mobile application which allows mothers (or ladies in general), who are referred to as mamas, to sell their homemade dishes to those interested in their neighbourhood. There are three main sets of users: mamas, consumers, and delivery persons. Mamas can upload their specialty dishes to their profile for consumers to see. Consumers can find variety of items from various mamas around their neighbourhood in their feed to select from. They can pay through the app and have the option for pick-up or delivery. Furthermore, consumers have the option of monthly paid subscription which allows them to receive homemade dishes any two days of each week from the subscribed-to mama(s). Additionally, if a consumer is subscribed to a mama, they receive other perks such as free-delivery, first to receive notifications for new dishes posted by mama, and also be able to view recipes to all of the dishes published by mama.

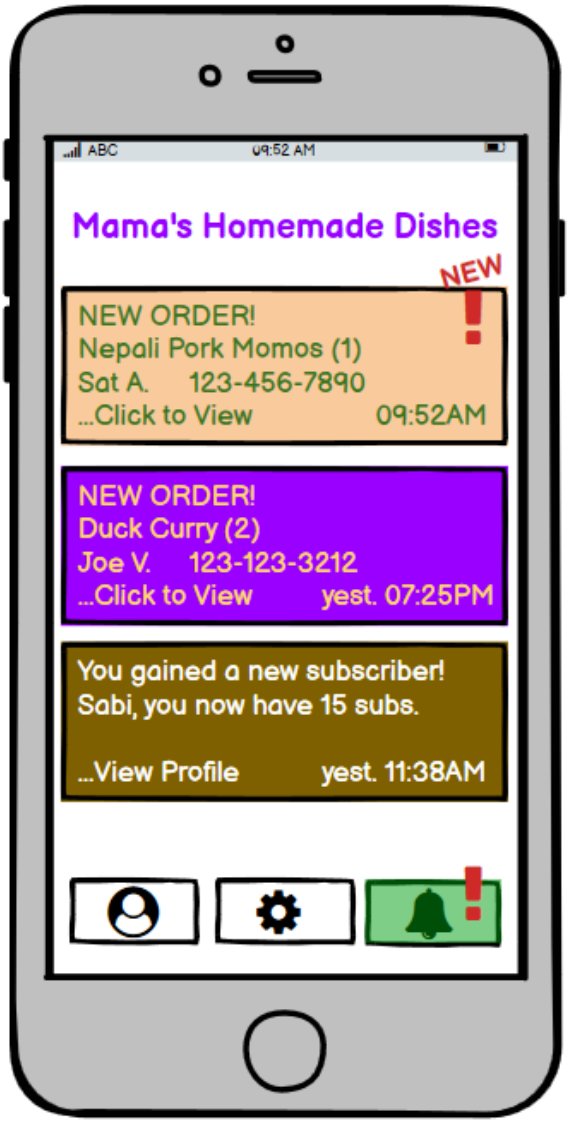
Distributed Cognition is the cognitive framework of choice for the project. Unlike its predecessor Information Processing Model, it involves more than just the user. It emphasizes on people, environment, and artefacts working as a unit to solve a cognitive task. In our project, the task of completing an order involves multiple people: consumer who makes the request, a mama who prepares the food, and possibly the delivery person who delivers the food. The service cannot function without collaboration between multiple parties. Environment refers to places where the app might be used. There are multiple environments: mama's kitchen is an environment as it is

where she would prepare her dishes and upload pictures to the app; consumer's home is an environment where they would likely have the food delivered. The dish that is ordered by consumer is considered to be a physical artefact because it is handled by multiple people and can be likened to notes being passed around a table. As a smartphone would be used for operating the app, it also acts as a physical artefact needed for the task. There is a virtual artefact in the form of the app itself; consumer, mama, and delivery person all use the same app to collectively finish a consumer's order. Sharing and accessing of knowledge is also evident when a consumer views recipes for a dish by their subscribed-to mama. Distributed problem solving, by definition, means multiple people are doing their designated chunks to solve a large task. In our project, an instance of distributed problem-solving is when a mama finishes preparing Order A and sends a delivery person to deliver Order A while she then moves on to prepare Order B. All in all, by looking at the potential applications of Distributed Cognition above, it seems to be the best cognitive framework for our project.

Section B



This is the order checkout screen where consumer sees details such as dish, mama preparing the dish (which is a link when clicked takes consumer to that mama's profile), consumer's information, and cost. A complete summary of their order is in this screen before the consumer pays. This is particularly beneficial when, for instance, consumer has added many dishes to cart for which this summary can help offload details like dishes and its prices from consumer's memory. Although this is a trait of External Cognition, TA Eric explained in office hours that External Cognition is considered to be a part of Distributed Cognition and that both work towards reducing memory load from people with the use of external objects during a cognitive task.



This screen is from Mama Sabi's perspective. The bell icon at the bottom right shows notifications. Mamas receive a notification whenever a consumer places an order through the app. As we can see, the latest notification is for the consumer with the name Sat A. who ordered Nepali Pork Momos in the page above. This screen was used to portray communication in a collaborative activity. Communication between parties is vital in such a platform where multiple users are working together to complete a task. This concept benefits the mama as they can easily see incoming requests and know when a new request has arrived. Although not shown in the prototypes, delivery persons on the app also have similar notification centre that informs them when, for instance, a mama's order is ready for delivery.

On the left screen, consumer is browsing recipes from Mama Sabi. As a reminder, only subscribers to Mama Sabi are able to view recipes posted by her. The right screen is the result of consumer clicking on the “Recipe” button beside Nepali Pork Momos. It contains information about the required ingredients and the steps to prepare the dish. The purpose of this is to promote healthy-eating and also encourage consumers to cook their own homemade meals too. This concept demonstrates sharing and accessing of knowledge between mamas and their subscribers.

Part 2: Emotional Interaction

Section A

The project proposal is the same as Part 1. As a brief recap, *Mama's Homemade Dishes* is a mobile application which allows mothers (mamas) to sell their homemade dishes to consumers in their neighbourhood. Consumer can order dishes, pay through the app, and choose to have it delivered or pick-up at mama's place.

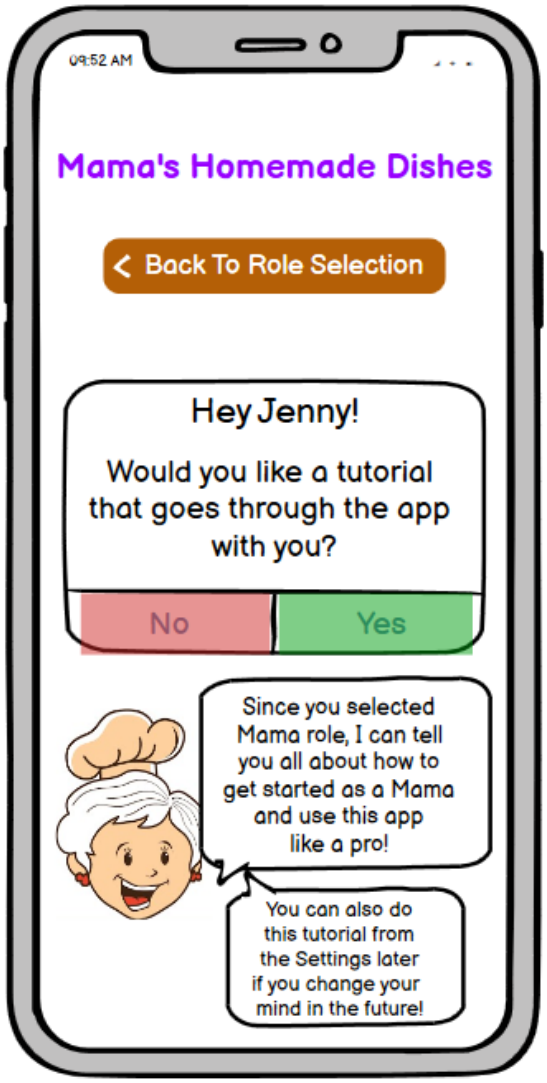
Traditionally, a good user experience meant the system was designed to be efficient and get the work done. However in the current era, those factors are not sufficient. As mentioned in the lectures, it is also important to make the user feel happy, motivated, and have trust in the system. The reason that interfaces such as Microsoft's "Office assistant Clippy" failed was fundamentally due to a lack of understanding of their audience. Let us take a look at the main audience for our project. The app is primarily made for mamas in the neighbourhood who enjoy cooking and who are looking to use this opportunity to start a side business doing what they love. Often with systems like Skip The Dishes, the consumers are given much higher priority in user experience than the vendors. Our project differs from Skip The Dishes in that the system also prioritizes how mamas might use the app. Generally, mamas may be novices in mobile technology so it is vital to provide them with a platform that is primarily easy to use along with making them feel happy, motivated, and trusting. Of course, it is not to say that every mama may have a hard time navigating the app from the start.

Keeping these possibilities in mind, our project can benefit from a mascot that acts as a guide. As we saw with the Clippy example in the lectures, it was mostly considered to be annoying and distracting because user had no control over it. However in our project, after the user opens the app for the first time and selects their role, they are prompted to choose whether they want a tutorial of the platform. If they go through with the tutorial, a talking mascot of a warm, smiling mama takes user around the system. It explains features pertaining to the user's role. For mamas,

it would show how to set-up profile, upload pictures and recipes, view notifications, etc. For consumers, it would show how to set-up payment method, feed personalization, various privileges from subscriptions, etc. For delivery persons, it would show how to check for orders that are ready to be delivered, how to see consumer's delivery address, how to verify payment for delivery, etc. If user chooses to not take part in the tutorial, they are informed that they can still go through the tutorial from the Settings if they change their mind later. The mascot serves the purpose of making users feel comfortable navigating an unfamiliar system and also makes mamas feel motivated in using the platform without making it seem daunting.

Another important aspect of Emotional Interaction is user-friendly error messages. Any system is bound to encounter some form of error as technology is never perfect. A good user experience can be provided when the system communicates the error to the user in a meaningful and positive way and also suggests potential solutions. Similar to MailChimp's use of its brand image for the website's error page, our system can also make use of the smiling mama mascot. This would be particularly beneficial when, for instance, consumer searches for a dish that is not offered by any mamas in their neighbourhood. In this case, the mascot could read a brief error message in casual language explaining what happened and also suggest a few entries that match any keywords inputted by consumer, if possible. Proper Emotional Interaction in a system ensures users are happy, motivated, as well as have trust in the system.

Section B

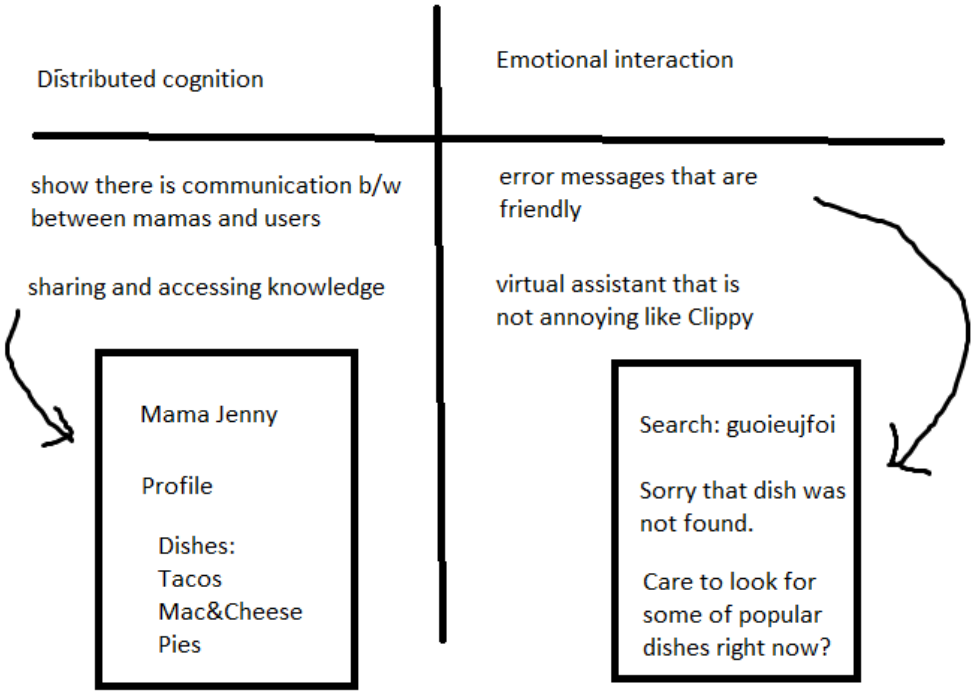


After the user downloads the *Mama's Homemade Dishes* app and opens it, they are asked to choose their role: Mama, Consumer, or Delivery Person. Next, they are brought to this screen. The mascot acts as a virtual guide for the app. The system firstly asks the user whether they want a tutorial that shows them around. If they choose not to do the tutorial, the mascot lets them know that they are still able to do the tutorial at a later time. The tutorial goes over everything user needs to know about the platform in a step-by-step fashion so user has a good grasp from the get-go. Unlike Microsoft's assistant Clippy, there are no distracting and patronizing pop-ups from the mascot.

In this screen, consumer searches for a dish called “Chocolate Avocado” which is not offered by any mamas in their neighbourhood. The mascot interacts with consumer in a conversational tone which produces friendly user interaction. It also suggests consumer some dishes that are relevant to the search query. In this case, chocolate cake was suggested due to the keyword “Chocolate” and guacamole dip was suggested because the description for the dish likely included the keyword “Avocado”. This screen is meant to capture a good user-friendly error message page that not only is informative but also provides potential solutions all in a positive tone.

Appendices

This is my rough sketch on MS Paint to plan my ideas for the prototypes before I started implementations on Balsamiq.



Source for pork momo image: https://bit.ly/3O5suFZ

Source for mascot image: https://bit.ly/3O4Rddx

Source for chocolate cake image: https://bit.ly/3LUhtVY

Source for guacamole dip image: https://bit.ly/3JBSlBD