

## **ITIS 6400/8400 Principles of Human Computer Interaction**

### **Project Activity - Design for a non-traditional interface**

The next stage of your project is conceptual design: brainstorming and then narrowing down design ideas into a set of concepts. These concepts may differ by:

- Interface type
- Which design goals are emphasized
- Which usability goals are emphasized
- Different features that are emphasized
- Different metaphors that are used

For today's activity, choose one non-traditional platform or modality – something that is not a standard GUI, Web, or Mobile app interface. Examples include speech, large touch screens, TVs, a wearable, watch, tangible, etc... Brainstorm an application for that modality for your project that meets your design goals. Sketch out your design, with a drawing of screens, or listing of dialog, or storyboard or scenario.

With this as inspiration, continue to brainstorm ideas for your project. Ideally, you should brainstorm many possible ideas the next two weeks and narrow down to 3 in the coming month.

#### **Modality chosen / Interface type: Large touch screen machines**

The interface type selected is “large touch screens”. As this is one of the non traditional modalities, it would be easier for the users to choose the options based on the given choice in the touch screen.

##### **Screen 1:**



At initial home screen, you would have option to directly login the application or you need to register first before login. Register option is because, we need to get the details of the person being using the application. It would track the location based on the location of the touch screen panel.

##### **Screen 2:**

**SELECT THE OPTION OF YOUR CHOICE**

Find Nearby food provider

Check the NGO providing the food today

Check the nearby vending machines for food

Once logged in to the application, the user can choose either of the above three options. If the chosen option is first, then it would take it to next screen where user can select the vendor of food.

If the chosen option is second, then it would take it to next screen where user can select the NGO who provides the food.

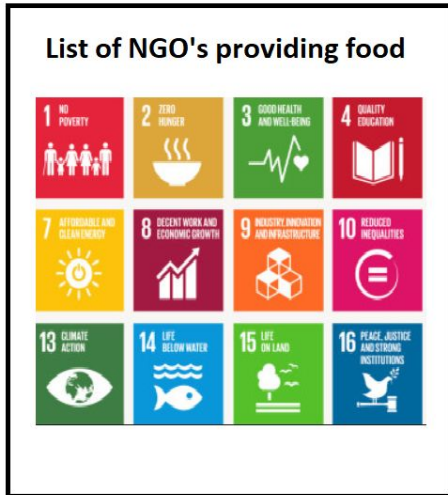
If the chosen option is third, then it would take it to screen where it would show a map with various vending machines located.

### Screen 3:



This screen would provide the details of different food producers in the nearby area. The user just need to touch the location to get the details of the producer. This screen is much user friendly as user just needs to move/drag in the direction which he/she needs to move.

### Screen 4:



This screen would show the list of NGO's which are helping the users in either providing food or establishing the connectivity between the food banks/producers and needy people.

User have to choose the NGO and get the details of it.

#### Screen 5 :



This screen would show the list of nearby vending machines nearby which would help the needy user to get the food. These vending machines would help to get the good in cheap rates.

#### Screen 6:

**Selected Vendor : ABC**

**Miles away : 1.2 miles**  
**Type of food : Burger**  
**Charges : 0 \$**  
**ETA for food expiry : 2 hrs**  
**Any delivery options : No**  
**Any NGO to help : No**  
**Food quality : Medium**  
**Cooked time : Noon**

This screen allows the user to know the details of the vendor who is providing the food. User can check the type, delivery options, quality and other things about the food being provided.

### Usability Goals

- **Flexibility:** We are targeting both the type of users (Producer, Consumer) into our application. So we would only make one system which can be used by both the type of users. The landing screens will differentiate on the based of login.
- **Scalable :** Later on the based on the users challenges we could improve and add more features to the app in order to satisfy the other various scenarios.
- **User-friendly:** The content and navigation should be user-friendly. Any new person should be quickly able to navigate and learn how to use the application.
- **Simple content:** The content of the application will be in simple, easy to understand language.
- **Sociable:** Users could get to know about other activities being carried out by NGOs similar to such kind of help which would be more help full.
- **Creativity:** The application look and feel should implement creative and out of the box ideas to make more the application more attractive and eye catching for all users.
- One of main usability goal that we are emphasizing on is, it should be easy to use the application. i.e our application interfaces should be self descriptive about the function what is doing? so that by looking at the components in interface user should be able to realize what is meant for.
- The large touch screen allows the components to be displayed clearly, which helps user to use out system without any confusion.

- Having the map on whole screen allow user recognize the location of food outlet/restaurants location clearly, rather than having overlapping text or any other component.
- We are also having large card shapes to represent our partners such as food distributors (such as NGOs) , produces, outlets. These large cards contain all necessary information.
- We are also making use of Map to indicate nearby vending machines. Similar to the map which shows nearby outlets, this map also spread over screen showing only vending machines.
- Dedicating each screen for its own functionality or related functionality follows the **proximity design principle** which helps user to find related functionalities easily and increases the usability experience.

### **Design Goals**

1. The design should be such that user should be able to locate the nearby food provider seamlessly. It should give user a map or list of nearby location where he can click and get the details of it.
2. Another goal of the user is to find a nearby vending machine which provides the food in cheap rates. The design should also provide option to do so.
3. The application design should also enable the user to sign up or register as the details of the user is required by the application.
4. Proper information should be displayed for each option on the screens as this would help user to move in/out of the application easily without any help.

### **Different features**

The application should allow any type of user to register so that (s)he can login to the application later to use the features.

The application should give the user multiple choice after login like to find nearby food provider, checking the NGO providing the food today and checking the vending machines for availability of food.

In case the choice of finding nearby food provider or finding nearby vending machine is chosen, the screen should show a map area with locations represented by red colored drop icon.

The list of NGO's can be represented by little square icons which contain the name of NGO.

Once the vendor is chosen, details such as the distance in miles, type of food available, estimated delivery time etc should be available to the user to either proceed ahead or go back to the previous screen to choose another vendor or NGO.

### **Interface Metaphors**

We are following the Interface Metaphor design principles while designing our application. Below points emphasizes on its implementation in our application.

- We are having the large buttons for registration and login on the same screen, which follows the widely used convention of proximity. This will allow user to understand that if there is no login , they should register.
- Having the available functionalities or option on top of other. This is a widely followed practice of grouping functionalities together. This helps user to use our application if they have used any this kind of application before.
- We also following default location icon which used by google without customizing it. This helps any user to learn that these icon shows locations.