Assignment 4

1 Aim

Design an interface prototype for selected product/system

2 Objective

To be able to identify and design an interface prototype for the selected system and make it easy for the user according to the requirements.

3 Outcome

Students will be able to design and understand the prototype used in detail.

4 Theory

Interface prototyping is an iterative development technique in which users are actively involved in the mocking-up of the UI for a system. UI prototypes have several purposes:

- As an analysis artifact that enables you to explore the problem space with your stakeholders.
- As a design artifact that enables you to explore the solution space of your system.
- A basis from which to explore the usability of your system.
- A vehicle for you to communicate the possible UI design(s) of your system.
- A potential foundation from which to continue developing the system.

The system under study is our final year project, which is a wearable technology for group management. The system consists of two main interfaces:

- Android application on a mobile device

- A band with an OLED display and a buttons for user input

UI prototype w.r.t. the considered system can be explained as follows:

- As we are focusing on school trips, teachers and the students are the main stakeholders. So,the problem space i.e. the components of all the problems which are involved need to be considered. The main problem can be understanding the use of the app by the teacher and the usage of the band by the children.This needs to be analyzed carefully.

- In the process of designing the interface prototype, we consider many UML models, requirements and design functions that help to describe the function, architecture and design of software. For the following system, considering the problems the teacher would face while using the app, we made modifications in the application accordingly.

- As mentioned earlier, the system should be user-friendly and easy to use.So,the warnings/messages given by the app in certain conditions should be easily understandable by the teacher i.e. , it should not be in any complicated language which is understandable only by the computing system.

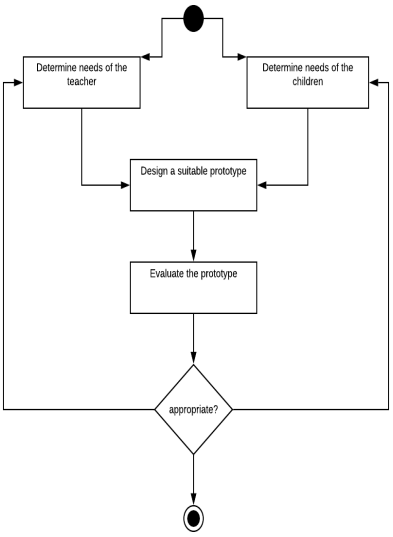
- The system will keep requiring changes as the users keep changing. Here, for example, we have considered only a teacher who has to manage his/her students. But, there can be other cases like a group of friends in music concerts, trekkers, patients in a hospital suffering from Alzheimer and their caretaker, etc. So, prototyping provides the basic foundation to continue developing the system as per the system and its requirements.

Further, to make our app look better and more user-friendly, we are planning to use the JustInMind which is used for prototyping the interface.It provides a full range of web interactions and mobile gestures, so that you can focus on creating delightful user experiences.
It has the following features:

- Visual Design:
  We can design the style, size and layout distribution of any UI element to fit the look and feel of your screens.

- Web Interactions:
  We can design web experiences with a full range of interactions, animations and transitions.Also, we can create anything from simple links to advanced interactions.

- Mobile gestures:
  we can choose from a ton of gestures that allow you to rotate, tap, swipe, scroll and pinch your way through your mobile app prototype.



Prototyping is carried out as shown above.

For the following system, while designing the prototype we can consider the following features:

- options when the app is opened
- sequence of the screens displayed
- contents to be displayed
- amount of content to be displayed on screen
- back and exit buttons

When the prototype is evaluated and if it is appropriate,then it can be considered as the foundation of developing the system further and the following changes can be made:

- Make fonts and colour schemes on the application and device screens easy to read
- Buttons should have easy to understand symbols so as to be understood by even toddlers who may not have learned how to read
- Text-to-speech output for the bands
- Haptic feedback on bands
- Incorporating suggestions from the Android Developer's official website into our application to make it more accessible

- Testing the system's accessibility design with specialised users and incorporating their suggestions.

5 Conclusion

Through this assignment, we understood how to design an interface prototype for our product.