

EE 4213 Human-Computer Interaction

Design Project

Design a Mobile App to Help the Citizens During the Pandemic

Intended Learning Outcomes

On completion of this project, you should be able to go through the process of interaction design including

- User requirement capture
- Screen design
- Icon design
- Evaluation

Grouping and Deliverable

- Students are required to form groups of **THREE** or **FOUR** by **Week 3**
- Student workload at each group should be evenly distributed
- **Each group** is required to submit a **softcopy report** with no more than **15 pages for group of 3 and less than 20 pages for group of 4** by **20 April 2021, 9 a.m.**
- **Each group** should present their design project using at most **5 minutes** during the lecture on **20 April 2021**. The format can be pre-recorded video or real-time presentation via ZOOM.

Objectives

A storyboard view of interaction with a computer application that supports certain specific tasks is needed. Storyboard is a picture/drawing that shows what the screen looks like at one instance of time. Several storyboards in sequence show how the screen changes in response to the user interaction. The storyboards should be prepared with any drawing/painting tools you wish to use. Note that there is no need to implement the system.

In this project, your group will design a new mobile app (e.g. vaccination booking and vaccination passport for travelers) or re-design an existing mobile app to implement a function of your group's interest (e.g. COVID-19 contact tracing) to help the citizens during the pandemic. If your group opts for re-designing an existing mobile app, the usability issues of the existing app should also be analyzed in both report and presentation before discussing the improvements of the proposed new design.

Report Requirements

1. The requirements of the app and user profile should be described.
2. You should use storyboards for prototyping the app. Explain your design using HCI criteria, principles and/or knowledge. Note that there is no need to include all the icon selection actions if the sequence is long, while representative actions may be sufficient. Nevertheless, storyboards showing both the initial and final screens are needed.

3. You have to design both the screen layouts, and the appropriate icons. You should also describe how the user interact with the system, including the organization of the icons.
4. You should list two representative tasks, including the action steps for each of them. You should then perform evaluation using cognitive walkthrough for assessment.

Suggested Report Template

1. Overview of your app
 - This system is for ...
 - Functional and non-functional requirements include ...
 - Users can use it for ...
2. Technology
 - Hardware (e.g., iPad, iPhone)
 - Software (e.g., iOS, Android)
 - Development kits needed
3. User groups (i.e., who are the intended users)
 - Group 1: ...
 - For each user group, write a representative Persona including their experience in the use of technologies, frequency of use of the system, etc.
 - Group 2: ...
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4. Representative task identification and illustration of how users accomplish them
 - Task 1 is ...
 - Task 2 is ...
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5. Design description and rationale (e.g., learned techniques have been applied)
6. Evaluation using cognitive walkthrough
7. Discussions and conclusion