COMP3423 Human Computer Interaction

Assignment 3 (15%)

Deadline: 26th November, 2023 (Sunday), 23:59

Group Assignment: Interface Design Project (Note: revised parts in green color)

[Total 100 marks]

Objective:

This is a group assignment. Please form a group of about 5 students among two HCI sessions.

Your team is told to create a "Learn Arithmetic" mobile app. As interface designers, you know about the five phases of "Design thinking" (1. Empathize, 2. Define, 3. Ideate, 4. Prototype, and 5. Test). You have quickly identified the stakeholders as *Children*, *Teachers*, and *Parents*, while the children are your major target.

Project Descriptions:

Create user interfaces for stakeholders by first listing the tasks they must perform to learn and understand basic arithmetic (such as multiplication tables, addition/subtraction of two numbers, multiplication of two numbers, and basic division ideas). Please think about the exercises that children should do.

The user interface could be on a screen or a robot (but it does not have to be). It could also be a game or… whatever helps them to learn. Look at what is out there on the Internet and design something of your own (or modify some interface you have designed before).

Tasks:

Task 1: Requirement gathering and analysis – Go to the stakeholders (children, parents, teachers) and interview them (at least one of each): what do they need, what would they prefer? You can do the interviews online. Show them examples (a real app, a ppt with pictures, a cardboard mock-up, or the prototypes you have made in Assignment 1) and let them reflect on it.

Children

- User requirements - In your group, there may be a few candidate designs with different requirements collected in previous assignments. Discuss among your group which one to put here, and please justify why. (Give >=5 functional & >=5 non-functional requirements)

Parents

- User requirements – Hint what are the tasks for parents do? (Give >=3 functional & >=3 non-functional requirements)

Teachers

- User requirements – Hint what are the tasks for teachers do? (Give >=3 functional & >=3 non-functional requirements)

Task 2: Prototyping and Technical Specifications – Use the Figma tool to prototype related features/functions. No coding is needed. Besides making a demonstrable prototype, you need to write the technical specifications below.

Your implementation (prototype application) – provide the URL below:

Technical Specifications (Discuss on at least 5 UIs in your prototype: you may describe the UI elements and their functionality, and how they are used to satisfy the requirements to do targeted functions/tasks, etc.):

Task 3: Testing – Describe the process for testing the usability of the interface you built. Perform **at least one** test / survey / experiment to demonstrate that your interface is a good design with enough user subjects required to ensure the validity of your study.

Task 4: Presentation & Demo – Take a video of presenting a PPT, showing:

- How did you collect the user requirements?
- What are the requirements of the stakeholders?
- Walkthrough the app by picking the most prominent feature/function for each stakeholder, and show how it is used.
- Describe how to test the interface.
- Describe the test results (if any)
- Length: do not exceed 15 minutes.

Note:

- A portion of your user interface may be demonstrated when needed. Each member of the group must participate in the presentation.
- Each member should address his/her name, and present a part in the video. Otherwise, part of the presentation marks will be deducted for absent one.

Submission Guidelines:

- Submit a zip file that contains:
    - A MS Word or PDF document with the answers to the assignment questions. The document should also contain the URLs to prototype and URL to download the presentation video; The suggested document structure could be:
        - Begin with a table, write down the names and ids of your group, and state your major contributions in point form.
        - Task 1 answer: Write down the requirements for stakeholders:

        - Children
        - Parents
        - Teachers
    - Task 2 answer:
        - A working URL to the prototype
        - The Technical specifications
    - Task 3 answer:
        - Testing method(s)
        - Testing results(s)
- The project PPT

- Each group only needs to submit to Blackboard **ONCE** by a representative or team leader.
- Marks will be deducted if the markers are unable to access the links
- Please notice the late penalty policy of the HCI course.

Suggested Rubrics (Total 100 marks):

- Group work (5 marks):
    - Put this part as "Appendix" in the Word document;
    - Include **any two** meeting minutes that recorded your discussions among your group-mates;
    - Each minute should contain
        - Date of meeting
        - Time of meeting
        - Venue of meeting (if not physically meet, put "Online on Zoom" or whatever)
        - What have you discussed in point form (no need to be long).
- Requirement collection (15 marks)
    - Empathize phase and Define phase.
- Prototyping (50 marks)
    - Ideate phase and Prototype phase.
    - Include the technical spec.
- Testing (10 marks)
    - Test phase.
- Presentation (20 marks)
    - PowerPoint (PPT)
    - You must attach the video in which you present the PPT.

End of Assignment 3