Module Code	Examiner	Academic Unit	Tel
CPT208	Yue Li	Computing	3223

Xi'an Jiaotong-Liverpool University
西交利物浦大学

2nd Semester, 2023/24 Final Examination

Human-Centric Computing

Time Allowed: 2 Hours

Instructions to Candidates

1. This is an open-book examination with invigilation. You are allowed to take one-page notes with you. Please complete the assessment independently and honestly.

2. Total marks available are **100**.

3. This exam consists of **three questions**. The mark allocated for each question is indicated at the end of the question.

4. Answer **ALL** questions. There is **NO** penalty for providing a wrong answer.

5. Only **English** solutions are accepted. Answer should be written in the answer booklet provided. Clearly indicate the **question numbers** before your solutions. Submit your notes together with your answer booklet. Make sure your writings are clear to read.

6. All materials must be returned to the exam supervisor upon completion of the exam. Failure to do so will be deemed academic misconduct and will be dealt with accordingly.

Question 1 Discovering Requirements and Design   (40 marks)

Imagine you are tasked with **designing a mobile banking app for senior citizens**, adopting a user-centred approach. Based on the given context, answer the questions below. Note that your answers should be closely related to the given context.

(a) Outline a data collection plan detailing the methods you would use to gather user requirements and justify your choices. [10]

(b) Discuss how you will carry out the design and the practical issues you may encounter. Please give specific examples. [10]

(c) Please create a persona for this app. How does the persona help the design? [10]

(d) What types of interactions and interfaces will you adopt in the design? Please justify your answers using specific examples. [10]

Question 2   Prototype   (30 marks)

Imagine you are part of a design team for a university-based **mobile application that assists students in better organising their schedules**. Your team has already devised initial prototypes for key features such as personalised calendar, task prioritisation, and study habit monitoring.

(a) Highlight the main characteristics/advantages of using prototyping in human-centred computing design. Take one key feature listed above for example, elaborate how prototyping aids the design. [10]

(b) What is Minimal Viable Prototyping (MVP)? Please identify its four core characteristics. Please use specific examples about the mobile application to illustrate its advantages. [10]

(c) In your own opinion, what is the most appropriate prototyping tool to use for this application design? Taking one key feature for example, explain how the prototyping tool could be used in the design and discuss its benefits and potential drawbacks. [10]

Question 3   Evaluation   (30 marks)

You are an expert user experience researcher and need to evaluate **a fitness tracking wearable device targeted at novice users**.

(a) What is heuristic evaluation? Explain its advantages and problems in evaluating this design. Discuss the differences between heuristic evaluation and usability testing. [15]

(b) Identify another two types of evaluation methods that are applicable to this study. What are their differences and similarities? Select one evaluation method that you find more appropriate, explain why, and describe how you plan to implemented it in detail with specific examples. [15]

——— *End of Questions* ———