

Paper Code	Examiner	Department	Email of Examiner	Ext
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Xi'an Jiaotong-Liverpool University
西交利物浦大学

Semester **2**, 2022/23 Final Exam

Undergraduate - Year **3**

Human-Centric Computing

Exam Duration: 2 Hours

Crash Time Allowed: 15 Minutes

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 marks**. This exam consists of **three questions** in total. The mark allocated for each question is indicated at the end of the question.
3. Answer **ALL** questions. There is **NO** penalty for providing a wrong answer.
4. Write down your solutions on the answer booklet. Clearly indicate the **question numbers** before your solutions. Submit your notes together with your answer booklet.
5. Only **English** solutions are accepted. 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.
7. The duration is **2 hours**.

Question 1 Design (40 marks)

- (a) Draw the interaction design life-cycle model. How does it differ from the double diamond of design? Give **two** specific examples to show how you have followed them in your group project. [10]
- (b) Is the CPT208 learning mall page a good design or a bad design? Please justify your answer using at least **two** design principles. **How do design principles inform the interaction design?** [9]
- (c) What are the **three** principles of a user-centred approach? How did you follow the principles in your group project? [9]
- (d) What are the differences between usability and user experience? Please give **two** specific examples for each and explain how you addressed usability and user experience goals in your own project. [12]

Question 2 Prototype (30 marks)

- (a) What are the **three** main characteristics and **three** main functionalities of prototyping? Please give an example of how you used prototype in your group project. [10]
- (b) Please describe the breadth and depth dimension in a prototype. Why is it important to balance these two dimensions? What is the name of the strategy that focuses on the breadth dimension of the prototype? Please give a brief introduction of this strategy and describe how it could be used in the development of a hotel booking system. [10]
- (c) What is the best choice of prototyping method if a designer would like to show a **series of scenarios** related to design tasks? Please give a short description of this prototyping method. Use this method to provide a prototype for a hotel booking system, describing at least **four** key scenarios. [10]

Question 3 Evaluation (30 marks)

- (a) What are the **three** types of evaluation methods? What are their differences and similarities? Discuss **one** of the types in detail and explain how you have implemented it in your group project. [10]
- (b) You are asked to conduct an experimental design to evaluate the usability of two online quiz systems. What are the steps you need to follow to prepare and conduct the experiment? Specify the alternative hypothesis, your proposed study design, the independent and dependent variables, and give as many details as you can. [10]
- (c) As a student in XJTLU, you have used many XJTLU systems, such as learning mall, eBridge, XJTLU official website, the sports centre mini-program, and the library book-borrowing system, etc. Choose one that you are familiar with, and discuss what, where, when and how can you evaluate the design. Please provide as many details and examples as you can. Make it clear if you are making assumptions and claims. [10]

———— End of Questions ———