



BENG HONS / BSC HONS / BSC(ENG) HONS / MENG HONS / MSCI HONS Examination by course unit

Friday 19 May 2017 10:00 am

ECS522U Graphical User Interfaces

Duration: 2 hours 30 minutes

YOU ARE NOT PERMITTED TO READ THE CONTENTS OF THIS QUESTION PAPER UNTIL INSTRUCTED TO DO SO BY AN INVIGILATOR

Answer ALL Four Questions.

Cross out any answers that you do not wish to be marked.

Calculators are NOT permitted in this examination.

Complete all rough workings in the answer book and cross through any work that is not to be assessed.

Possession of unauthorised material at any time when under examination conditions is an assessment offence and can lead to expulsion from QMUL. Check now to ensure you do not have any notes, mobile phones, smartwatches or unauthorised electronic devices on your person. If you do, raise your hand and give them to an invigilator immediately.

It is also an offence to have any writing of any kind on your person, including on your body. If you are found to have hidden unauthorised material elsewhere, including toilets and cloakrooms it will be treated as being found in your possession. Unauthorised material found on your mobile phone or other electronic device will be considered the same as being in possession of paper notes. A mobile phone that causes a disruption in the exam is also an assessment offence.

EXAM PAPERS MUST NOT BE REMOVED FROM THE EXAM ROOM

Examiners:

Astrid Bin

Nick Bryan-Kinns

Question 1

A company has asked you to design a user interface for an smartphone app that will allow dog owners to find dog-friendly cafes in their area (WoofCafe app).

- (a) Do a CUSTOM stakeholder analysis for WoofCafe app. Specify the CUSTOM stakeholder groups, and describe their members for the WoofCafe app.

[8 marks]

- (b) Draw a screen layout for the main user interface seen by the user of WoofCafe app. Clearly indicate what each element of the user interfaces does.

[11 marks]

- (c) Explain the difference between structured, unstructured, and semistructured interviews. Specify the type you feel is most effective for gathering requirements, and explain why you think it is effective.

[6 marks]

Question 2

A company has asked you to design a user interface for a smartphone app that will allow dog owners to find dog-friendly cafes in their area (WoofCafe app)

- (a) Describe the difference between lo-fi and hi-fi prototyping, and the benefits and drawbacks of each. Describe in detail how you would go about lo-fi and hi-fi prototyping for the WoofCafe app, and how you would get user feedback during the prototyping process.

[10 marks]

- (b) Explain the terms “conceptual design” and “physical design”. Give a brief description of a i) conceptual design and ii) physical design for WoofCafe app.

[8 marks]

- (c) Describe the four parts of the WIMP interaction model, and give an example of how this model is used in computing.

[7 marks]

Question 3

- (a) List the three HCI paradigms. For each paradigm describe its primary theoretical concern and its goal.

[6 marks]

- (b) State the two types of errors theorised by Donald Norman. Explain how they differ, and offer an example of each.

[6 marks]

- (c) Name the 3 characteristics of participatory design.

[3 marks]

- (d) Draw a user-centred product design life cycle. Describe how this differs from the waterfall product life cycle.

[10 marks]

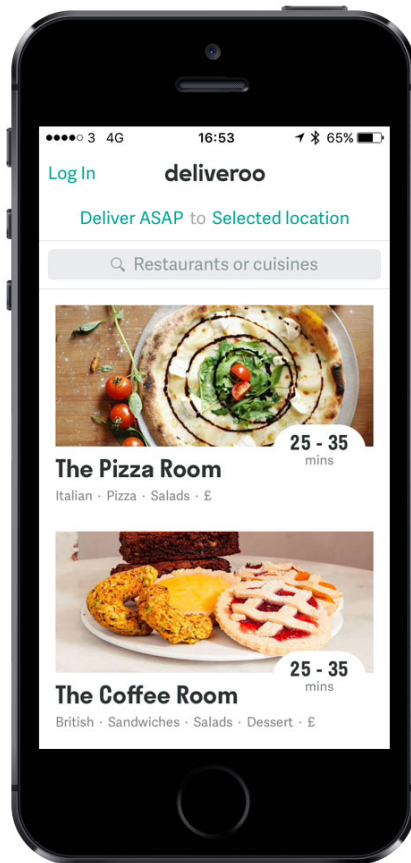


Figure 1: Deliveroo restaurant selection interface. ©Deliveroo 2017

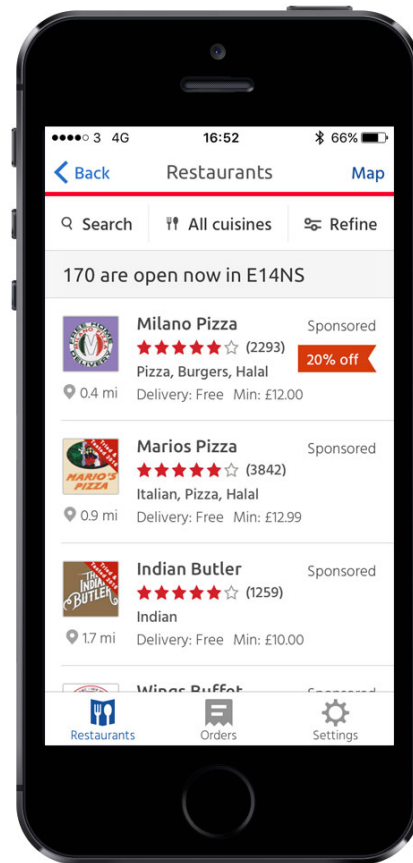


Figure 2: JustEat restaurant selection interface. ©JustEat 2017

Question 4

- (a) Figures 1 and 2 show the restaurant selection interfaces for Deliveroo and JustEat. i) Explain the differences between the interface layouts in terms of memory and attention, using the Human Processor Model. ii) Explain the differences in the task of searching for a Greek restaurant.

[15 marks]

- (b) Explain heuristic evaluation and cognitive walkthrough, and the benefits and drawbacks of each.

[10 marks]

End of questions