human computer interaction

Lecture 10:
Preparing for the Exam

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agenda

- get to know the structure of the online exam
- get an idea of the types of questions
- try answering some questions together with me
- receive general guidance on how to prepare for the exam
- ask questions if anything remains unclear

disclaimer

- the exam is ready and has been submitted to the department for review
- it is possible that the reviewers will request some changes, however, big changes are unlikely to be requested
- in case the reviewers will request major changes, I will notify you about those via a Canvas announcement

key facts

- the exam is going to be a Multiple-Choice Quiz (MCQ)
- it is going to take place online, as a Canvas quiz
- you will find it under Assignments on the HCI Canvas site
- most questions will be multiple choice
- some questions will be “essay” type and ask you to provide a free-form response (i.e. typing in 3-5 sentences)
- the exam date and time is defined by the school (not me)
- please check Sussex Direct for the exam date and time
- the duration of the exam is 2h (no 24h window, no extra time, only one attempt)

exam structure

- The exam will consist of:
  - **8 Low Reward Questions** (worth **3 marks each**, based on theory, multiple choice)
  - **4 Medium Reward Questions** (worth **6 marks each**, test how well you can use the theory in practical situations, multiple choice)
  - **3 High Reward Questions** (worth **17-18 marks each**, test your ability to propose solutions to complex problems, short-essay-like questions)
- The total number of marks you can collect for the exam is 100. These define **100% of your mark for the module** (unless you are an exchange student – you will be contacted separately in such a case).

Let’s go through some examples!

Low Reward Questions

Low Reward Question: Example 1

When designing systems that are usable by people, we need to understand the users' needs. What do we need to take into account when tackling this challenge?

A. What are they doing wrong and what new solutions can we bring in to fix this?

B. What would people find helpful in supporting the way they do things at the moment?

C. How can we make sure the target users do not influence the design process with their biased opinions?

D. How can we introduce fresh approaches to user-centred design?

Lecture 1 Recap

- need to take into account **what people are good and bad at**
- consider **what might help people** in the way they currently do things
- think through what might **provide quality user experiences**
- **listen to what people want** and get them involved
- **use** tried and tested **user-centred methods**

Low Reward Question: Example 2

What is one of the key drawbacks of using interface metaphors?

A. The users have too much flexibility which is hard to design for

B. The designers have too much flexibility

C. The design team need to follow the design principles very strictly

D. The members of the design team cannot go for the full variety of ideas because not everything would fit the chosen metaphor

when interface
metaphors go bad

Lecture 2 Recap

can **break conventional and cultural rules** (e.g. recycle bin placed on desktop)

can **constrain designers** in the way they conceptualise a problem space

can conflict with design principles

can **force users** to only understand the system in terms of the metaphor

designers can inadvertently **use bad existing designs** and transfer the bad parts over!

limit designers' imagination in coming up with new conceptual models

Low Reward Question: Example 3

Which of the below options correctly describes the way the experts work when doing the first round of a heuristic evaluation?

A. Experts work in pairs

B. One expert assesses the system and others take notes

C. Each expert performs the evaluation on their own

D. Experts work together to prioritise problems

how to do
heuristic evaluation

Lecture 9 Recap

- briefing session to **tell experts what to do** (prepared script can be useful)
- **evaluation** period of **1-2 hours** in which:
  - each **expert works separately**
  - make **one pass** to get a feel for the product
  - make a **second pass** to focus on specific features and identify potential usability problems
- debriefing session in which experts work together to **prioritise problems**

Medium Reward Questions

Medium Reward Question: Example 1

Imagine using a VR system in which you can interact with the virtual environment using your bare hands (e.g. to grab a virtual object), as the system is able to track your hand movements and detect the relevant gestures. Thinking of advantages and disadvantages of different interaction types, which statement best describes a potential issue that may occur when using such a system?

A. The user needs to learn how to pass commands on to the system and what these commands are
B. The user does not have much freedom in the way they can interact with the system
C. The user can get easily annoyed by the system
D. The user might not have a virtual object for every activity they would like to perform

direct manipulation
pros & cons

Lecture 2 Recap

pros	cons
novices can **learn the basic functionality quickly**	some people **take the metaphor** of direct manipulation **too literally**
error messages rarely needed	not all tasks can be described by objects, **not all actions can be done directly**
users can get **direct feedback** on their actions	**can be slower than function keys**, command line

Medium Reward Question: Example 2

What type of a requirement is this: “The menu should be self-explanatory, and the user should be able to start using the UI without the need to learn how to use it”?

A. Functional requirement
B. User requirement
C. Data requirement
D. Usability requirement

what requirements could be gathered?

Lecture 5 Recap

- **functional:** what the product should do
- **non-functional:** how the product should work
- **data requirements:** e.g. type, size, accuracy of the data
- **user requirements:** characteristics of the intended user group
- **usability requirements:** usability goals
- **user experience requirements:** user experience goals
- **design requirements:** **what needs to change for a solution**

Lecture 5 Recap

usability:

- based on usability goals such as ease of use, learnability, efficiency, safety and associated measures

user experience:

- based on user experience goals such as fun, enjoyable, entertaining – much harder to specify in terms of requirements!

High Reward Questions

High Reward Question: Example 1

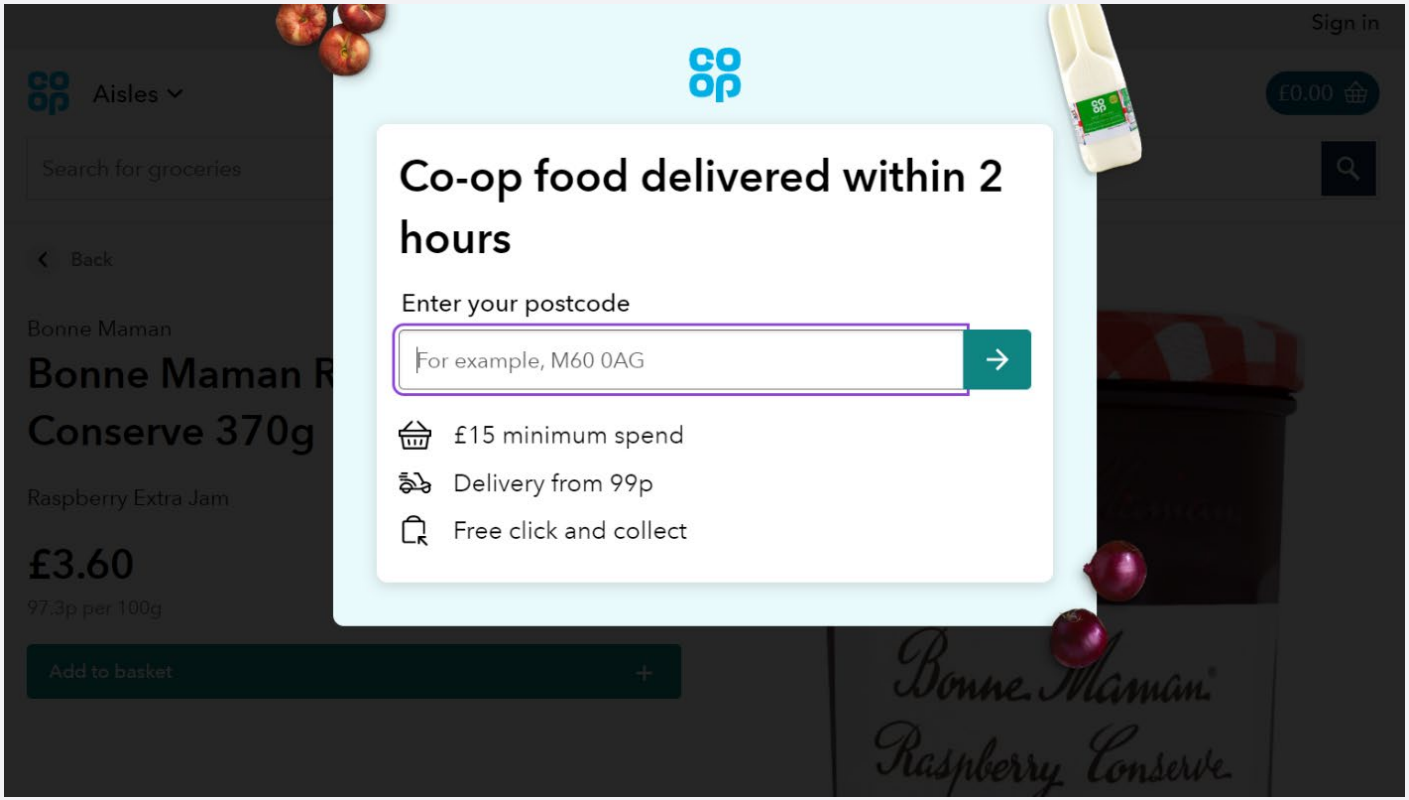
Imagine you are a member of a design team. Your task is to test the effect of the app's behaviour on the engagement of the user with this app. You are working with a new social media app. Your line manager has asked you to specifically focus on the type of push notifications. What dependent and independent variables would you set to investigate this? What would be the rough procedure of your test session designed to investigate the relations between these variables? Please write a total of 3-5 sentences briefly explaining how you would go about this task.

Lecture 7 Recap

- formulate and **test hypothesis**
  (typing is faster than swiping)
- predict the **relationship between** two or more **variables**
  (typing time, keyboard type)
- **independent variable** is manipulated by the researcher
  (keyboard type, language)
- **dependent variable** influenced by the independent variable
  (typing time)
- typical experimental designs have one or two independent variables
- validated statistically & replicable

High Reward Question: Example 2

The user wanted to check how much Bonne Maman Raspberry Conserve 370g costs at Co-op. They used Google to land on the page displayed below. Which Nielsen's heuristic is violated in this case and why? How could you fix this problem? Please write a total of 3-5 sentences answering these questions.



Nielsen's heuristics
(revised 2014 for current technology)

Lecture 9 Recap

1. visibility of system status
2. match between system & real world
3. user control & freedom
4. consistency & standards
5. error prevention
6. recognition rather than recall
7. flexibility & efficiency of use
8. aesthetic & minimalist design
9. help users recognise, diagnose & recover from errors
10. help & documentation

how to do well in the exam?

- revise the content of lectures and seminars
- complete the practice quiz / demo exam
- go through the quiz questions presented in lectures
- for high-reward questions, do not write more than you are asked to write (i.e. max 3-5 sentences in total)

That’s it for now!
Any questions?

That was the last lecture delivered by me this term…
Thank you!