SCC.202 Human-Computer Interaction 24/25

Exercises E1 – HCI Introduction, Model Human Processor, Reaction Time

This worksheet provides exercises for revision of content covered in week 1. This includes questions that are examples of what you might be asked in the written exam.

- No submission – just prepare exercises on paper, and show your TA in the tutorial.
- No grading – this is to support revision, and we recognise honest effort.
- Feedback – exercises will be discussed in the tutorial
- Bonus Point - we recognise honest effort and participation in class

Word limits are given as maximum – <u>always answer in the shortest possible way!</u>

Introduction to HCI

A) We discussed that interactive systems are defined by interaction in "real-time". Consider the following examples of public displays. Would you consider either of them an interactive system? Why? – What could be reasons to consider them interactive, and what might be reasons to not consider them interactive? (1-2 sentences per example)

	Example 1: Digital signage at train station
	Example 2: A public display that shows content to passers-by. If people slow down as they pass the display, then the display reveals more detail on the content.
	Example 3: A public display at a bus stop. People bored waiting can post images from their phones to the display, to share them with others waiting.

B) Explain the metaphor "Bad Usability is like a leaky pipe". Read the article Moodle and explain the metaphor in your own words. (max. 50 words)

C) The user interface is often the main discriminating factor between products or services. Give one concrete example of a product (e.g., app on your phone or service on the web) that you prefer over an alternative that offers essentially the same functionality. Explain your choice, with reference to utility, usability and/or user experience. (50 words)

Model Human Processor and Time in HCI

D) What would be a good setting for the time gap in a double-click or double-tap? First think this through theoretically based on what you learned in class. Then search online for any specific recommendations you can find (list 2 or 3 with reference to where you found them).

E) At https://scc-source.lancs.ac.uk/25/scc241/reaction-time-experiment you can find the source code for a web app that includes two reaction time experiments. Using the same process as in the JavaScript tutorial, download to your machine and open index.html in a web browser.

The visual reaction test works as follows:
- The application shows a coloured circle as stimulus.
- After you start the experiment, the colour of the stimulus will change at a random time between 2 and 5 seconds, and your tasks is to react by pressing the SPACE bar.
- The program measures the time from the colour change until the SPACE bar is hit and displays it on the screen.
- The experiment ends after 10 trials, you can then download a .csv file containing your reaction time data.

The auditive reaction test works accordingly, only with an auditory stimulus instead of the visual one.

Try out each application first, and then use them to collect data on your reaction time. Import into excel and calculate means – is there any difference in your reaction time depending on the type of stimulus?

Bring the data to the seminar for further analysis.

Checklist: Come Prepared to the Tutorial

- Bring your answers to the questions above.
- Bring your reaction time data, ready to share with others as we will give a mini-tutorial on analysing and plotting data.