

## Exercise 1 - Usability ( $3 + 3 = 6$ points)

1. Name the six goals in which usability is usually broken down. Describe each of them in your own words (two sentences per usability goal) and provide for each of them at least one example that was not given in the lecture.
2. Choose 3 of the 6 goals named in the first part of the exercise and state how the design of Apple's Ipad classic (without touch) fulfills / does not fulfill them. The explanation should not be longer than two sentences. If you don't know this device, you should inform yourself on the web. Note: Although we ask for 3 goals, it might be worthwhile to think about the other 3 goals as well.

## Exercise 2 - Interaction modes ( $1 + 1 + 1 + 1 = 4$ points)

Imagine the following situations where you have to interact with a system to achieve a specified task. For each of them decide which interaction mode(s) would be the most appropriate one(s) and justify your choice. It is sufficient if the main interaction mode per item is mentioned accompanied by an adequate description (not longer than 2 sentences).

1. You would like to pay for your parking ticket before leaving the parking garage in your car. (Do also consider the fact that some people might suffer from disabilities.)
2. You are walking in a foreign town using a pedestrian navigation system.
3. You would like to present pictures on a digital device.
4. You are playing a racing game controlled by an accelerometer included in your mobile device.

## Exercise 3 - Analyze Interfaces ( $4 * 8 = 32$ points)

Human-computer interfaces are ubiquitous in our environment and we need to interact with them to accomplish everyday tasks, e.g. buying train tickets, withdrawing money from your bank account, or checking the latest cat pictures on the internet.

Your task is to find **four**, at least one physical (e.g. like the remote in the lecture) and one virtual (e.g. a mobile app), human-computer interfaces (e.g. at the university or in the city center) and analyze them in respect to the principles presented as *Foundations of Interaction Design* in the lecture:

- Affordances
- Visibility
- Feedback
- Mapping
- Constraints
- Consistency

Please provide pictures/photos to document your findings, analyze different interfaces (e.g. not four ATMs), and restrict your answer to about three sentences per principle.

Further explain shortly:

- What metaphors are used (if applicable)?
- How can the interface be improved based on the principles discussed above?

Bonus challenge: We will award 4 extra points to the group(s) submitting the best or worst interfaces out of all submissions and present the interfaces in the lecture.

## Instructions for submissions:

- You can upload your answers multiple times until November, 8<sup>th</sup> 2018 - 12pm (noon). The most recent version will count. You cannot change your answer after November, 8<sup>th</sup> 2018 - 12pm.
- If one of your group members are not contributing to the exercises, you must inform your tutor.
- Please name your submissions according to the following scheme:  
HCI\_exercise\_XX\_GGG.pdf  
XX = exercise number (e.g. 03)  
GGG = group number (e.g. M01)

Hand-in until November, 8 <sup>th</sup> 2018 - 12pm as PDF via Moodle ( <a href="https://hci-lecture.cs.uni-saarland.de">https://hci-lecture.cs.uni-saarland.de</a> )
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