Mobile Interaction
Summer 2024

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Assignment 8

All exercises that are not explicitly declared as group tasks must be done individually and handed in individually. Identical submissions are treated as plagiarism. Plagiarism may lead to loss of exam bonus points.

You can submit the solution to this task in English or German until Wednesday, June 5, at 23:59 via https://assignments.hci.uni-hannover.de. Create a pdf file that contains the text and images of your solution, name it "Assignment-08-<Firstname>-<Lastname>.pdf", and save it together with the exported project (Android Studio: File → Export → Export to Zip File) in a single zip file. Your submission must consist of a single zip file containing all necessary files. The name of the .zip file, as well as the names of the contained files, **must not contain any umlauts**. Therefore, please resolve umlauts in file names.

Exercise 1: Contextual Scenarios (12 points)

Describe **two contextual scenarios** that are connected by a **scenario transition**. The scenarios to be described are intended to illustrate the interaction with an urban mobility app that helps people to move around in the city by walking, taking the subway, renting a bike or a scooter, etc. The app should simplify everyday mobility within a city and support different travel needs as the user visits different destinations (shops, pharmacy, restaurant, dentist, etc.). The app is assumed to have access to the user's calendar. A short general description of the settings and a brief list of the values of the scenario variables is sufficient. In both scenarios, the "devices and usages" variable should briefly explain the role that the app plays in the activity. The scenario variables (as defined in the slides) are:

- location and setting
- movement and posture
- workload, distractions, and activities
- devices and usages
- users and personas

Exercise 2: Experience Sampling Method – Paper Prototype (16 points)

Create a paper prototype for a simple experience sampling app for university students. This app should generate notifications (via the Android Notification Bar [1]) and ask the student to answer a brief survey about their experience in the context of the current lecture. The survey needs to be brief in order to minimally distract from the lecture. Answer the following points and create a paper prototype.

a) Pick four suitable items from the UEQ-Short questionnaire [2] for your experience sampling app. Also formulate a short question for each questionnaire item. **(2 points)**

b) Name one further item/question that should be asked that is specific to the lecture situation. Do not add another UEQ-Short item! Do not use: "Do you have any further questions?", because the input effort for free-form text input is too high. **(1 point)**

c) How often and at what times should the experience samples be collected? Briefly justify your answer. **(2 Punkte)**

d) What data should be transmitted to the server? Should this be anonymous or pseudonymous? (Pseudonymous means that although the identity of the user is not known, a fixed, randomly selected identification number is used.) What are the advantages and disadvantages for data analysis and for the user? **(3 points)**

e) Draw a rough paper prototype according to the description below. Include photographs of the drawn screens in your submission. **(8 points)**

A rough, hand-drawn sketch of the user interface is sufficient. Each screen of the application should be included in the submission (except for possible configuration screens). Submit photographs of the screens.

The interaction process should be recognizable, starting with the appearance of the notification in the notification bar. To clarify the interaction process, add a sequence number and a short caption below each screen. The caption may be omitted if the purpose of a screen is self-explanatory. No more than five screens should be necessary.

In your design, make sure that the experience sample can be answered quickly, so minimize the input effort (number of clicks, amount of scrolling, etc.). The paper prototype is meant to serve as the basis for the implementation of the app in the next assignment.

[1] https://developer.android.com/develop/ui/views/notifications

[2] https://www.ueq-online.org/Material/UEQS_Items.pdf