

Mobile Interaction Summer 2024

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Assignment 11

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 26, 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-11-<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.

Android Phones: Please let us know if you need an Android phone for the assignments. We can lend a limited number of simple Android phones for the duration of the semester. These must only be used for the assignments.

Exercise 1: FoodFacts (18 points)

"Open Food Facts" (<https://world.openfoodfacts.org>) is a non-profit project whose goal it is to maintain an open database of food products. It has an HTTP-based API to request product information in JSON format given the article number of the product (https://wiki.openfoodfacts.org/API/Full_JSON_example). We provide a template that scans a product barcode and then queries the "Open Food Facts" database to get information about the product. Currently the template just produces debug output of the result and shows the product name and quantity.

Extend this app to:

- Show nutritional information about the scanned product. In the JSON object, use the use "nutriments" attribute. (6 points)
- Show allergens that may be contained in the product. (6 points)
- Show a picture of the product, if one is available. Scale the image to use the available space reasonably. (6 points)

In solving these tasks, pay attention to detail (reasonable font and image sizes, grouping of elements, suitable layout, suitable colors, etc.). Design with the Material 3 guidelines in mind.

Hint: To get an idea of the structure of the JSON object, you may open a product page with your Web browser. To pretty-print the JSON, you may use "show page source". Example product:

- <https://world.openfoodfacts.org/api/v0/product/8715700110103.json>
- https://wiki.openfoodfacts.org/API/Full_JSON_example