Exercise 1 - April 4th, 2018
Hello Android!

Preface: Plagiarism

„Plagiarism is the "wrongful appropriation" and "stealing and publication" of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work." [https://en.wikipedia.org/wiki/Plagiarism]

All exercise submissions will be checked for signs of plagiarism, both automatically and manually. Plagiarized submissions will not receive bonus points points. Repeat offenders will not be able to take the exam.

The simple rule is: *you have to write your exercise submissions on your own* (or in collaboration with your teammate). *If you use any external sources or help, you have to **cite** them.* **This includes other students as well as Stack Overflow!**

Preparation, part 1: Android Studio

We assume that you will be using Android Studio for the exercises, and templates will be in the form of Android Studio projects. This is the officially recommended way to develop Android applications, so we follow Google's lead here. If you have prior experience with Eclipse, switching to Android Studio should not be difficult. We will be targeting Android 4.3 (= SDK Level 18) in the exercises, as this ensures broad support across many different devices.

Installation of Android Studio is documented at https://developer.android.com/sdk/installing/index.html?pkg=studio, and helpful documentation is available at https://developer.android.com/guide/index.html.

In case you do not have any experience with Java, we highly recommend completing the "Getting Started" Java tutorial first: https://docs.oracle.com/javase/tutorial/

Preparation, part 2: GitHub

We will be using GitHub (https://www.github.com/) for the exercises. If you don't already have a free account there, please create one now.

For each exercise, we will provide a repository containing a template project. You should then create a fork of this repository, develop your app in your personal fork using good revision control practices and create a pull request for your submission.

If you are not yet familiar with Github, a tutorial is available here:
https://guides.github.com/activities/hello-world/

Exercise 0: Device Features

In later exercises, we will use advanced features of mobile devices, such as NFC or Bluetooth 4.0. To plan ahead, we want to get an overview over the devices you will be using for the exercises. Please select the most recent/full-featured device you have available and install the „Hardware Info" app from https://play.google.com/store/apps/details?id=com.dama.hardwareinfo&hl=en. Afterwards, start this app, select the envelope icon in the title bar and export your device information as XML. Include this XML file with your pull request (see below).

Exercise 1: Hello Android!

Fork the empty repository at https://github.com/mmbuw/mis-2018-exercise-1-helloandroid.

Your task is to write a HTTP client app which presents a text entry box and a button. On pushing the button, the contents of the text entry box are interpreted as an URL, retrieved from the server and displayed as plain text below the UI controls. Take care to implement proper exception handling and display any errors, e.g. using `Toast()`.

Create an Android app with the following features:

- A text field for entering the target URL, along with a „Connect" button.
- Functionality to connect to the URL via HTTP and retrieve the contents.
- A text view below to display the received response from the server. Take note that there may be some delay between the request submission and the response.
- Proper exception handling (connection refused, timeout, URL not found etc. etc.)
- Add proper handling/display for at least one other data type, such as images or HTML.

Deliverable

Submit your pull request on Github by Friday, April 13th, 9:00. Take care to include a compiled APK file, which we will test the in the Android Emulator. Include a text file with the first name, last name and student number of each team member (up to 2 persons). Do not forget to also include the device information XML from exercise 0.