

## First Mandatory Assignment: Tingle App version 4

During the semester, we will create an app called “Tingle”. The purpose of Tingle is to register and find physical things such as books, clothing, keys etc. Many of us spend a lot of time looking for things that we cannot find and could use a Google-like search engine for things in the physical world. Something like:



During the semester you will gradually improve the user interface and add functionality to your app. A big challenge with this app is to find convenient ways of registering things. We will therefore experiment with using camera, location, bar-code reading and storing things in databases.

The first mandatory assignment is to make version 4 of the Tingle app as specified in the next section. You may base your solution on previous versions (1 -3) of the Tingle app that you have done in the weekly exercises.

### Submission information

*Due date:* the first mandatory assignment must be handed in before Wednesday March 2 (12:00 am) through learnIT.

*Team work:* You may discuss your solution with other students (or anybody else), but each student must submit their solution individually. There can be similarities between the code you submit and the code submitted by other students, but the documentation (see below) must be done individually.

Your submission must consist of two parts (files): *Code* and *Documentation* as explained below.

**Code:** You must submit a complete Android Studio project directory with a working app (no syntax errors or runtime exceptions). Your gradle file must look like the standard gradle file for the course (exercise 3 from week 2). The project directory must be packed as a single zip file.

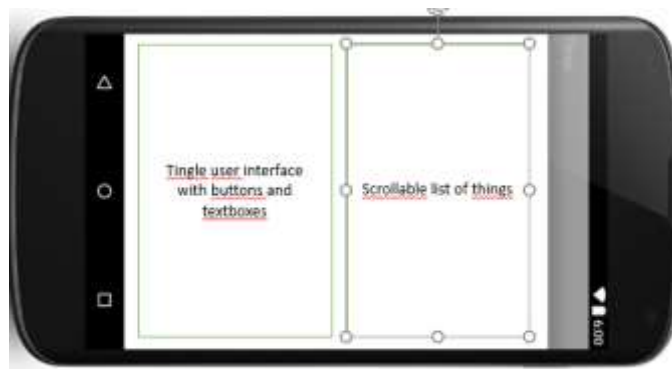
**Documentation:** You must submit a 1-2 page documentation (in pdf format) explaining your solution. The documentation must contain these sections:

most important design choices, for example, class and layout structures  
 short explanation of user interface  
extensions compared to Tingle V3  
 how did you test the app  
 problems (if there are any) e.g. if something does not work completely as you want

## Tingle app: version 4

Version 4 of the Tingle app has almost the same functionality as version 3, but with two changes:

- 1) Version 4 must be able to work in landscape mode where the screen consists of two fragments one that is similar to TingleActivity and one that can show a scrollable list of the things registered (stored). It should be similar to this layout:



The normal (non-landscape) mode should work as version 3 with two activities, one providing the user interface with buttons and textboxes and a separate activity for the scrollable list.

- 2) You should extend the Tingle app with a delete functionality that allows the user to delete one of the things registered (stored). It is up to you to design and implement the details of the user interface. There are several ways of doing this, one would be to introduce a delete button another would be to allow the user to click on an item on the list.