Work plan for week 2

Mandatory reading
Read chapter 1 of the textbook carefully.

Look at all the items related to chapter 1 in publisher's online forum:
http://forums.bignerdranch.com/viewforum.php?f=552&sid=6d4ed4d1a39ccc1e995a0924ddac4782

Individual assignment:

1. Do chapter 1 in the book.
   Read the text and try to repeat all steps described in chapter1. When you are done, you will have created a "GeoQuiz" app that you may run on an Android phone.
   Warning on p. 6 do not pick "Blank Activity" as suggested in the book (the default). Instead you should pick "Empty Activity" see also the errata in the discussion forum for the book: http://forums.bignerdranch.com/viewtopic.php?f=549&t=10305&sid=3304c41fdbc36b0ad64ceeb9009d0352 .

Main assignments:

2. Set up basic user interface for the Tingle app.
   See further instructions in the document "TingleV1.pdf" in the section "Lecture 2" on LearnIT.

3. Adjusting your SDK and the build.gradle file.
   There are numerous versions of Android and many libraries differ from version to version. Therefore, you can set up Android Studio to target all the different versions. Chapter 6 of the textbook gives an overview of the many versions how to manage which version you target in your app.
   a. Do chapter 6 of the book.
   b. Change the build.gradle for the app you created in the individual assignment above so it looks like (your build.gradle will be different at the …):

```
apply plugin: 'com.android.application'
android {
   compileSdkVersion 23
   buildToolsVersion "23.0.1"
```

```
    defaultConfig {
        applicationId ...
        minSdkVersion 16
        targetSdkVersion 19
            }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}
dependencies {
    compile fileTree(dir: 'libs', include: ['*.jar'])
    compile 'com.android.support:support-v4:23.0.1'
…
}
```

Try building your app with this build.gradle file. If this is not possible, modify the SDK as explained in Chapter 6 until you are able to build the app without any error messages from Android Studio.

The build.gradle outlined above will be the standard used in most of the exercises in this course.

Java background

4. Before the first lecture prepare a short explanation e.g. to a fellow student of these Java concepts:

   - abstract class
   - interface

   You will get a chance to check your explanation at the class on Wednesday Feb. 10.

Challenges

5. You are not required to do the challenges. They are an offer to students that wish to go a bit deeper. Most weeks there will be two challenges, one with emphasis on *design* (GUI, graphics etc.) and one with emphasis on *technology* (coding, hardware resources etc.).

   You may get feedback from the TA by turning in a solution through learnIT. In most weeks (including this week) you may turn in a pdf file explaining your solution and showing all or part of your code.

   Design challenge: Make a nice launcher icon for the Tingle app

   The launcher icon is the icon your find in the app list/screen on your phone that starts the app when you press it.
   You may find some useful hints here: http://stackoverflow.com/questions/15014242/how-to-make-an-android-launcher-icon .

   Technology challenge:

   In the first version of the Tingle app it is not possible to see older items in the ThingsDB list. Extend the app so it is possible for a user to type in a text giving the "what" attribute of a thing. The app should then search the list of things stored and if there is thing with a matching "what" show the "where" attribute of the thing in a toast (see the section on toasts in the book).