# Mobile Development: Plan for week 05 [week 06](M2017F_plan_Week06.pdf)

## Goal for the week

* You should have a running Android Studio with SDK and a Virtual Android Device
* You should be able to use SDK manager for managing different Android versions
* You should be able to create and use virtual devices   
  (Visual Studio Android Device / Android Device (ADV) Monitor)
* You should be able to Use and tools for controlling the device (Android Device Monitor / ADM / DDMS)
* You should be able to use and do basic setting on a virtual / physic device
* You should be able to use Android Studio for making very simple APPs, deploy and run the APPs on Virtual device **and** Physic device
* You should be able to deploy and debug an APP from Android Studio
* You should be able to use UI designer and have experience with UI controls lookout

You should focus on getting familiar with the development environment

## Preparation before Wednesday 1th February

**Get Android studio and install it**

 - <https://developer.android.com/studio/index.html>

If you don’t have so much space on your harddisk, you can uses same installation of android SDK for coding from Visual Studio and Android Studio.  
You must in this case select to install Android SDK and Android Studio separately  - this note might help: <http://bjoerks.net/klasser/Mobile_2016_Foraar/materials/InstallAndroid.pdf>  
You can then also use the Android Emulator from Microsoft for testing.  
If Xamarin already is installed some of the installation is already done and you might skip some of the Microsoft (Visual Studio) parts. You can start Visual Studio and see if you in the menu-bar under Tools have Android in top and here Android SDK manager and Android Device Monitor available.

**Read briefly this pages**

* (download Android studio): <https://developer.android.com/studio/index.html>
* (developers home): <https://developer.android.com/index.html>
* (Meet Android Studio)  [https://developer.android.com/studio/intro/index.htm](https://developer.android.com/studio/intro/index.html)

Use a bit of time to look around to get an idea of the resources on the developer site

**Watch the first 15 minutes** of the beginner video (**you might need to see it a number of times** – he is really fast)

* <https://www.youtube.com/watch?v=Z149x12sXsw>

**If you don’t know anything about what Android is**, you can read these two articles (you could read them briefly anyway)

* <https://www.androidpit.com/what-is-android>
* <http://www.androidcentral.com/what-android>
* <https://recombu.com/mobile/article/what-is-android-and-what-is-an-android-phone_M12615.html>

## Teachers plan for Wednesday 1th February

* Introduction to Specialization in general  
  Se Fronter – 4. Sem – SEM INFO for documents
* A short discussion about content of the mobile subject
* A short talk in general about Android and using Android studio
* Demo of making and run small counter app (use Blanc Activity template for project)  
  [SimpleCounterAppWithAndroidStudio\_201508170736.zip](http://bjoerks.net/klasser/Mobile_2015_Efteraar/materials/SimpleCounterAppWithAndroidStudio_201508170736.zip)
* Startup with some exercises  
  + Make a new APP (use Blanc Activity template for project)  
    Try to put some fixed UI elements into the APP screen using drag and drop in the designer (no action needed for now)  
    For each change try to run it on the emulator and if access to physical also on this.
  + Try to debug – set breakpoint at onCreate method.  
    Step through each statement
  + Make some new simple apps the same way as demo (use Blanc Activity template for project)  
    You now need action for buttons   
    Ideas  
    - Celsius to Fahrenheit and Kelvin converter  
    - BMI calculator  
    - Circle calculator based on radius calculate circumference and area  
    - Second to Hour, Minute and Second calculator  
    For each try to run and debug
  + You might find these videos useful even if they are use with eclipse – the tool is the same started from Android Studio  
    They are in Danish – sorry  
     http://bjoerks.net/YouTube_ICO.gif  [Andoid-pbs111: Debugging og afvikling af android apps i eclipse](http://www.youtube.com/watch?v=W-V-cRH47BY&feature=BFa&list=PL1757CA922F4D9E64&lf=BFa)  
     http://bjoerks.net/YouTube_ICO.gif [Andoid-pbs111: Brug af DDMS i eclipse til at kontrolere afvikling af applicationer](http://www.youtube.com/watch?v=kBq3g92IyBQ&list=PL1757CA922F4D9E64) (Android Device Monitor)
  + View the video tutorial **1-9** from this theNewBoston playlist:   
    <http://www.youtube.com/playlist?list=PL6gx4Cwl9DGBsvRxJJOzG4r4k_zLKrnxl>

**More resources**

Textual, code and video resources:  
<http://developer.android.com/index.html>   
- Training: <http://developer.android.com/training/index.html>   
TheNewBoston – Android Video Tutorials  
[Android App Development for Beginners Playlist - YouTube](https://www.youtube.com/playlist?list=PL6gx4Cwl9DGBsvRxJJOzG4r4k_zLKrnxl)  
Mobile Blog: <http://dm-mobile.blogspot.dk/>   
Twitter for the course: [#dmuMobile](http://bjoerks.net/klasser/Mobile_2016_Foraar/dmuMobileTwitter.htm)