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# Mobile: Plan for BJBU (Wednesday week 37-Monday week 38)

# Preliminary plan

## Goal for the week (Wednesday to Tuesday)

* You should be able to communicate with a website/webservice in a acynchronous way.
* You have some knowledge about using user threads in java and special knowledge about running some part in background using AsyncTask to keep liveness for user in the app.

## Teachers plan for Wednesday 9/9 in Odense & Vejle – conference room (bjbu from ?)

* Follow up on the weeks of study
* Accessing webservice for external data - asynchronous  
    
  Example using asynchronous access by running the call in background.  
  [Android\_HttpGetPostRequest\_AssertXmlReq\_Asynk\_20150304.zip](http://bjoerks.net/klasser/Mobile_2015_Foraar/materials/Android_HttpGetPostRequest_AssertXmlReq_Asynk_20150304.zip) (Last call is now done asynchronous by using AsyncTask – general async solution)  
    
  Briefly about JSON and XML format
* Java threads in general  
  [TraadEksempelMedSync.zip](http://bjoerks.net/klasser/Mobile_2012_Foraar/Materiale/TraadEksempelMedSync.zip)

## Prepare yourself by before and after lecture

* **Tutorial - Connecting to the Network:** [**http://developer.android.com/training/basics/network-ops/connecting.html**](http://developer.android.com/training/basics/network-ops/connecting.html) **Reference – HttpURLConnection class:** [**http://developer.android.com/reference/java/net/HttpURLConnection.html**](http://developer.android.com/reference/java/net/HttpURLConnection.html)
* Read briefly about AsyncTask  
  [Code Overtones Android AsyncTask template](http://jyro.blogspot.com/2009/11/android-asynctask-template.html)  
  [Android Threads, Handlers and AsyncTask - Tutorial](http://www.vogella.de/articles/AndroidPerformance/article.html#asynctask) (AsyncTask)
* Read briefly about parsing XML og JSON[XmlPullParser Android Developers](http://developer.android.com/reference/org/xmlpull/v1/XmlPullParser.html)  
  [Android XML Parsing Tutorial](http://www.androidhive.info/2011/11/android-xml-parsing-tutorial/)  
  [JSON - Android Developers](http://developer.android.com/reference/org/json/package-summary.html)  
  [Android JSON Tutorial: Create and Parse JSON data](http://www.javacodegeeks.com/2013/10/android-json-tutorial-create-and-parse-json-data.html)
* **Eventual study example using the HttpClient (Be aware of there is discussion about only HttpURLConnection is supported by the Android team)  
  still the example gives you some ideas using Asynchronous Http Client:**[**http://loopj.com/android-async-http/**](http://loopj.com/android-async-http/)[**http://stackoverflow.com/questions/4457492/how-do-i-use-the-simple-http-client-in-android**](http://stackoverflow.com/questions/4457492/how-do-i-use-the-simple-http-client-in-android)

## Extra useful tools for making interacting with webservices:

* **With WCF services (and ASMX) you can get the necessary data for SOAP call with WcfTestClient.exe you probably will find here "C: \ Program Files (x86) \ Microsoft Visual Studio ….. \ …… \ IDE \ WcfTestClient.exe"**
* **Fidler is a usefull tool to show all what is sent and received on the http protocol:** [**http://www.telerik.com/download/fiddler**](http://www.telerik.com/download/fiddler) **You can use this tool for discover how to interact with a webservice, by using the service from other applications.**

## Ideas for small exercises:

* **External data to be used with web access**
* **Webservices for retrieving data** [**http://webservicedemo.datamatiker-skolen.dk/**](http://webservicedemo.datamatiker-skolen.dk/) **Both with soap and REST call for JSON and XML**
* **Webservice with geodata from Odense Municipality** [**http://geodata.odense.dk/datatothepeople/**](http://geodata.odense.dk/datatothepeople/) **for retrieving JSON or XML data for fx parks and playgrounds.**
* **Make an app, which can show a list of data retrieved from webservice – fx list of parks in Odense  
  When selecting an item show detail in another screen (activity)**
* **Make a RSS reader to get news from your room (Se fronter for link)**
* **Make a RSS reader to get news from** [**http://dm-mobile.blogspot.dk/**](http://dm-mobile.blogspot.dk/)

## More links about android threads / asynchronous methods

* [Processes and Threads Android Developers](http://developer.android.com/guide/topics/fundamentals/processes-and-threads.html)
* [Code Overtones Android AsyncTask template](http://jyro.blogspot.com/2009/11/android-asynctask-template.html)
* [Android Threads, Handlers and AsyncTask - Tutorial](http://www.vogella.de/articles/AndroidPerformance/article.html#asynctask) (AsyncTask)
* [Android Threads, Handlers and AsyncTask - Tutorial](http://www.vogella.de/articles/AndroidPerformance/article.html) (Handlers)
* [Handler Android Developers](http://developer.android.com/reference/android/os/Handler.html)
* **Eventual study example using the HttpClient (Be aware of there is discussion about only HttpURLConnection is supported by the Android team)  
  still the example gives you some ideas using Asynchronous Http Client:**[**http://loopj.com/android-async-http/**](http://loopj.com/android-async-http/)[**http://stackoverflow.com/questions/4457492/how-do-i-use-the-simple-http-client-in-android**](http://stackoverflow.com/questions/4457492/how-do-i-use-the-simple-http-client-in-android)

## Monday – only Odense (bjbu available 8:30-11:50):

* Follow up on lectures from Wednesday
* Solving problem according to the goal for the week

## Torsdag– kun Vejle (jawe available 9:15-13:15):

* Follow up on lectures from Wednesday
* Solving problem according to the goal for the week