What do in Hand In 4 "http and JSON".

1. Create a new project targeted at Android 2.1 -> 4.4.2 Chose target appropriate to your test device. Remember to include study number in project name.
2. Add an Activity and a Service component to the project.
3. The Service must be responsible for using " iTog service" to get list of S-togs stations in Copenhagen by using this RESTFul request: http://stog.itog.dk/itog/action/list/format/json
    a. The RESTFul request (REST: REpresational State Transfer) is done at
        i. server is "http://stog.itog.dk/"
        ii. request is "itog/action/list/format/json" that is something like calling itog application with list (here S-tog stations) in JSON format
    b. The list returned is formatted en JSON
    c. JSON (JavaScript Object Notation) is easy to read and understand.
        i. **{}** is an object ex: **{"name":"Albertslund st" ,"wid":"621", "x":"55.65804", "y": "12.353124"}**
        ii. Attributes is as : **"name":"Albertslund st"** attribute name with value **Albertslund st**
        iii. **[]** is an array of objects ex: **[{"name":"Albertslund st" ,"wid":"621", "x":"55.65804", "y": "12.353124"} , {"name":"Allerød st" ,"wid":"681", "x":"55.870983", "y": "12.357045"}]**
        iv. **,** is used as separator.
        v. See http://www.json.org/ or http://www.w3schools.com/json/default.asp
    d. JSON may be deserialized in different ways where you make your own choice!
        i. Using the simple model with JSON objects, attributes and arrays see this example http://inchoo.net/mobile-development/android-development/simple-android-json-parsing-example-with-output-into-listactivity/
        ii. Using a JSON library like "Android JSON Parsing with Gson" see http://www.javacodegeeks.com/2011/01/android-json-parsing-gson-tutorial.html
4. The Service must be a **bound service** providing methods for
    a. Start downloading the "iTog service list" in a **background task.**
        i. When finished with download a broadcast must be done indicating an (updated) list is available
    b. getting the deserialized list (i.e. list in Java) of S-togs stations

    About "Bound Service": http://developer.android.com/guide/components/bound-services.html

5. The Activity must subscribe for Service broadcast and upon reception of a broadcast be able to update the view. To this functionality take into considerations
    a. How the background task makes change to the UI. Does the broadcast receiver get access to the View? Read eventually http://developer.android.com/reference/android/content/BroadcastReceiver.html
    b. Use of global or local broadcast's. What is need in this case? Read eventually http://developer.android.com/reference/android/support/v4/content/LocalBroadcastManager.html
6. The Activity/Fragment presents a ListView containing all the stations. (Use the specialized ListActivity or ListFragment to control the UI)
    a. Add an Update button for updating data for the server.
    b. Add an EditText field above the ListView. The text field can be used to filter the list, so entering "A" in the field and pressing the GO button or just typing a text, should only show stations beginning with A . See an example of how in this link http://stackoverflow.com/questions/1737009/how-to-make-a-nice-looking-listview-filter-on-android.

    Customizing the default ListView with ListActivity/ListFragment

    - http://developer.android.com/reference/android/app/ListActivity.html
    - http://stackoverflow.com/questions/4740197/add-buttons-to-a-listactivity
    - http://developer.android.com/reference/android/app/ListFragment.html

Hints

- Install the Advanced Rest Client in a Google Chrome Browser. See https://chrome.google.com/webstore/detail/advanced-rest-client/hgmloofddffdnphfgcellkdfbfbjeloo#detail/advanced-rest-client/hgmloofddffdnphfgcellkdfbfbjeloo in a Google Chrome Browser.
- Or find similar RESTFul tools