Assignment 1: Making a web-facing Android App

Problem Statement:

A local fruit seller wants your help in making an Android App to sell his fruits in the campus. Your app will show a list of available fruits, the quantity left in the stock (in Kg or Dozen), and the price per unit (in Rs per Kg or Rs per Dozen). You have set up a temporary webspace (say on your own laptop), to which the App connects, and fetches this data. On the server side, a basic persistence mechanism (such as a JSON or XML file, or a DB like SQLite or MySQL) manages the data. The App should be able to show the current fruit details to the user. The details must be fetched once, every time the app starts (no periodic fetches are expected). On the server side, a basic mechanism via a web based interface, must be in place to manipulate details in the persistent data (you must not change the data directly via an editor or by using utilities like MySQL command-line). You should be able to add a new fruit, remove an existing fruit, change stock quantities and prices etc. via the web interface.

Please note:

You will be graded for:

Functionality - being able to perform the said operations on the web, and able to fetch and show it in the app.

You will not be graded for:

Aesthetics - keep it as simple as possible, specially when it comes to making a GUI.

Marking Scheme (tentative):

The Server and App parts will roughly carry equal weightage. On the app side, you have to show the contents in a clean, understandable manner (simplicity is highly appreciated and recommended, but not in trade with functionality). On the server side, provide the mechanisms to update the persistent data, as indicated in the problem statement. Avoid spending time on styling the page(s), and devote time towards writing the server-side code.

Submission:

Each of you are supposed to submit two separate Zip files (the files "must be **ZIP ONLY**", we do not guarantee your assignment getting graded if you use any other file format). One file should contain the code for your Android App, while the other should carry the code to be deployed on the server. If you are using any third party libraries, or making JSON/XML files as your persistent option, make sure you include the same in the server code file.

The files **MUST** adhere to the following naming conventions:

<Your Roll Number>_AppCode_Assgn1.zip

<Your Roll Number>_ServerCode_Assgn1.zip

For example, if your Roll Number is 13111164, your files must be named as "*13111164_AppCode_Assgn1.zip*" and "*13111164_ServerCode_Assgn1.zip*".

We may automate some part of Assignment grading, and if your files do not match the above formats, they may not be graded. The mode of submission will be intimated to you at least 2 days prior to the submission deadline.

Deadline:

The deadline for submitting the assignment is **Wednesday, Aug 24, 2016, 11:59 PM**.

Demo:

You may be called in to give a demo of the code that you wrote. Hence, it is very important for you to understand every line of code you submit, even if, you take code snippets from online tutorials. At the time of demo, you may be asked to explain at random, any code fragment submitted by you. Also, the demo **MUST** be given on a **real Android device**, and **NOT** on a **simulator**.

Clarifications:

Any clarifications regarding the assignment can be sought by dropping a mail to the Course TAs. Please note that all the clarification mails **MUST** be sent by **Sunday, Aug 21, 2016, 11:59 PM**. **No clarification queries**, via mail or in person, will be answered **after that** (meaning you must start with the assignment as early as you can).

Plagiarism:

This is an individual assignment, and you are not supposed to collaborate with any one else. If we find any unusual similarities in codes of two or more individuals, the same will be reported as suspected act of plagiarism. If found guilty, you will face severe punishment for the same.