Lab 7 – Tide Table with a SOAP Web Service

CIS399, Android Application Development

Objectives: This lab is designed to give you practice:

- Using a web service client
- Using asynchronous tasks
- Using geo-location (optional, extra credit)

Part 1: Do the textbook exercises shown below:

- 10-2, Work with asynchronous tasks

Upload a text file to Canvas in which you will report, for each exercise above, whether you:

A. Followed all the steps shown in the book and successfully compiled and ran the program (where applicable).
B. Loaded the completed solution, experimented with the code, and ran the program (where applicable).
C. Read through the steps and inspected the relevant code without writing or running a program.
D. Didn't do any of the above.

Submission

Enter your exercise report directly on Canvas, or enter it in a text file and upload it to Canvas.

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Part 2: Modify the previous Tide Table app so that it has these additional features:

- The user will be able to choose a coastal location from a list of Oregon tide prediction stations by name. You can find a list of stations for Oregon here: http://tidesandcurrents.noaa.gov/tide_predictions.html?gid=252
  Note that the web service will only provide you with data for the stations with "Harmonic" predictions. It's up to you to decide how to store the list of available tide stations and how to present them to the user.
- The user will also be able to select a date for the prediction.
- The app will check to see if there is tide information in the database for the location and day requested by the user. If the data is in the database, it will be displayed. If it is not in the database, it will be downloaded from the web service, added to the database, and displayed. This page provides you with information on the web service and a link for testing the web service via a browser: http://opendap.co-ops.nos.noaa.gov/axis/
- The app will display appropriate messages (and not crash) when the user requests tide information while the mobile device is not connected to the Internet.
- The processes of querying the database and downloading information from the web service will be done asynchronously.
- All the features implemented in previous versions of this app will still work (for example, clicking on an item will display the tide level).

Submission

Zip the project folder and upload it to Canvas.