Project Assignment #11: City App, Reloaded  
Due Date: Tuesday, 12/6/2011 by 5:00pm

Purpose: This purpose of this exercise is for you to finish assembling your implementation of the City App.

Teams: Remember you can work in teams of two on this project. If you are working in a team, make one additional improvement.

Description:

Your app should continue to do the following:

- Continue with the initial setup as before (obtain GPS, call city webservice, parse data) [a requirement of Assignment 9]
- Continue to support showing only the non-completed jobs [a requirement of Assignment 10]
- Presentation of jobs on both a ListView and MapView with Overlays [a requirement of Assignment 9 (ListView) and Assignment 10 (MapView)]
- The user should be able to switch back and forth between the MapView and ListView [a requirement of Assignment 10]

Required new features to implement:

- Ensure that the radius selection is designed to support distances around 1 mile (that is, don’t support 1 mile, 5 miles, 10 miles; support a reasonable set of distances close to 1 mile (maybe ¼ mile, ½ mile, 1 mile, 1.5 miles, etc).
- Any presentation of brief details for the WorkOrders being shown should now be an address and brief description of the job, not the id number and coordinates.
- Hook in the actual search interface as the initial Activity, allowing the user to select or set the following before searching:
  - Priority: Emergency, High, Medium, Normal (EMER, HIGH, MED, NORM in the City database)
  - Type: Corrective, Preventive (CORRECTIVE, PREVENTIVE in the City database)
  - Radius
  - Select between using the GPS location of the phone or using an address typed into the phone and geocoded
  - Entry of an address which is Geocoded to obtain latitude/longitude
    - Remember Geocoding can’t be tested on the emulator, only on actual devices.
- For Priority and Type, those should be used to filter the types of jobs that are shown (so, if the user chooses Emergency, Corrective only non-completed jobs whose type is Corrective and priority is Emergency should be shown)

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When an entry in the ListView is pressed or an Overlay in the MapView is tapped, an Activity should be spawned that shows a detail view of the work order (providing extensive information about the work order).

Desired new features to implement: *(the following are non-trivial updates; they are desired for app functionality but are not required to obtain a good grade on the app)*

- The ListView of jobs should be ordered by distance from the search center point
- Allow the user to select a point on the map as their search center as a third alternative for picking a search center

A few relevant screenshots are below. Additional ones will be uploaded soon. The screenshots below do not include the desired optional features.

*A search screen as the first Activity:*
ListView showing address and brief description of problem (asset, activity) instead of id and latitude/longitude

Detail view of WorkOrder with most work order information presented, shown after item was selected in ListView or tapped in MapView