

CSCI 4237 Project Proposal

BusBuzz

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Project Abstract

I usually travel by bus from work to home via WMATA's metro bus and at times I miss the bus, sometimes by fraction of seconds, because I could not keep a track of bus arrival time. I know my bus will come after 40 minutes but there is nobody to remind me that 40 minutes wait time is almost done, as I am busy working, and I should reach the bus stop before the bus comes. I always felt a need of reminder system that reminds me minutes before the arrival of bus.

With BusBuzz I am trying to create a system that reminds me minutes before the arrival of my bus. This reminder will be in the form of an alarm.

Strategy

BusBuzz will be specifically developed for android (gingerbread) platform, and will be designed to work on android emulator. At the launch of application, a tab navigation system will be presented titled map and alarm. By default a map will be displayed along with search field for entering the bus number. This map will show bus route along with respective stops in its route.

Alarm tab would contain search field that outputs estimated arrival time of bus based upon stop-id. This will also give option to set alarm after user-specified minutes based upon arrival time.

Unknowns & Problems

This application will use WMATA's JSON api as data source. Parsing JSON and using it in the application is an issue for me. Along with that integration of google maps and displaying complete bus route along with its stops is still an unknown. The major issue, I believe, could be broadcasting time to set an alarm after specified minutes. Due to no experience in android development and mediocre java skills trying to figure out the classes and libraries used for this purpose will be a challenging task.

Implementation Plan

Steps to be followed:

- Using proxy to call WMATA api and populating the parsed JSON in applications model
- Designing a tab based user interface
- Integrating google maps in one of the tabs

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- Implementing form based text-field which will take input as bus number in one of the tabs and bus stop-id in other
- Displaying bus route on map based upon received result
- Invoking system alarm based upon provided input
- Testing application for various inputs and conditions

Possible User Interface:

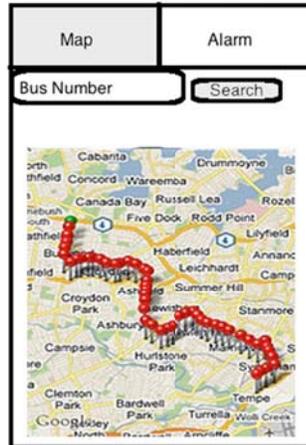


Fig. 1: Map displays bus route



Fig. 2: Set an alarm based on ETA