INFO401 Group Project

Iteration 4 Documentation

Iteration Overview

This final iteration of the class project involved making several small modifications to the application to ready it for deployment. The result of this iteration is the final result of the class project, therefore this iteration served as an opportunity to tie up all loose ends.

The objectives of this final iteration were to:

1. Edit the range setting option, allowing users to choose their own range value. (James)
2. Add an error message when there is no WIFI connection. (Abdulaziz)
3. Add an error message if there is a problem conntecting to the database. (Jack)
4. Test and debug the effect of multiple users syncing at the same time. (Jack)
5. Write a user manual. (Othman)
6. Highlight the selected overlay item (Ray)
7. Implement functionality allowing the user to change their position on the map. (David)

Range Selection

This parameter defines how far away points of interest have to be before they are nolonger of interest to the user. In previous iterations this was carried out by the user selecting an option from a list of values, however this needed to be changed to allow the user to enter any value they want, increasing the flexibility of the system.

This functionality was achieved by launching a dialog containing a text field for the user to enter any value they want when they want to change range, instead of the list of values which used to be displayed. Once the value is entered to the dialog, a call is made to the changeRange method, which handles the actual changing of the range value.

Change location function

This has been implemented using the long-click gesture (onLongPress() method supplied but GestureDetector). This function is invoked when the user wants to change the focus of the location of the application (e.g. when the user wants to see POIs located within the vicinity of the Auckland CBD, when you are located in Dunedin).

The location of the user is initially found via the GPS, and the resultant POIs shown on the application are filtered by the range filter, centred from the current location (default of 50km radius). When the user wants to change the location focus of the application, this previous GPS location must be stored as to regain the current location's focus again when chosen.

The implementation of the location change functionality occurs as follows. When the user wants to change the location focus, they perform a long press on the screen on the location they desire. A dialog box appears offering to change the location, or refocus on the users current location. If the user chooses to change the location, the coordinates of the long-press are converted to a GeoPoint location object which is passed to the MapView and stored. This location is then used as the current map coordinates for the application.

The user can change location as many times as they want, and when they want to return to their

current location, the user simply chooses the 'Move to current location' option in the change-location dialog box. The MapView will then use the last stored GPS location to refocus the POI application.

It must be noted that once a new location is chosen, this new location will continue to be used as the current location of the application until the user chooses to change it. GPS readings will still be takes upon application start-up, changing the actual stored coordinates of the user's location, but will not be used unless the user chooses to return the application focus to their current location.

WIFI connectivity message

If there is no internet connectivity, the system will provide a toast message to the user informing them to switch their wireless on.