ID: 180917

Course: Application Development for iOS

Date: May 13, 2019

Class Summary

In the class on the date provided above we were introduced IOS’s location service. Through the use of the Core Location library the device is able to get information on a device’s latitude, longitude, altitude, orientation and position relative to an iBeacon. iBeacon is a proprietary protocol developed by apple which utilizes all onboard wireless transmitters to communicate with nexuses called beacons which allow smartphones, tablets and other compatible devices to perform special actions when in range.

IOS offers a variety of location services. They are Visits location service, Significant-Change location service and the Standard location service. The visits location service logs the coordinates of users as they go about their daily activities. This log of coordinates is used to optimize the user experience by recommending suggestions on places that the user might be interested in visiting. This location service is not unauthorized and requires the user’s confirmation.

The Significant-Change location service only updates the user’s position when a significant change in location occurs and as such is less power hungry than the Visits location service, relying on lower powered means of determining the user’s position. (eg. Through WiFi network). As with the Visits location service, the significant change location service requires user authorization. The Standard location service is the general means of getting the user’s location is real time. The Standard location service used significantly more power than the other two services, however it is the most reliable.

Below are the findings for the following questions from the class exercise:

1. Research and compare how location service work in iOS/Android

Similarities:

* Both location services require user authorization before they can record location information
* Both services offer the option to use GPS only or both Wifi and GPS for more precise location results

Differences:

* Google Location service does not work in China whereas Apple’s Location service is fully functional

1. Think about how to use the location service for MacOS

Mac OS allows for users to enable location services in the settings. Once enable users can use this simple command line utility called “WhereAmI” in their software to access the devices Lat-Long coordinates.

Reference: <https://github.com/robmathers/WhereAmI/releases/>

For the class exercise we were required to:

1. Learn, revise, or review the UIKit in iOS development

This step was completed by researching some additional information; including what we learnt last class.

1. Compile, run, and understand the Location service iOS app

The location app was compiled and run. It provides a MapView which required very little code to be functional.

1. Research and compare how location service work in iOS/Android

An in-depth comparison is provided on the previous page

1. Try different location services in iOS, including different parameters to control the accuracy and frequency
2. Try to use the Geocode translation functions, translate between coordinates and placenames
3. Try to extract CLLocation object to e.g. JSON
4. Think about the map service for iOS
5. Think about how to use the location service for macOS

Provided on the previous page