Plant View - An Augmented Reality Android Application

Description

An augmented reality app that displays information relevant to the user depending on their location. The data is displayed on a graph to show how it changes over time and analytics are applied to highlight any anomalies. The location points are stored in a SQL database to match data points to a location.

The points are plotted on a google maps web application

Project Plan

Completed so far Google maps web application, two Node JS web services and Android application has been started with the camera, location and HTTP requests working.

To do Pulling data from data source to app, creating app UI, displaying historical data, analysing the data to detect anomalies, finding direction faced by device

Requirements

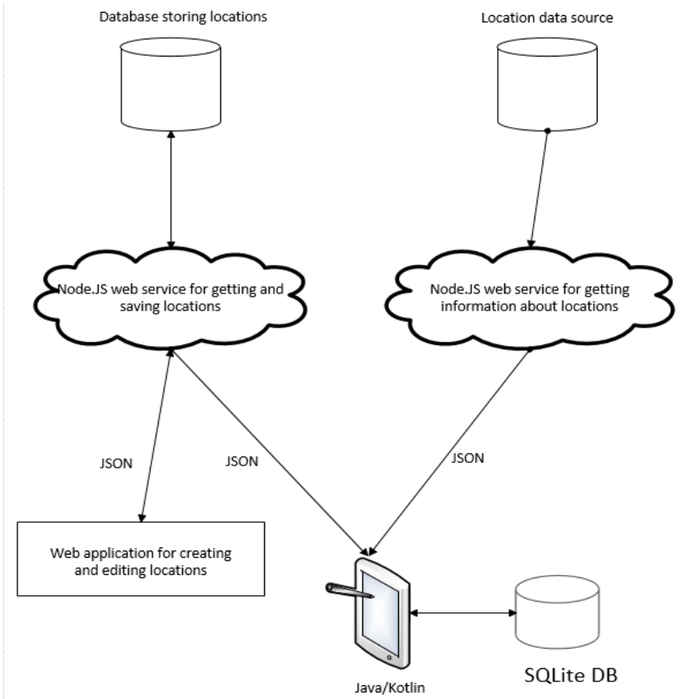
- Use the tablet's camera to show the user what they are looking at and overlay location information
- Use the tablet's GPS and compass to determine current location and direction faced
- Show the change in data over time and highlight anomalies
- Allow plotting of locations on the Google maps web application

Analysis

- Met with the client weekly to discuss progress and get feedback/advice
- Researched language choices and libraries to use
- Created mock ups of the user interface
- Created the architecture of the system

Methodology

An agile methodology is used to develop the project. This allows work to be broken up into sprints and takes into consideration time for rework based on feedback and testing. This is especially useful when working with a real client.



Research

- Researched libraries for Kotlin, this included Kolley which is a library used for better HTTP requests
- Using the Gson library to parse JSON into Java class objects
- Using Google Play Services to get the location of the tablet with the location API
- Using Node JS to interact with SQL Server for both storing and retrieving data

Technologies: AR, Android, Node JS, SQL, Kotlin, JQuery, Knockout JS, MVC

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