FIU School of Computing & Information Sciences

Senior Project, 2017, Fall
Betwixt 1.0
Student: Alejandro Palacios, Florida International University
Mentor: Joseph Cutrono, Ultimate Software
Instructor: Masoud Sadjadi, Florida International University

Problem

- **Virtual Employees (VE) need a place to meet up.**
- **No place to meet up in office space.**
- **Need a public space that is mutually convenient for them.**

Solution

- **App Allows VEs to join a Space.**
- **Central location is calculated between them.**
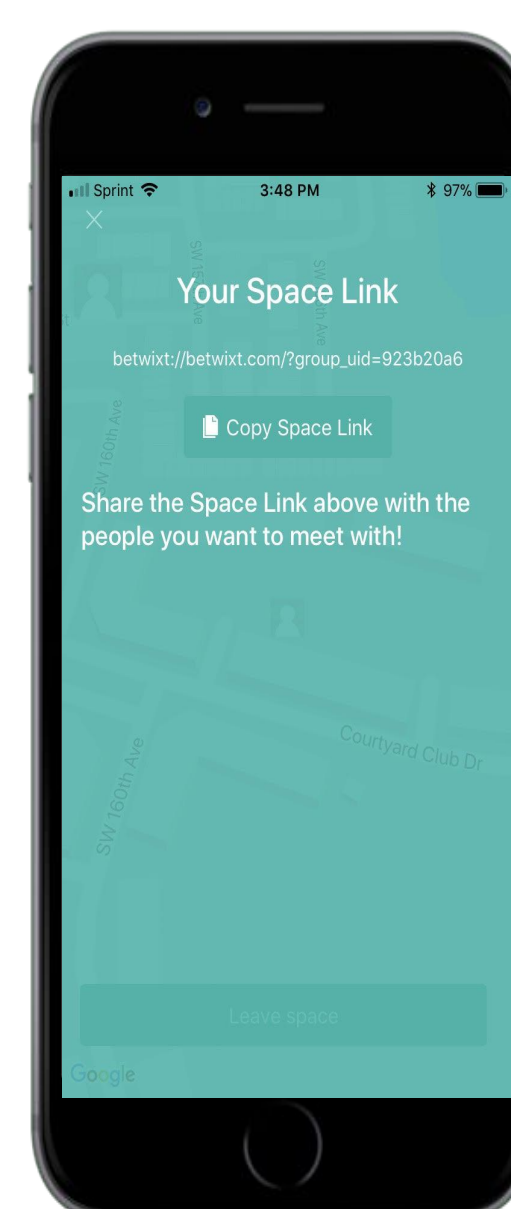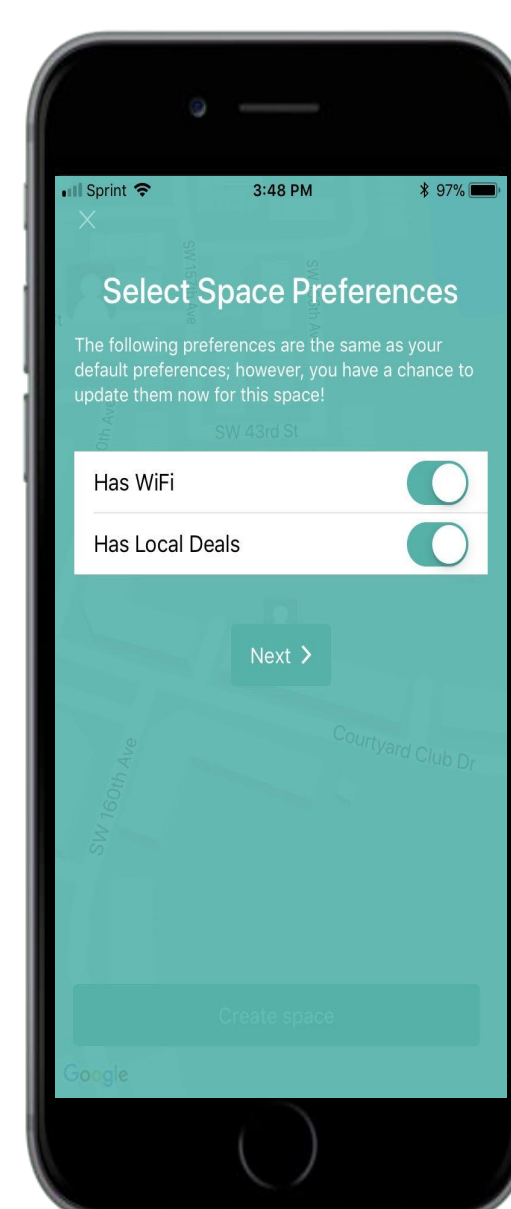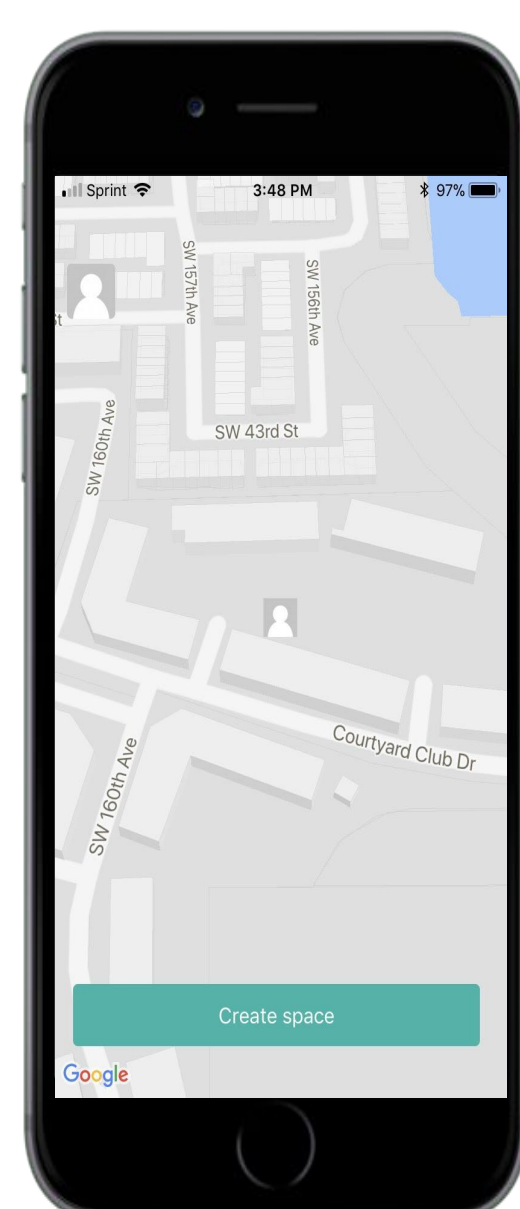- **Space host chooses a public space close to the central location.**

Current System

- **iOS and Android Mobile App.**
- **Create a Space and send link to VEs.**
- **Central location is calculated.**
- **Able to choose a public space around the central location.**

Images
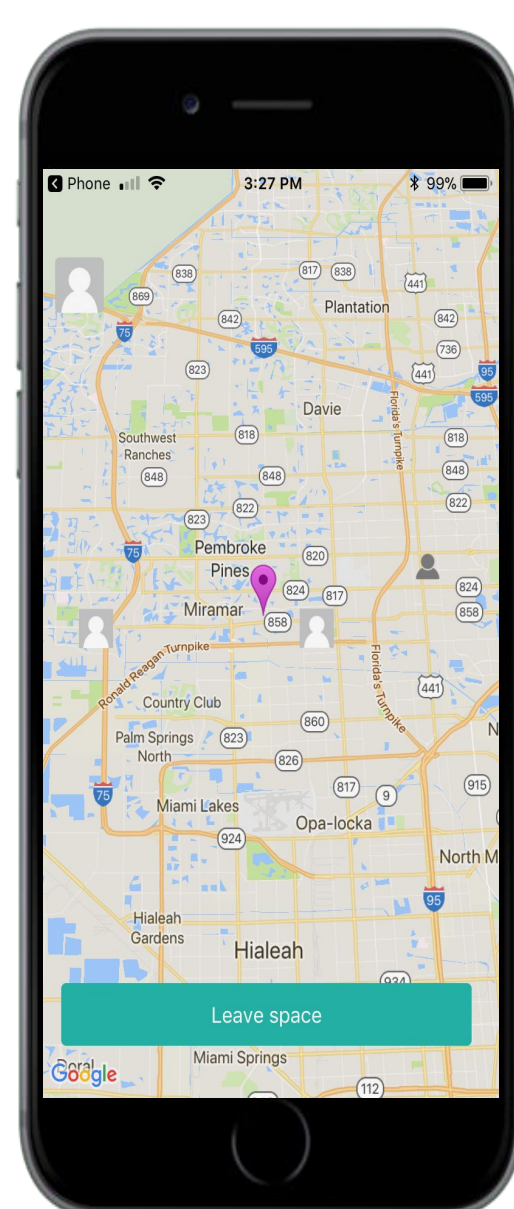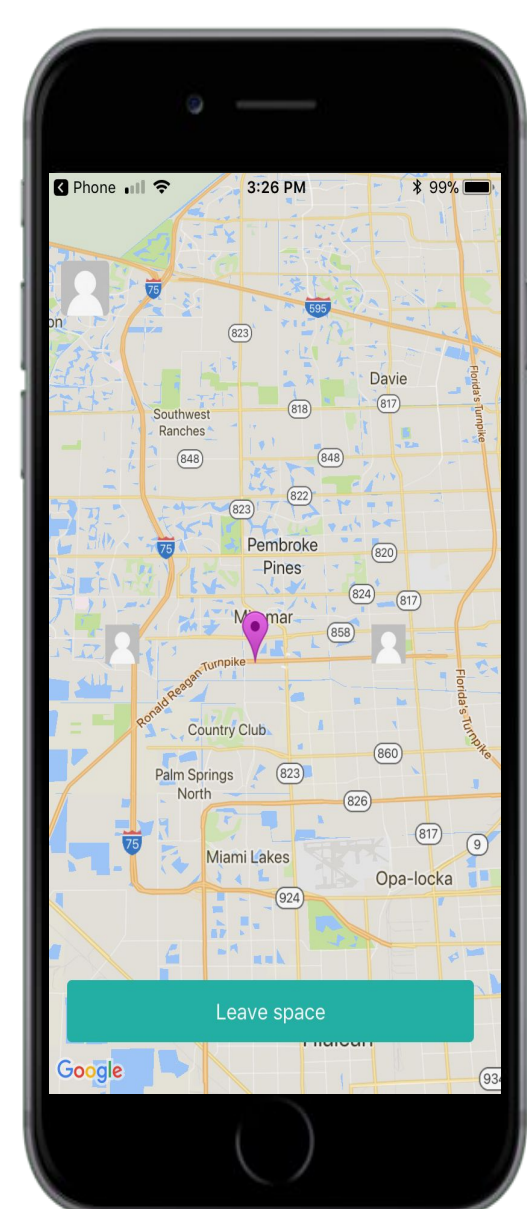
Adjusting the central location

When a user joins or leaves, the central location pin is adjusted accordingly.

Creating a Space

When creating a space, you are asked for your preferences via a modal. You can then send the link to other VEs which will redirect them to the app and drop a pin at their location.
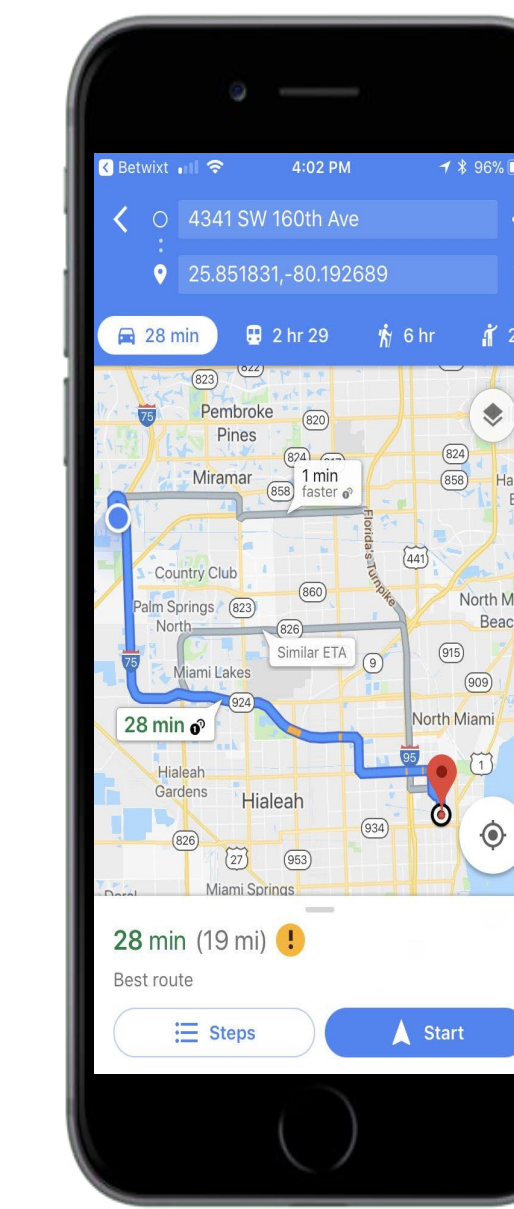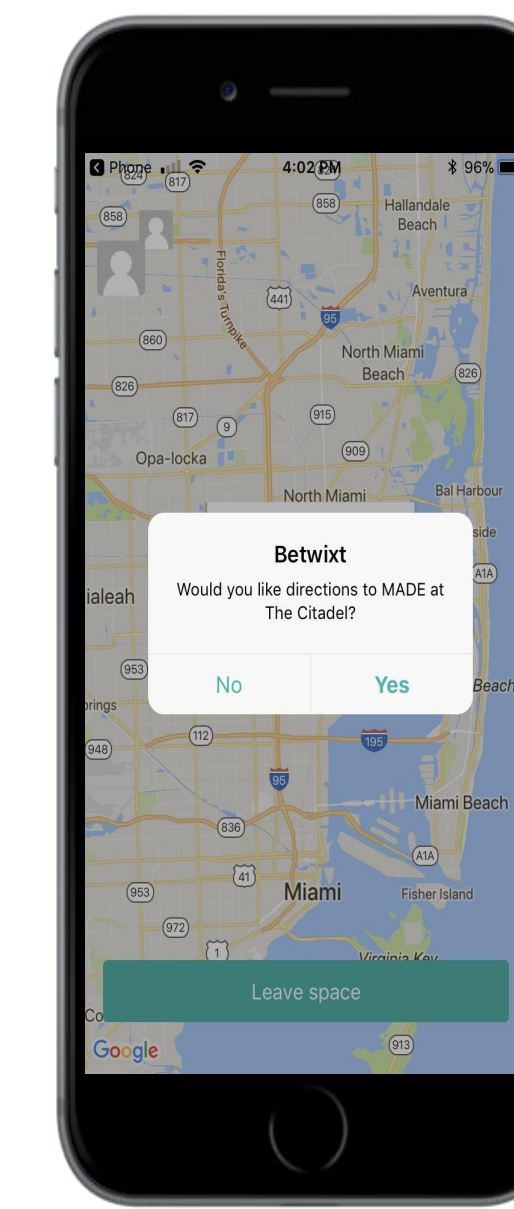
Redirecting to navigation app

Clicking on the selected location for the Space will ask if you would like directions to the location. This will open up Google Maps if installed. If not, it will allow you to select a navigation app.

Requirements

- **Must run on iOS and Android.**
- **Create and join a Space.**
- **Calculate a central location between VEs**
- **Central location must be dynamic.**
- **Communication pipeline between all users (sockets).**
- **Use link to join group and open app on click.**

System Design
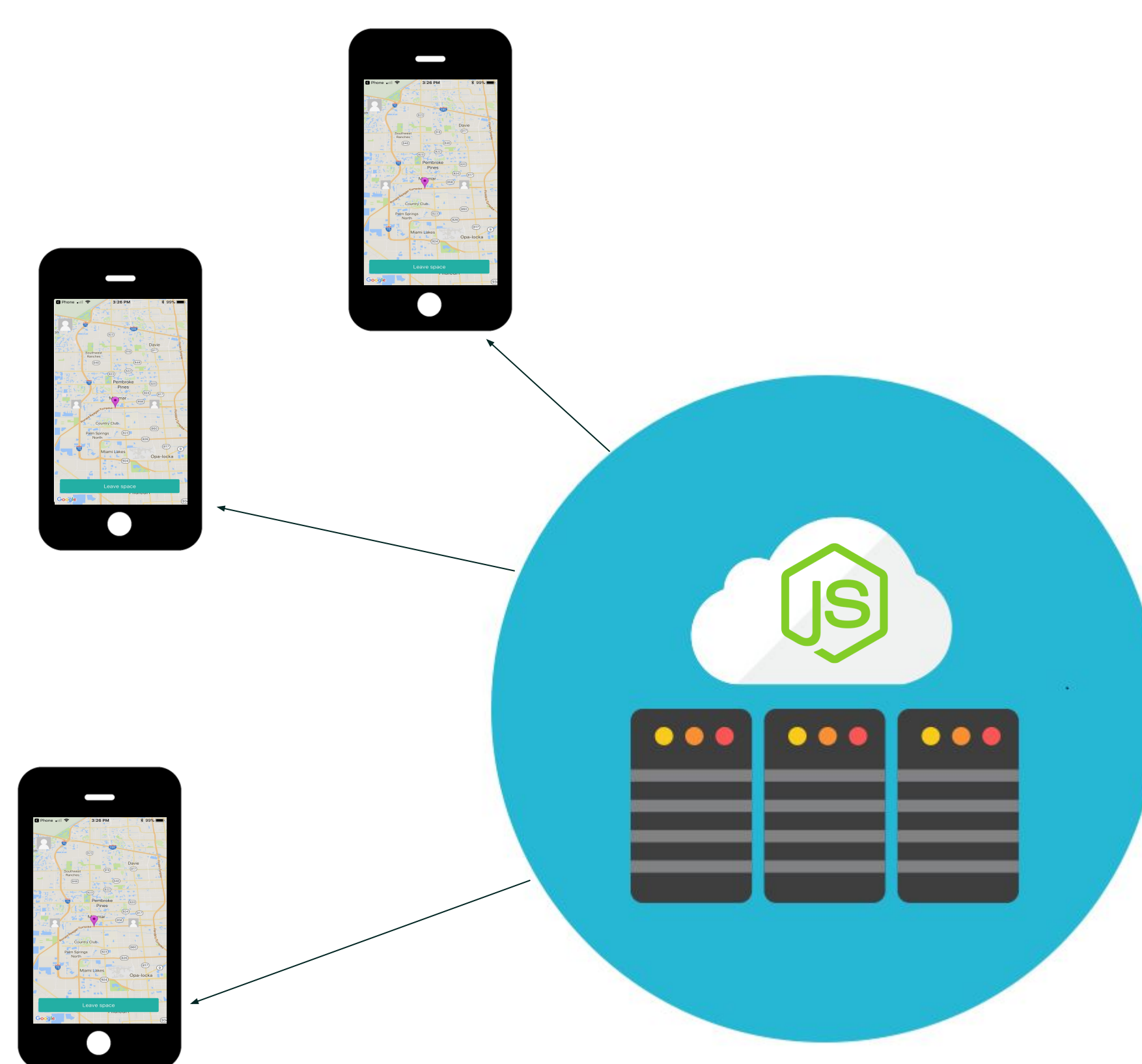
Implementation

- **Ionic Framework and Angularjs for front-end mobile app dev.**
- **Node Js backend and Express Framework for back-end.**
- **Google Maps API for map view.**
- **Socket.IO for communication between clients.**
- **Work From API for getting locations by central location.**

Verification

- **Testing done on both iOS and Android. Both emulators and phones were used.**
- **Button on front-end for developers to generate users in a Space within a 10 mile radius of your location.**
- **Postman used to test HTTPS requests on the server.**

Object Design
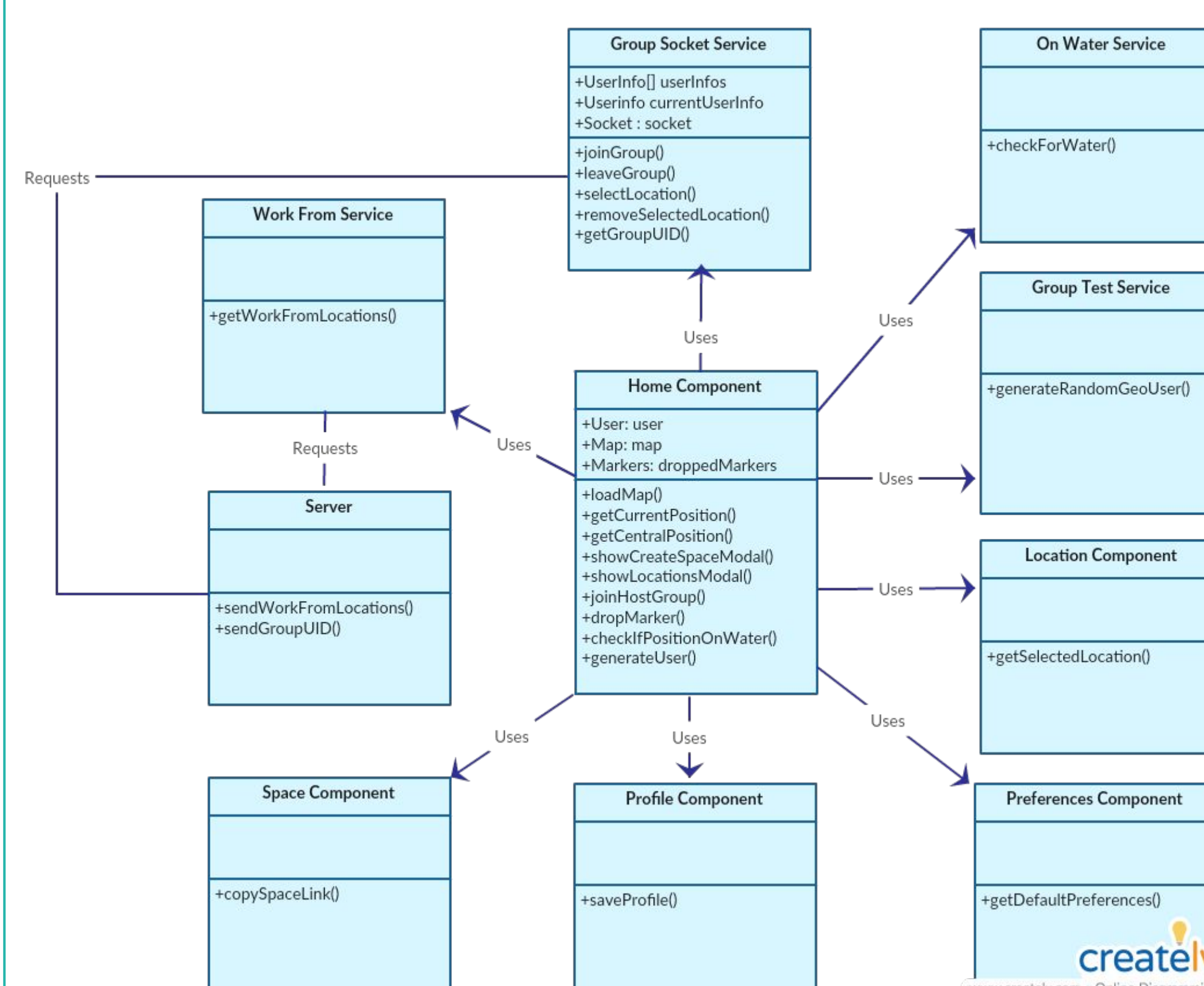
Summary

- **App is functional and solves the problem.**
- **Able to join a Space via. a link which opens the app.**
- **Central location adjusts when a user joins or leaves.**
- **Clicking on the selected location redirects user to a navigation app.**