## Section A:

### The Scenario:

My client for this project will be my father, Quinlan Eddy. Quinlan will also be taking on the role of my advisor as well. Quinlan currently lives in New York City and to get around the city he uses the subway system. However, sometimes he uses the bikes from the Citi Bike share system. There are currently already both web and mobile applications made by Citi Bike however, my father very much dislikes the current Citi bike applications out right now and wishes for a simpler user interface layout and a way to get directions to the station of his choosing. This project is very appropriate for the IA as it would take things that I learned such as parsing data and loops and learning new things such as Android phone app development as well as reading remote web data and creating a nice, simple, user friendly, interface for the Android phone platform. Creating an app for the Android Operating System is also perfect for the IA because I will be creating a new solution based off of a twist of an old solution. I will not be creating a new solution from zero to one making it appropriate for a type of project like the IA.

Word Count: 207

### Initial Consultation with Client and/or Adviser:

Refer to the Appendix

### The Proposed Project:

This proposed application will be an application that will tell you the closest bike share stations on your Android phone. This app will be built using the Android Studio development environment with a target build for Android phone specifically Android 6.0 (Marshmallow) or higher. With the target build being for Android phone, it does not make any sense to use any other program besides Android Studio. This app will be able to access the real time JSON data feed using the Citi Bike website and parse that data into readable data by the application. Furthermore, the app will be able to access and use the user's GPS coordinates. The name of each bike station will be displayed in this list from closest too furthest depending on where the user currently is at the time of use. The app will also display the number of available bikes at each station, and if there are no bikes the item in the list will not show up. Furthermore, when a particular station is pressed on then an implicit intent will open up the user's Google Maps application and will provide directions to the bike station.

Word Count: 192

### Specific Performance Criteria:

1. Successfully connect and access the JSON data feed on the Citi Bike website.

2. Parse the JSON data successfully getting all of the necessary pieces of data from the live feed.
3. The app will have a smooth user friendly interface that is not overpopulated.
4. Display a list of all of the possible bike stations in New York City.
5. Text color of station name will change if station has either no bikes or is not in service.
6. When swiped down the app will refresh the data.
7. App will get user GPS location
8. App will order the bike stations from closest too furthest.
9. When a particular station is tapped then details about the tapped station will display on the screen
10. On that same screen with the details, an option to get directions will appear.
11. When clicked on the get directions button Google Maps will open up giving you directions to exactly where you need to be.