Criterion A Planning

1. Define the problem

I want to make an app to introduce the area I live in, so that my friends from other cities can have a better traveling experience when they come to Beijing. Apart from listing the places of interest on a map, I will allow the user to locate themselves on the map and the app suggests the best traveling route for him/her, according to the traffic condition, the time he/she has, the budget he/she has, and the weather condition. On this app, he has to enter the place he is, and the budget and time he has.

Why do I want to make an app for this? Because one of my friends back in Shanghai came to Beijing last August and he didn't have a good traveling experience. He didn't receive any tailored traveling suggestions. All the other traveling apps just list out the tourist attractions without considering weather and other variances. That's why I think I should make an app for him. He, whose name is Watson, is my client.

In brief, my app will contain a GUI displaying the tourist attractions in Haidian with some basic information. It can also suggest traveling routes for the client based on several variants. The client needs to enter the time and the budget he/she has.

2. Rationale for solution

This app needs Graphical User Interface, so I should be cautious to choose a programming language, and since the most valuable part of my app is the suggestion, I have to do some mathematical modeling.

In order to make beautiful GUI, I will choose Swift as a programming language. Swift is a newly born language introduced by Apple, but Swift is gaining more and more popularity, partially due to its easiness and Apple's capable ecosystem. Apple also provides lots of support that can be easily checked and read. Besides, I have learnt the Swift code a little bit before. That's why I'm constructing the whole app using Swift code.

To do mathematical modeling, I need huge amount of data, which mostly are weather and traffic. There are several data bases out there on the Internet, many of which do provide easy to use API. I can just implement their interfaces without writing my own scrawler program.

3. Criteria for success
    - A well-made, clear GUI for the client.
    - The client can easily input the necessary data.
    - The model I use must be very detailed and realistic. The model has to be accurate enough to achieve the utmost UX.

- As accurate data as possible.