**Summary of individual observations**

From the result of each member in the group, we came up with some shared and interesting viewpoints about user’s experiences on Google Maps. All participants shared common experiences that they are familiar with using Google Maps. We found some common mistakes the users made, e.g. the difficulties about using some features. We had a brainstorm on which research questions we would be investigating on what we had observed. We decided to mainly focus on further investigating Google Maps regarding usability based on what we have learned from the class, such as Norman’s principles of design. Thus, our list of research questions, interview questions, and task walkthrough will be based on usability and Norman’s principles of design.

**List of research questions**

1. Are there problems users are having with the current Google Maps interface?
2. Are there issues with the learnability, efficiency, memorability, or error feedback of the current interface? If so, specify.
3. If so, how can we improve the interface of Google Maps so people can use it more efficiently and with greater satisfaction?
4. Specifically, how can we improve the switching between views (e.g. Street View, Satellite View, and so on)? How can we improve adding a waypoint? Can we improve the icon graphics and/or their placement to minimize confusion?
5. How can we improve Google Maps, so users will choose it over the competition (Apple Maps, Waze)?
6. Can we make the 'hidden' features more discoverable to users so that Google Maps can become more useful to them?
7. How the different types of devices can affect the capability of using Google Maps

**List of interview questions**

1. Do you use Google Maps on a computer, a smartphone, or both?
2. How often do you use Google Maps? (daily, weekly, monthly, or less than once a month).
3. Once you used Google Maps for the first time (If you can remember), how hard was it for you to learn how to use it (on a scale 1-5, with 5 being the most difficult to learn)
4. On a scale of 1-5, with 5 being the most difficult, how difficult is it to remember the steps to take to perform your task?
5. What are the primary tasks you perform using Google Maps?
6. What are the main features of Google Maps that you use? (e.g. options)
7. Do you use Google Maps primarily for driving, public transportation, or walking?
8. From question 7. On a scale of 1-5, with 5 being the most difficult, how difficult do you think it is to use Google Maps?
9. Do you encounter any problems using Google Maps (errors, frustration, confusion, and so on)? If so, what problems?
10. If you are planning or taking a route, do you know how to add stops along the way (waypoints)? Do you have any problems doing so?
11. Do you know how to switch views in Google Maps (for example, go from Street View to Satellite View)? Do you have any problems doing so?
12. Are you able to find all of the options and features that you want to use?
13. Are you aware of other features of Google Maps that you'd like to try, but haven't yet? If so, which ones? If so, why haven't you tried them yet?
14. How would you improve Google Maps to make it easier to use?
15. How would you improve Google Maps to make it more useful to you?

**Task walkthrough**

1. Open up Google Maps on your preferred device.
2. Create a route from your current location to Syracuse, NY.
3. Add a stop along the way at a restaurant in a town along the route.
4. Select your preferred method of transportation (car, public, walking).
5. Switch the map view from the default view to Satellite View. Switch to Street View.
6. View various options that you may use to customize your route. Select the option(s) that you would like to use.
7. Save, share, or begin following your route as you normally would.
8. Repeat step 1 - 7 with different type of devices (e.g. if the user’s preferred device is PC, so we let the user use mobile) → We need task number 8 to answer research question number 7

 **Note:** While a user is performing a task walk through, the observer can observe user behavior in term of how he feels, how fluently a user can perform. Then the observer writes down the note of his observation to answer research questions.