1. Inspiration

The name “Marauder’s Map” comes from the popular fantasy novel series Harry Potter. In the series, the Marauder’s Map is a magical piece of parchment that is used by Harry Potter to sneak around Hogwarts School of Witchcraft and Wizardry. When called upon by its owner, the Marauder’s Map reveals the location of every individual on Hogwarts’ grounds. The owner of the map can see the movements of every individual as they happen. In the Harry Potter movies, each individual is represented by a pair of footprints moving about the map.

The Marauder’s Map was created by a group of mischief-making friends who nicknamed themselves the Marauders. These friends, and later Harry Potter, often used the map to sneak about Hogwarts while avoiding particular individuals. The map is disguised as a normal piece of parchment; however, it reveals itself whenever its owner recites the phrase “I solemnly swear that I am up to no good.” To hide the contents of the map, the owner must recite the phrase “Mischief managed.”

2. Vision for iPhone Application

For my application, I hope to implement the Marauder’s Map as a social networking tool at Yale. The primary use for the application will be to find friends’ current locations on campus. This will largely replicate the functionality of the original Marauder’s Map from the novel.

One obvious difference is that the Marauder’s Map application on the iPhone will not be able to automatically locate every individual on Yale’s campus. The way I hope to implement this is to create a system where users can “friend” other users similar to the facebook model. So, you would only be able to locate users who are your “friends.” I also want users to be able to organize their friends into subcategories—for example: close friends, acquaintances, suitemates,
teammates, etc. This way, when attempting to locate friends on the map, users will be able to show only the friends that they are looking for.

After implementing these main features, I would like to add additional functionality to the Marauder’s Map application to make it more of a social networking tool. I would like these features to include some sort of messaging integration or some way to post news to friends. For example, I might be interested in flagging a location and writing a message next to it saying, “Happy Hour starts at 8:30! Everybody come!” Then I could choose which group of friends to display this message to. In the end, I think much of this additional functionality might come to resemble the offerings of the social networking tool, foursquare. However, I have no intent to commercialize my product; I simply think that it might be an interesting exercise to implement some of these features.

3. Primary Goals

These features are the focal point of the application.

The two primary features that I hope to implement are:

1. The map displaying the location of friends
2. A method to add friends and place them in different “circles” (similar to Google+)

4. Secondary Goals

After successfully implementing the primary features listed above, there are a number of secondary features that I think would be interesting to implement but are not crucial to the functionality of the application.

Three secondary goals that I hope to implement are:

1. A method for posting news to friends or integrating messaging
2. A method for naming locations—perhaps only viewable to certain circles or maybe to all circles. Perhaps these names could be displayed somewhere on the map (This idea hasn’t been thought through very thoroughly yet.)
3. A method to open the application using Siri

Goal #2 might make the application a bit easier to use and perhaps even a little more interactive.

For goal #3, I would like to say to Siri: “I solemnly swear that I am up to no good” to open the app, and “Mischief managed” to close the app. This would just be a fun bonus feature.
5. Technology and Implementation

I am sure that there are a number of technologies that I will need to use that I haven’t even thought of at this point. However, to me it seems like this project will require use of several major, distinct technologies.

First and foremost, I must learn how to create an application for the iPhone. I have never created any application for the iPhone before, so using Objective-C and the Xcode IDE will be a completely new experience in itself.

Secondly, in order to track users’ real-time locations, I will need to find a way to access individuals’ location information. Currently it seems as if Google Latitude already performs the same task; however I will need to look into whether I can use the Google Latitude API to help me accomplish this task or whether I may want to develop my own approach to tracking user locations.

Lastly, I will need to find create a server to store all of my users’ information and all of the specific locations’ information. Currently I am thinking about using Amazon’s cloud servers to fulfill this need, although I do not really understand how Amazon’s cloud offerings work.

Ultimately, I hope to develop all of the skills necessary to create a full-scale iPhone application. I feel that this is a great opportunity to learn these skills in case I ever want to develop a commercial application in the future.