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CSE 440 – Assignment 2
Project Proposal

Over the years, jogging has become a very popular activity for many people. But for new joggers, people not familiar with their surrounding area, and even people who jog regularly it can be difficult to find running routes that suit them well. It is not very easy to map out jogging routes. The best way to map out a running route is to simply go out and run. But doing this can be challenging for many reasons. A large problem for these people is that they lack easy and accessible tools to help them find suitable jogging routes. This project will aim to provide an application that will make it possible to map out routes, see route ratings, and to monitor runner statistics, such as pace and distance.

Currently, people have to resort to mapping out a run using Google maps or by simply exploring their area on foot. Many times it is impossible to know which routes are the scenic, safe, or challenging without simply running the route. But doing so can end up being a waste of time or even dangerous. Also, it is difficult for avid runners to find routes with similar characteristics as their favorite routes or to find routes slightly more challenging routes, as they become stronger runners.

An application that currently exists that is geared towards runners is the iPhone application called "RunKeeper." This application uses the iPhone's GPS capability to track the pace and distance traveled of a runner. It is a very easy to use and accessible application that tracks and stores data on every run that you do. But it is difficult to compare two different runs because this application does not provide a way to take a run's difficulty into consideration. Also, this application does not have a map interface and thus doesn't provide things like route planning, or seeing past routes.

This project would retain, if not improve upon, the good aspects of the applications that already exist and will provide much more functionality. It will still be very easy to use and accessible. It will provide a one-click track-only mode in which the jogger's route is simply tracked and stored. It will still provide useful information such as pace and distance, but route difficulty ratings will allow users to more accurately compare their performance of runs on different routes. It will still store information on all past routes that have been tracked. On top of these, the map interface will allow users to plan routes. Routes will be able to be generated based on user input such as desired distance and difficulty. Users will also be able to enter waypoints for their run. The difficulty of routes that have been ran and routes that have been planned out can be calculated based on distance and elevation change. Users can review and rate past routes and safety warning will warn users of areas with high crime rates, high traffic areas, or areas with little to no lighting.

This project has a lot of potential for success. At this time, there are no applications out that provide this kind of functionality. There are many people that are very health conscious and looking for tools to help them organize their lives and specifically their workouts. The demographic that this application is aimed towards are the children of technology and many, if not most, of our target audience own smartphones.

A possible scenario of use would be a jogger who would like to run a moderately difficult route of about 5 miles total that goes from their current location to Green Lake and back. They would also like to have data about their performance on this particular run. With the applications available today, this scenario could be addressed as follows:

1. Go onto Google maps and route a walking path to Green Lake
2. Examine the route and see if it is about 2.5 miles long
 - a. If not, set stops on Google maps to bring total distance to 2.5 miles
3. Open and activate RunKeeper
4. Go on the run and see if it was too difficult or too easy
5. Run to beginning location on the same path taken to green lake
6. Press the done button upon returning

These steps would be very time consuming and finding a route could be tricky to get right. But using the proposed application would simplify this quite a bit. With our application this scenario could be addressed as follows:

1. Open the application
2. Set the desired difficulty as moderate
3. Set the desired distance as 5 miles
4. Enter Green Lake as a waypoint
5. Enter if they would like to take the same return route or if they would like a loop that lead back to their current location
6. Hit "calculate route" and let the potential jogging route be calculated
7. Make sure route is ok and that the route does not need to be updated
8. Press the "track" button to begin pace and distance tracking
9. Go on the run
10. Press the done button upon returning

These steps are much simpler and easier to perform.

Jogging has become one of the most popular ways to work out and the number of people partaking is only increasing. There currently does not exist an application like this and our target demographic posses all the tools they need to download and use a tool like this. This application would not only help thousands of people organize and track their workouts, it would help us.