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App Name: CoPilot

App Type

CoPilot is a simple app that acts as an intermediate between the user and the built-in Android Maps application. When the user has more than one destination (for example picking up three friends), each destination can be entered into CoPilot, which will then calculate the most efficient route based on starting location and destinations. This app is targeted at people who make trips with multiple destinations (pit-stops) and want to save time by visiting each stop in the most efficient order. The app will be offered for free.

Vision Statement

CoPilot’s goal is to guide users to multiple destinations in an efficient order with an easy and quick interface that doesn’t just trade setup time for travel time. It brings a subtle, yet critical feature of standard vehicle navigation systems to mobile devices and can ultimately save users time and money (through fuel expenses).

Major Features

1. Route Planner  
   A pre-loaded list of exercises (e.g. “EZ-Bar Curls”, “Bench Press”, “Squats”, etc.) that will get all users started right away, and give novice weight lifters suggestions on where to begin. This list will be editable, so the user can customize exercises without starting from scratch.
2. Recent and Saved Routes  
   Allows the users to record how many repetitions, how many sets and the weight used for each exercise. The number of repetitions and weights can be selected quickly with a picker component. There is no predetermined number of sets per exercise, the user can keep adding.
3. Maps Integration  
   A way for the user to group individual exercises into a workout “routine” (e.g. “Chest and Triceps” would contain “Bench Press”, “Skull Crushers”, etc.). This feature allows the user to create, edit and save workouts – essentially planning their time at the gym.

Assumptions and Dependencies

This app will depend on the Google Maps API for point-to-point routing and distance calculations. It will also require the use of an SQLite database to store data for saved and recent routes. I have prior knowledge in graphic design, Android UI design, and SQL databases. I will need to learn the Google Maps API, how to interface with the SQLite database in the context of the Android SDK, and design an algorithm for calculating “efficient” routes given multiple destinations and a starting location.

Scope of Initial Release (Beta)

For the beta release of this app, I expect to have:

1. A presentable user interface.
2. The ability to enter multiple destinations to build a route.
3. An algorithm that arranges the given destinations by distance.
4. The ability to save routes and present recently entered routes.
5. The ability to present the user with a map from current location to the next destination.

Scope of Potential Future Releases

For future releases of this app, I hope to have:

1. A route-calculating algorithm that incorporates traffic conditions along the way.
2. A map that displays the entire route (all destinations).
3. Different suggested routes (overall shortest, fastest, scenic, etc.).
4. Share routes with friends (e.g. “Trudy’s Tri-Fecta”).
5. The ability to take in a “needed order” from the user if certain destinations must be visited before others.

Operating Environment

Everything for this app will be contained on the Android device. The SQLite database file will reside on the SD card of the device (if one is available) for data integrity reasons. It is my goal to contain all the data the app needs on the SD card, making the data portable as well – switching to a new device will be a seamless transition. Eventually, shared routes may be accessible through a web interface where users can upload routes to share with the general public, or browse and download routes they like.

Competitive Analysis

I was not able to find any similar free apps in the Google Play store, however I did find an assortment of turn-by-turn navigation apps. As far as paid apps, I found one called Route Alert that analyzes traffic conditions on a given route and has the option to enter “waypoints”. It then alerts you prior to your departure time and tells you about the traffic conditions on your route. This app is selling for $1.49 currently with 1,000-5,000 downloads and an overall rating of 4/5 from users. CoPilot is different than Route Alert in that Route Alert gives you different suggested routes, similar to Google Maps on the web. It looks like if you enter waypoints, it will route to through those waypoints in the order you entered them. CoPilot’s competitive advantage is that it narrows down information for the user instead of presenting the user with even more information and then leaving them to think more about their trip. Oh, and it’ll be free.