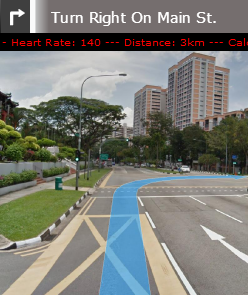
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Description: Go-Bike is a GPS, health and exercise statistics tool for cyclists. It is intended to be run as a mobile application with a bicycle mount for the mobile device. Go Bike can be used to plan bike routes and track progress along the routes on a map. It records relevant data (distance travelled, distance remaining, speed, RPM, time, heart-rate, BPM, calories burned etc….) so that users can have their exercise and/or bike ride visualized.



User Analysis: Age 15-50, athletic, with varying levels of health-consciousness. Moderate exposure to technology, and likely touch-screen devices. Owns a smartphone capable of running the application. Possible experience with health-statistics (e.g. heart-rate).

Task Analysis:

|  |  |  |  |
| --- | --- | --- | --- |
|  | User | Admin | System |
| Enter Start | Provides location |  | Searches for GPS |
| Enter Finish | Provides location |  | Searches for GPS |
| Generate route |  | Load bike map | Uses start/finish and map of bike routes to generate route |
| Collect Data |  |  | Uses GPS to collect necessary data |
| Generate Statistics |  | Develop and set system’s statistics calculations | Uses GPS data and calculations to develop statistics |
| Select Statistics | Selects which statistics to include in the display, if any. |  |  |
| Display Route |  |  | Use GPS to display user on route |
| Display Statistics |  |  | Use selection data to display appropriate statistics above route map |
| Cancel Route | Choose “cancel” |  |  |

Functionality and Usage Scenarios:

1) Select Stats: A user can select which statistics to include in a news-style ticker. Before planning a route, users may read through a list of statistics and their descriptions. By touching a checkbox, the user can select a particular statistic to see during their bike ride.

2) Create Route: A user will enter “Start” and “Finish” destinations. The system will use a bike map to generate a route from start to finish, and returns the route for the user to view and either follow or abandon.

3) Follow Route: After Create-Route returns a route, the user can choose to “follow” or “abandon” the route. Abandon returns the user to the main page and destroys start and finish. Choosing to follow will initiate a GPS display of the user along the route. The statistics that the user selected will appear in a news-style ticker above the GPS map. The user can choose to abandon the route at any by touching a small button on the screen.

Conceptual Model:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Objects: | “Start” | “Finish” | “Route” | “Statistic” | “Stat-List” |
| Object Attributes: | Name, GPS Location | Name, GPS Location | Start, Finish, instructions | Name, description, function,  Is-selected | Number of selected Statistics |
| Object Relationships: | Start belongs to a “Route” | Finish belongs to a “Route” | A route has a “Start” and “Finish”. The instructions go from the Start to Finish | A Statistic may or may not belong to “Stat-List” | A Stat-List is a collection of “Statistics” |
| Actions on Objects: | Create, destroy | Create, destroy | Create, Follow, Abandon | Select to include in list | None |
| Actions on Object Attributes: | Set Name, Set GPS Location | Set Name, Set GPS Location | Set start, Set finish | Set is-selected | None |
| Actions on Object Relationships: | None | None | None | Add a Statistic to “Stat-List” | Remove a Statistic from “Stat-List” |