**Project Mission Statement**

Team Power Rangers is developing a mobile app that enables users to routinely exercise daily, clocking their required calories intake step count.

The project will be considered complete when application is tested and accurate exercise (walking/steps clocking) routine is plan, tallying with actual steps results.

This project enables users to exercise regularly while staying healthy just by walking and follow up to their routine activities. It is implemented partially for the Health Promotion Board National Steps Challenge completion purpose.

**Functional Requirements**

**System functionality to be performed**

- The user must be able to know his/her BMI and daily required steps. (Through Height, Weight and Age).

- The user must be able to retrieve/see its current steps count and how many steps to meet required amount (XXX/XXXX). It should show the percentage of the goal is completed. It should also display distance travelled.

- The user must be able to know different paths to their desired location/home/work (fastest path, reliable path) from their current location.

- The user must be able to check history base on days with path information, number of steps walked, duration of trips, distance of trips.

- The user must be able to show traffic or path situations with indications.  
(Red -> Heavily Congestion, Orange -> Moderate, Green -> Neutral)

- The footsteps of the users must be able to restart to step 0 daily.

**Information to be processed**

- The system must display time in 12-hour format for clarity.

- The system must display time taken to complete activity in hh/mm format.

- The system must display up to 5 digits for the footsteps in the user interface.

- The system must display 1 decimal place.

- The system must not assign the respective users path to walk because of rain within the next 30mins.

**Interface with other systems**

- The system must be able to use traffic API to retrieve traffic and road conditions.

- The system must be able to use GPS to locate user current position.

- The system must be able to retrieve pedometer figures from pedometer measurement application.

- The system must be able to use google maps API to retrieve map and passageway information.

- The system must be able to retrieve transport information using public transport API for route planning

-The system must be able to adjust routes depending on the weather conditions of the starting and ending location. (Clock steps depending on weather at certain locations. E.g. If work area has clear weather but home area is raining, will try to clock necessary steps at work area going home)

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| --- | --- | --- | --- | --- | --- |
| **Term** | **Data Type** | **Data Format** | **Field Size** | **Definition** | **Example** |
| First Name | Text |  | 30 | Name of the user | John, Gary |
| Last Name | Text |  | 30 | Surname of the user | Koh, Wong, Tan |
| Height | Integer | NNN | 3 | Height of the user | 174,182,172 |
| Weight | Integer | NN | 2 | Weight of the user | 55,65,75 |
| BMI | Decimal | NN.N | 4 | BMI of the user | 22.3,22.1,22.0 |
| Footsteps | Integer | NNNNN | 5 | Footsteps of the user | 1,10,100,1000,10000 |
| Distance | Integer | NNNNN | 5 | Distance travelled by the user | 4000, 9000, 10000 |

**Non-Functional Requirements**

**Usability**

- Help messages must be displayed in English

- There must be an information button/tap which enables user to find help/understand the usage of the function/mode

-The application should not hang and should be responsive.

**Reliability**

- After application restart, full system functionality must be restored

- Application should display accurate values with minimal error

**Performance**

- The application must be able to retrieve/compute values and data not more than 20 seconds.

- The application must be able to update location real-time via GPS signal readings.

- The application must be able to store and display up to 30 days of history and information.

- The application must be able to retrieve the BMI within 30 seconds.

**Supportability**

- The database should make use of smartphone memory/cloud drive memory for storage of data.

- The database should be able to migrate information to another mobile device easily   
(Via a database account that stores information through cloud or able to retrieve data by back-up previous history)

**Data Dictionary**

|  |  |
| --- | --- |
| Term | Definition |
| GPS | The Global Positioning System (GPS) is a space-based navigation system that provides user the location and time information in all weather conditions. |
| Pedometer | It estimates the distance of the user travelled on foot by recording the number of steps taken. |
| User | Human user of the application to monitor how many steps is achieved. |
| System | Retrieve the number of steps, distance travelled and BMI. |
| Report | Report of the total steps and distance travelled by the amount of days. |
| Weather Instruments | Notify the user the temperature or the weather to prevent unnecessary inconvenience. |