**Fusion Fitness**

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**Introduction:**

The topic of rising concern amongst today’s people is “Health”. Time is very important to them and they like to make most out of it. Though people exercise they are losing the count of the number of calories burnt as there is no such app that can combine the calorie count of the popular exercises like walking, running, brisk walking, cycling and pushups. This is the motivation for the implementation of our application. The goal of our project is to calculate the amount of calories burnt by doing the various workouts fused in our app.

**Devices/Sensors used:**

The following in-built phone sensors are being used in our project:

* Proximity sensor
* Accelerometer sensor
* Barometric sensor

Data is collected using these sensors and used to calculate the amount of calories burnt per workout. This data is sent to the Hbase where it is stored. Mahout is used to classify the generated raw data into five clusters: Walking, brisk walking, running, cycling and pushups .In the analysis part we are proposing to draw various graphs like to map my run (maps running and walking with different colors), monthly and daily calorie analysis (each exercise contributions). The relevant data obtained from solr is displayed by using the Web services.

**App Features:**

* The proximity sensor is used to count the number of pushups done.
* The accelerometer sensor is used to measure the speed, counts the number of steps taken and measures the distance covered.
* The barometer sensor is used to determine the altitude based on the atmospheric pressure i.e. if you are walking on a flat surface or up an inclined plane.
* The total number of calories burnt is calculated from the obtained data.
* The user can set the target goal for the day.
* Graphs are generated per day and the user can compare his performance with respect to his previous performance.

**Technologies:**

* Android sensors
* Hbase
* Hadoop
* Mahout

**Bibliography**

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