**Project Proposal**

**Real-Time Pedometer Gait Data from an Accelerometer for a Better Health**

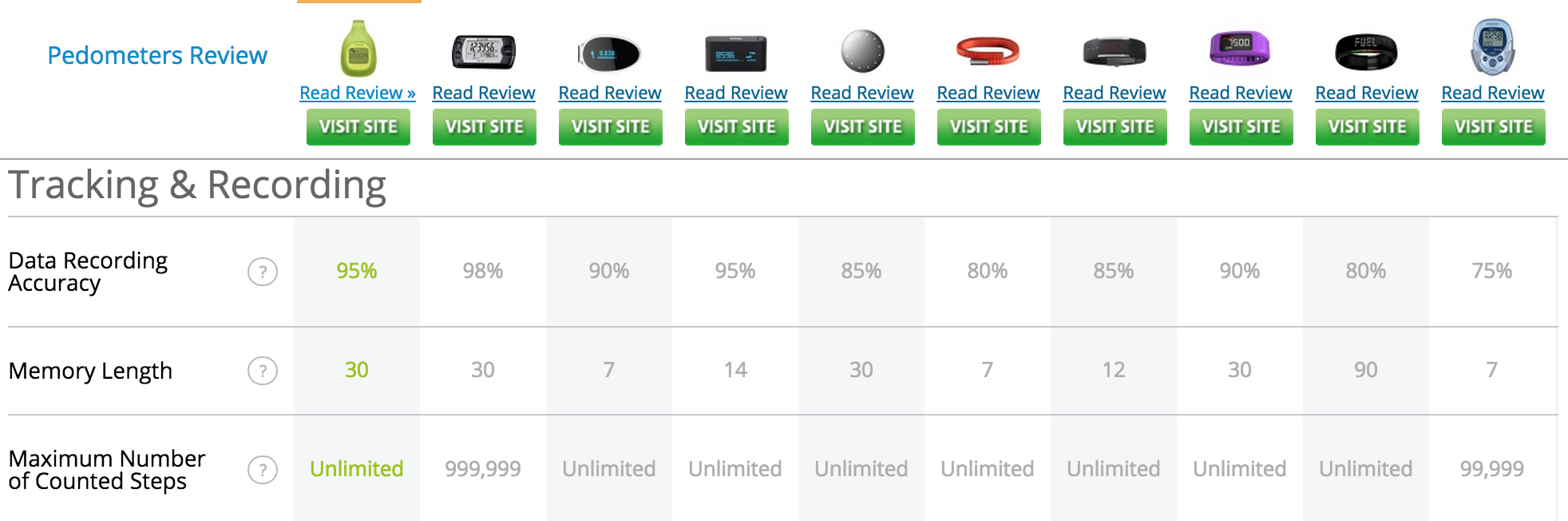
**Introduction:**

This goal of this project is to make people healthier. This project helps motivate and let less-active people know to keep track of their health and exercise more. It uses an accelerometer sensor to count the number of steps a person takes. As the person is running or walking, it will calculate the calories base on how fast the person moves. The data will be sent to the server and then the server will communicate with the Database to store the steps and burned calories into the database system (FairCom). For displaying the data, the project will have an android application that will plot the number of the steps and burned calories as an interface.

In short-short term goal, this system should be able to communicate between server and client (raspberry pi), and the database system. In long-term goal, this system must be able to calculate classify the movement as a step or not and the burned calories correctly. The project’s final goal is to motivation for a healthier life and more convenient by displaying the result of exercising on a smartphone application.

**Background:**

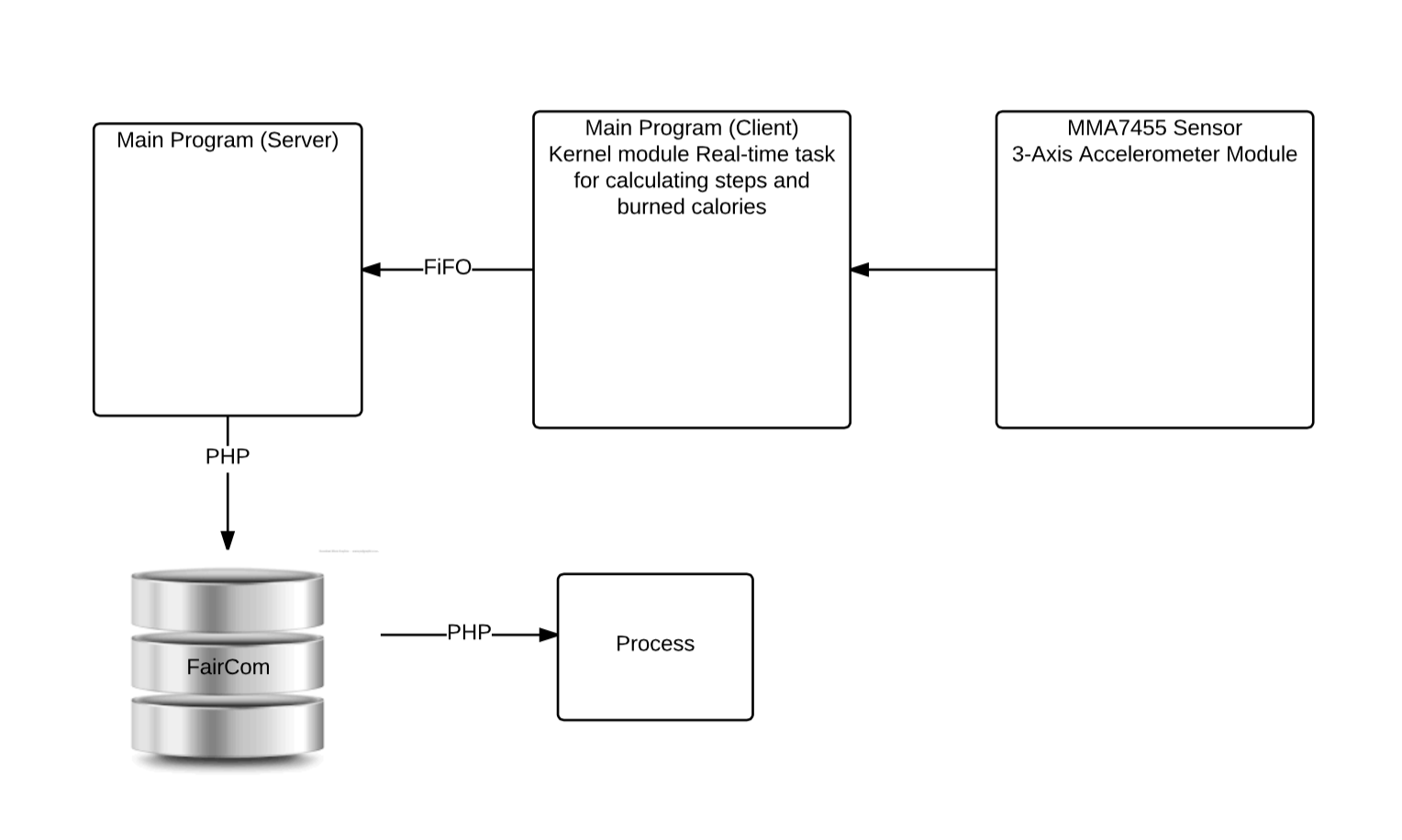
The pedometer is an instrument for estimating the distance traveled on foot by recoding the number of steps taken. The pedometers in the market today are pretty accurate, such as Fitbit, Vivofit, Jawbone Up, etc., but they still have error of counting steps.

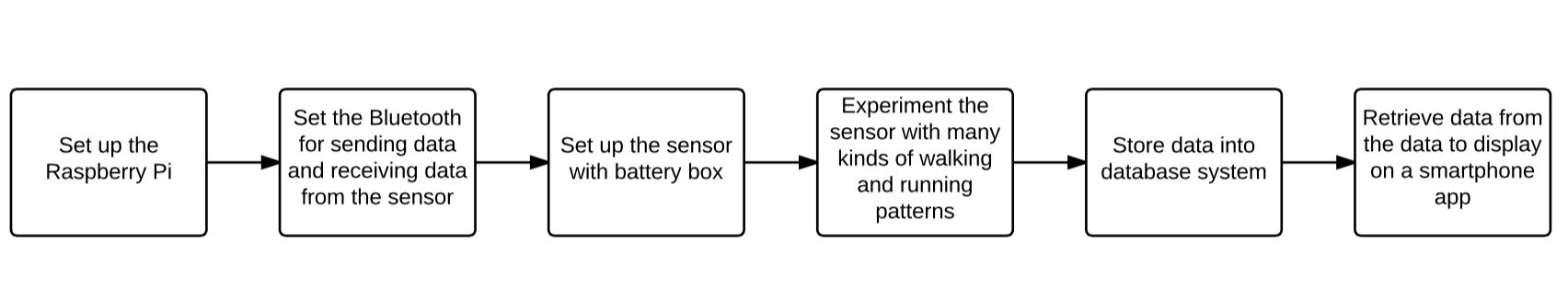


**Implementation:**

First, read in the data from the MMA7455 sensor 3-axis accelerometer module, which acts as a personal tracking device for a person in motion. Second, calculate the steps and the burned calories based on the how fast a person moves. After that the number of steps and burned calories will be stored into database. For displaying data on a smartphone, the plot will look like histogram each bar of histogram graphs represent 20 minutes interval of a day that will retrieve the data from the database system. My constraint/limitation is the sensor might not be able to detect unusual slow walking and it might effect how the burned calories are calculated.

**Flow Chart:**

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**Timeline:**

**Reference:**

http://pedometers-review.toptenreviews.com/