ECE 387 Individual Project Written Proposal

Project title: Health Measuring System

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**Project Description and Goal**

It is confused when you trying to lose weight or gain weight when you are exercising in the gym. So the embedded system idea I have come up with is to achieve very simple goal – measuring your weight, height, how many calories you need to spend in order to achieve today’s goal and give suggestions for your body health. It is easy to locate this system everywhere around the gym and all the personal private data will be transferred to the wristband for gym members and recorded. In order to compare it for the next time you enter to the gym.

**Possible features:**

There are some possible features which can be put into the embedded system, first of all, a sensor which can detecting pressure, this sensor can be used as measuring weight and transferred the pressure force into data and display the data on the screen, an infrared ray will be installing on the machine and measuring from top to bottom, when the infrared ray detected human head, it will subtracted from total height until the distance to your head so that calculated the total height of yours. After detecting these two data, calculated these two data and compared to a standard normal “ health” data, If the measured data value is equal to the standard data, the screen will display “ your body is health, keep going” , and if the measured data value is small or greater than the standard data, it will display the corresponding suggestions.

Besides all the possible features, the reason why I named health measuring system is because I want the screen to compared the weight between last time you recorded into your wristband and the current time you recorded into your wristband, then calculated how much calories you have spent which also provides a reminding function.

**preliminary plan on what needs to be done:**

By(03/30/2019): Finish buying all the parts

By (04/15/19): finish the code of the weight measuring sensor and infrared ray

By(04/20/2019): finish the code of the smart screen display

By(04/30/2019): Combine all parts together

By(05/01/2019): finish the project