

CHAPTER 1

INTRODUCTION

1.1 Background

The health of the human body is very important. humans need to exercise so that their bodies are healthy. When someone is exercising, it will certainly cause the heart rate and temperature of the human body to increase at a certain stage. When someone is doing heavily exercise, it can increase the heart rate in a dangerous level. This project is used for monitoring and recording the heart rate and body temperature.

This project consists of the Arduino Lilypad, Pulse sensor, IR Thermometer sensor, and ESP8266 Wifi module. The sensor data read by Lilypad will be sent to MySQL server through Wifi. The process begins with the installation of Arduino Lilypad as a microcontroller along with a Pulse sensor, an ESP8266 Wifi module, and an IR Thermometer sensor. All module include the Arduino Lilypad are sewed at a glove. The Pulse sensor and IR Thermometer sensor detect the heart rate and temperature of the human body. Then through ESP8266, heart rate data and temperature data are sent to MySQL database in the server.

The result of this project is to analyze the condition of someone who is exercising so that he/she can be monitored if he/she practices too much. With the background of heartbeat-and-temperature charts, this program will display graphics simultaneously in real time.

1.2 Scope

Some of the points that must be used in this project are:

1. How is the comparison between the results of accuracy of heart rate data when exercising with normal standard data on exercise?
2. Does the IR Thermometer sensor detect body temperature normally just like an ordinary mercury thermometer?
3. Can data collection in a certain period detect and identify someone's activity?

1.3 Objective

The purpose of this project is to be able to identify the heart rate and temperature of the human body based on data recorded from sensors.