ABSTRACT

Fever is a symptom of a disease in which the body temperature rises more than 37^0C. This condition is a reaction of the body to survive in the face of disease such as virus or bacteria that enter the body. One effort that can be done to reduce fever usually using compress with the temperature is higher than normal body temperature. In general, traditional compress use a warm towel. However traditional compress has weakness. Traditional compress is used by putting towel on the surface of human body and it will lose its heat, people have to compress repeatedly. To solve these problems requires an alternative that can stabilize compress temperature and it does not need to be done repeatedly.

In this final project, researcher designs a thermoelectric based compress. By using thermoelectric, electrical energy can be converted into heat energy. The heat energy will be used to heat compress tool. The temperature sensor is used to measure the temperature is DS18B20. The basic technology is used to control compress temperature is Arduino Uno microcontroller using fuzzy logic.

In this study, the compress tool can function properly and produce a stable temperature in the range of 37^0C - 40^0C. With the length of time to reach expected temperature is 2 minutes 6 seconds.

Keywords : Compress, Thermoelectric Module, DS18B20 Temperature Sensor.