CHAPTER 6

CONCLUSION

The following conclusions are obtained from the results of research using the Haversine Algorithm:

1. The Nodemcu ESP8266 microcontroller can be connected to WiFi so that it can send output in the form of notifications to the Telegram BOT

2. The PIR sensor can function properly, so it can detect a movement.

3. The haversine algorithm used in this study can find the closest distance at each location that has been tested.

4. Using the Haversine algorithm is very effective in finding the nearest location. It is enough to input the coordinates of the location after which it is converted into distance and finally find the location of the security post which is closest to the starting point (home).

In this study, there are also several problems, including:

1. The SIM800L module has an error because it cannot receive incoming messages via SMS, so replace it with the NODEMCU ESP8266 Microcontroller

2. Algorithm changes so that it is necessary to change the research, which initially used Dijkstra's Algorithm changed to the Haversine Algorithm, due to difficulties in implementing Code Dijkstra to the Arduino IDE.

Suggestions for further research are adding a GPS module, changing the application to receive messages and making comparisons with other algorithms that look for the closest distance, such as the dijksta algorithm, A star algorithm and others..