ABSTRACT

Bluetooth Low Energy (BLE) is currently in widespread use on IoT devices because of its simple infrastructure, but that has become the weak point of BLE. One of the solutions for this problem is using a Token Authentication Mechanism of BLE. Token Authentication is a security technique when the user attempts to access a secure system, the system will provide a security token as a guarantee for the user to not do unwanted acts.

This thesis discusses the mechanism of Token Authentication on BLE, what are the differences with previous method using a temperature sensor with a token authentication mechanism which is used as an example of a media device.

The results obtained from this final project are the results of authentication that occurs between devices, which proves that in the authentication process there are stages and processes to be connected between two devices, and the effect of token authentication on temperature sensors based on Quality of Service (QoS), with proof that QoS on the token authentication mechanism is not better than the previous method.

Keywords: *IoT, BLE, Token Authentication, Temperature Sensor, QoS*