ABSTRACT

A locker is a place to store goods used by visitors to a place. The existence of lockers in the library is very important and useful for visitors as a place to store or put luggage, so that visitors do not need to bring all their belongings into the library. At this time the growth of technology is growing rapidly in various fields, one of which is smart lockers. Conventional goods storage systems generally still require a process that takes quite a long time such as finding empty lockers, entering keys and opening lockers. Therefore, a smart locker device based on the Internet Of Things was developed using Radio Frequency Identification (RFID). The use of RFID can help locker users with an easy way of working, namely bringing the tag closer to the reader so that the system can work automatically. This automatic system produces output in the form of a solenoid lock door which functions to open and close automatic lockers that are connected to the NodeMCU Microcontroller which is connected to wifi internet and RFID-based data transmission. In addition, the availability of lockers can be monitored via a web that can be accessed by the admin which provides a visual display and writing about the lockers that are filled or unfilled. So that the use of smart lockers is expected to provide time efficiency in accessing lockers. From the results of the research that has been carried out, the results are quite good, namely the tap test on the RFID card is successful with a distance of 0-2 cm on the three RFID cards, then the quality of service on QoS testing in the IoT-based RFID locker system gets a throughput of 112.896 bits/s (very good).) and packet loss of 100% (very good), and get an average delay of 0.128961 second (very good).

Keywords: *Locker, RFID, NodeMCU*