ABSTRACT

The library is an information center where library materials are collected and processed, then disseminated to users. The library is said to be one of the supporting components in an academic institution that plays an important role in the provision of books as a source of learning reference that is required to provide actual, accurate, fast, timely, and easily accessible information. Therefore, libraries must also be equipped with good information and technology systems, so that the role of libraries in academic institutions can be maximized. In general, the library functions as a room or place that is useful for students or visitors who aim to conduct research such as a thesis, final project, thesis, and dissertation. However, the reality in the field shows that with different conditions, namely with complaints from library visitors about the use of space or learning places that are not suitable for use, such as chairs and tables that should be used by library users as the result they do not get, this happens because of an association of several people and causing annoying noise for visitors who are doing research or are working on assignments related to learning, so that it will spur noise in the library. Based on the explanation above, the authors make a design namely the design of the monitoring system to count the number of visitors to the library of Telkom Institute of Technology Purwokeerto based on the NodeMCU Esp8266 board. This monitoring system to calculate will be a solution for monitoring library loggers via Android smartphones to make it easier to monitor ITTP library visitors. It is proven that the accuracy of the ID Hexa RFID card using NFC reader software is 100% the same as the serial results of the monitor on the Arduino IDE. Testing the Wi-Fi board NodeMCU Esp8266 with the firebase-Arduino-master library, which is 25.80 kbps, with the amount of data taken as much as 30 data in 30 minutes on one packet length.

Keywords: Library, NodeMCU Esp8266, RFID, Firebase, Android Application