ABSTRACT

Indonesia has a lot of wonderful places that much favored by local and foreign tourist. But the number of visitors heading to tourism place while on vacation, makes a long line at the entrance. The previous technology for queues managing at tourist entrances is RFID (Radio Frequency Identification), but this technology has several disadvantages, one of that is RFID reading process takes a long time. Currently there is a technologies that more faster for reading process and easier to use, namely QR-Code.

In this Final Task has been designed and made a device to improve the vehicle gate access process. By using IoT and QR-Code technology. Gate access device is programmed using the MCU Node as the gate condition control. Device can be controlled using Android application by scanning the QR-Code that has been provided. The scanned QR-Code contains data which then will be forwarded to the database and make the device to open the gate.

Based on the test results, its prove that the device can be used to replace RFID systems. In functional testing, the device can work perfectly, delay testing in downloading data is 0.894 seconds and the delay in upload data is 0.902 seconds, and the device has durability for 12 hours without any problems.

Keywords: Code-QR, Internet of Things, NodeMCU