ABSTRACT

Lack of information regarding the maximum amount of capacity, the number of motorcycles that enter, and the remaining amount of motorcycle capacity in the parking area of the University of Telkom often causes unity. So the need for information on the availability of parking capacity must be increased.

From these problems in this Final Project research created a solution that is the Smart Parking system by creating an Android-based application that is used to provide information about motorcycle parking capacity. This application is integrated by the Radio Frequency Identification (RFID) sensor which is placed at the entrance and exit of the motorcycle parking area as the main data to find out the total availability of motorcycle parking capacity. This system utilizes Internet of Things (IoT) technology as a connecting technology from sensors to applications.

The results of this Final Project research is to create a Radio Frequency Identification (RFID) Reader sensor that is integrated with the Radio Frequency Identification (RFID) Tag through the Internet of Things (IoT) technology. Internet of Things (IoT) technology is also used to connect RFID sensors to the Tel-u Parking application using firebase that is sent in Realtime. Testing is done by using 20 Telkom University student identification cards. Testing is done using the Blackbox Testing method. The features contained in the Tel-u Parking application are information about the maximum amount of capacity, the number of motorcycles that enter and the remaining amount of parking capacity.

Keywords: Internet of Things (IoT), Smart Parking, Radio Frequency Identification (RFID)