

ABSTRACT

The increase in the volume of mobility can cause transportation problems, namely increasingly crowded parking lots and difficulties in finding available parking spaces, especially in parking areas in office buildings. The fact is that many companies still use attendance records and enter office areas manually, namely by using an attendance record book when entering and leaving work hours. Reducing the efficiency and accuracy of companies in optimizing their productivity. Therefore, this study makes a smart parking system for four-wheeled special users using an RFID tap connected to a *database* to be able to provide information about parking lots and employee attendance data.

The system design that has been carried out includes the linking process between the RFID reader module and the ESP8266 NodeMCU microcontroller, then the ESP8266 NodeMCU which is connected to the server will use the WSN (Wireless Sensor Network) protocol to communicate with the *database*. The results of designing a smart parking prototype system will make it easier for four-wheeled vehicle users to find parking lots in office areas because they can provide information on recommendations for available parking lots according to their position and attendance data effectively.

Keywords: Smart Parking, Radio Frequency Identification (RFID), Wireless Sensor Network (WSN), Internet of Things (IoT)