

ABSTRACT

With the large number of vehicles owned by the community now, the need for parking area clearly become the main facility on a campus. But when the number of visitors came, the parking page became full. Sometimes there is also a parking page that looks full in front of it, but it is actually behind the blank/available car park. This becomes a problem, because of the lack of information that visitors get, so many campus visitors who park their vehicles outside the parking page. With this incident, there is often a wild parking that causes traffic congestion on the main road.

This late Tugus has been made to make a system easier. This system has made it easier for the user to find parking availability. Use the QR Code scanned through the smart phone of the parking user. Which is where each parking availability information is in the QR Code given. By knowing the availability of parking since the beginning, then the user does not need to re-check the parking time and save more time.

The results of tests that have been done, all devices such as software and hardware have worked well. The system also has a value of MTBF and MTTR respectively 160 hours and 18.5 minutes/0.308 hours. In the results of the second network quality measurement NodeMCU has a delay value that is strongly affected by the distance between NodeMCU with access Point. Which at a distance test 10M has an average value of 0.672 seconds, while the 15M distance has an average value of 0.710 seconds. The average value of throughput of the system is 7,129.996 bit/s on NodeMCU-1 and 13,212.116 on NodeMCU-2.

Keywords: Internet of Things, Smart Parking, Sensor Ultrasonic , Qr Code, Park and Ride