ABSTRACT

During busy days in the office or on holidays in shopping centers make the condition of the parking lot becomes very crowded and the availability can not be ascertained, so the motorists who want to park their car must turning around the parking area to find a parking space. This condition causes inefficient parking activity for the motorists. In this study, smart parking application will be designed that allows motorists to get information related to the availability of the parking lots directly and can also reserve the parking lot that they want to occupy, so that the time needed to find a parking space becomes more efficient. The prototype of Smart Parking app in this study was created using Android platform with Firebase servers. The system works by monitoring the parking spaces by sensors whose data will be sent to the mobile application via Firebase database server. The success parameter of this research is that the system can provide the availability of parking information through the internet in real time and the driver can make a booking on the destination parking area. The test results showed the Quality of Service (QoS) which includes an average delay of 0.3556 s and an average throughput of 1342.5 bytes/s.