

ABSTRACT

Recent technological developments have developed rapidly in all fields, one of which is information systems in the form of websites and mobile applications that are widely used, one of which is the parking lot processing sector. In the current building parking management system, most of the management still uses conventional methods in terms of the unavailability of information on the availability of empty parking slots where users must enter first into the building, observing that there may still be empty slots which often end up coming back out because they are full. In addition, the payment system for parking services when leaving the parking area still uses a cash system and requires the assistance of officers.

In this Final Project, a smart parking management system based on the Internet of Things (IoT). With an application to build a parking user database system with an android-based parking slot availability display feature to visually display an indication of queue slots that are still empty, filled, and booked. In addition, a server is also created to simulate a customer database from a financial service manager (banking system) for an electronic-based parking payment system (e-parking). With a customer detection system using a QR Code Reader.

With the creation of an Android-based smart parking system application, it is hoped that it will make it easier for parking users to find parking slots through the Android application while making reservations and paying for parking services without having to prepare cash. And a response test has been carried out to see what the response value is on the application features that have been created as a form of the success rate in making this application and get an average response value of ± 2.5 seconds for each feature the application runs properly as expected in the initial design.

Keywords: *Smart Parking, ESP8266, Ultrasonik, QR Code, E-Payment, Internet of Things.*