DESIGN AND BUILD AUTOMATIC PARKING PORTAL RADIO FREQUENCY IDENTIFICATION (RFID) WITH BLYNK APPLICATION USING THE BOOKING SYSTEM

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ABSTRACT

The current parking system requires a touch of automation so that it can be used more optimally and efficiently. Difficulty in finding a parking space in the parking lot is one of the obstacles faced by car drivers. This research designs an automatic parking portal system using RFID with Blynk as an application for the booking system. This design uses a microcontroller in the form of an ESP8266 MCU Node with an RFID Reader in the form of MFRC522 and has 4 parking slots as a vehicle parking lot with each slot having a servo motor to open and close the portal. Before entering the parking area, you are expected to order through the Blynk application by selecting the parking slot to be occupied. After ordering through the Blynk application, the RFID card is tabbed into the RFID Reader, the parking portal opens and can occupy the selected parking area. the parking portal is open it will be at 180°. When the parking portal is closed slot 1, slot 2 is at an angle of 5°, slot 3 is at an angle of 10°, and slot 4 is at an angle of 0°. The measurement distance of the tag reading when affixed right in front of the RFID Reader is read at a distance of 0.5 -2 cm and the distance is not read at 2.5 cm without any obstacles.

Keywords: *Parking, RFID, Blynk, microcontroller, servo motor*