

ABSTRACT

DESIGNING A VOTING SYSTEM USING IOT-BASED RFID TECHNOLOGY TO PREVENT FRAUD

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The development of digital technology has encouraged the implementation of electronic systems in various aspects of life, including the voting process. This study designs and builds a voting system using Radio Frequency Identification (RFID) technology integrated with the Internet of Things (IoT) to address various issues in conventional voting methods, such as the potential for fraud, the length of the counting process, and low transparency. The system uses an ESP32 as the control center, two RFID RC522 modules as input devices for two candidates, and an LCD display and buzzer as output devices for displaying results and providing audio notifications. All voting data is displayed in real-time via the LCD and the Blynk app as part of remote monitoring. The results of this design demonstrate that the system can uniquely identify voters, accurately record votes, and simplify the monitoring process. As such, this system is expected to serve as a modern, secure, and efficient alternative solution for conducting elections in an academic environment.

Keywords: RFID, IoT, ESP32, *voting*, *e-voting*, Blynk