

# **SISTEM BUKA LOKER DENGAN MENGGUNAKAN NEAR FIELD COMMUNICATION PADA SMARTPHONE**

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## **ABSTRACT**

Currently, technology is widely used to help with daily activities. One example of technology that can help with daily activities is using Near Field Communication (NFC) technology by applying it to lockers. By utilizing NFC technology, the use of manual keys can be replaced with electronic keys such as NFC devices currently commonly used in various types of devices. In addition to using NFC technology, the system also requires a microcontroller device to control locker keys and scan NFC devices.

This research produces the primary system, namely applications and support systems such as the Arduino system, that users can command Arduino to scan NFC devices or unlock lockers. Arduino waits for commands from the application to interact with the modules connected to the Arduino. In order to move the locker lock electronically, the manual lock in the locker is replaced with an electronic key (solenoid) connected to the Arduino. Even though the NFC device used to unlock it is lost, the electronic locker key (celluloid) can still be moved to open a locked locker.

Tests are carried out to test each feature's function in the system that has been built. From the results of the tests carried out in this study, 100% of the systems built have been able to carry out their primary functions properly.

**Keywords:** automatic locker system, NFC (Near Field Communication), Arduino, celluloid