DESIGN AND BUILD SAFE SECURITY USING A COMBINATION OF PASSWORD AND FINGERPRINT BASED ON ARDUINO UNO

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ABSTRACT

Safe security still uses conventional security, which opens the safe door by turning and using a code. Therefore, a safe system is designed to overcome this problem, with a password and fingerprint combination system that can make someone unable to access it except the owner of the safe. This system consists of hardware and software. The hardware consists of a power supply, buck converter module, 2x16 ICC LCD, FPM10A fingerprint sensor, LED, and 4x4 keypad, relay, doorlock solenoid. And the software on this system uses the Arduino IDE program. This system runs if the password and fingerprint entered are as registered, the doorlock solenoid (safe door) opens and the green LED is on, and if the password and fingerprint entered do not match those registered 3 times in a row then the doorlock solenoid (safety door) is closed, buzzer and red LED will be on. From the resultof test that have been carried out 100% times the tool performance is 100%.

Keywords: *security, password, fingerprint.*