**The Internet of Things (IoT) system operates assignment.**

IoT (Internet of Things) is an emerging technology revolutionizing how we interact with the physical world. It is a network of connected devices that can communicate with each other, enabling new levels of automation and control. With the emergence of RFID (Radio Frequency Identification) technology, it has become possible to create a secure and reliable door lock system that can be used to grant or deny access to a location based on the user's identity.

An RFID door lock system is an excellent example of how IoT can be used to improve security. This system uses an Arduino board and an RFID sensor to detect the presence of an RFID tag and control the locking mechanism. When a valid RFID tag is detected, the Arduino board sends a signal to the servo motor to open the lock. The Arduino board also stores a list of accepted tags, allowing for a secure and reliable access control system (Alguri, 2021).

The main advantage of an RFID door lock system is that it provides an extra layer of security. By using an RFID tag, the user can be identified and the door can be opened or locked accordingly. This also eliminates the need to carry keys or remember passwords, as the RFID tag provides a secure and reliable access control system. In order to build an RFID door lock system, the following components are required: an Arduino board, an RFID sensor, a servo motor, LEDs, and resistors. The Arduino board stores and processes the data received from the RFID sensor. This data then controls the servo motor, allowing the door to be opened or locked accordingly. The LEDs are indicators to show whether the door is open or locked. The resistors regulate the components' current and voltage levels (Bellavista et al., 2019).

The software required to run an RFID door lock system is relatively simple. The Arduino board must be programmed to read the data from the RFID sensor and then control the servo motor accordingly. The programming language used to program the Arduino board is usually the Arduino language. The user can also add additional features to the system, such as a keypad or a display for additional security (Simatupang et al., 2019).

In conclusion, an RFID door lock system is an excellent example of how IoT can improve security. This system is easy to build and can provide an extra layer of security for any location. By using an RFID tag, the user can be identified, and the door can be opened or locked accordingly. Furthermore, the system is relatively easy to program and can be easily extended with additional features.

**References**

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