IOT SECURITY

MINI PROJECT

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OVERVIEW

IoT Security System- In this presentation, we will learn how to make your own IoT based home/office security system using the RFID sensor and its Tags with the help of Arduino board.

Project Requirement

HARDWARE

- Arduino UNO Board
- RFID Sensor and Tags
- Buzzer
- connectors(jumper wires)

SOFTWARE

- ARDUINO IDE

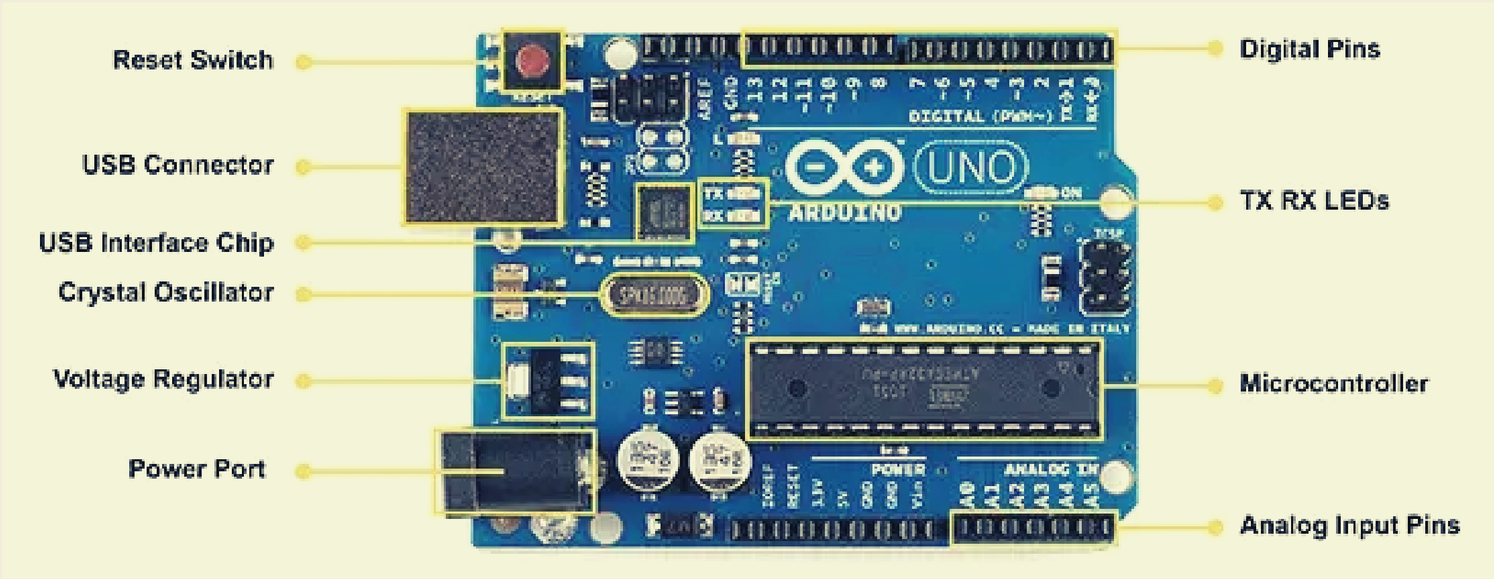
LIBRARY USED IN THIS PROJECT

<SPI.H>

This library allows you to communicate with SPI devices, with the Arduino as the controller device. This library is bundled with every Arduino platform, so you do not need to install the library separately.

<MFRC522.H>

Read and write different types of Radio-Frequency IDentification (RFID) cards on your Arduino using a RC522 based reader connected via the Serial Peripheral Interface (SPI) interface.

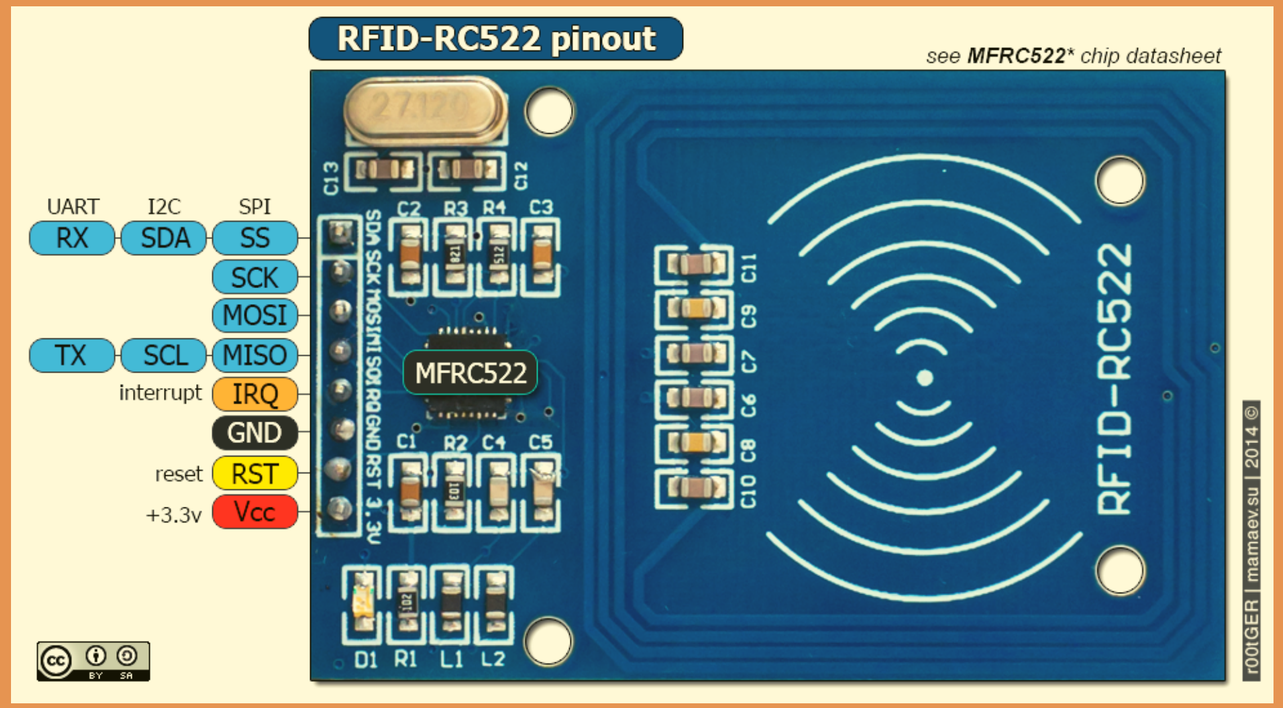


What is Arduino UNO?

Arduino is a microcontroller-based open source electronic prototyping board which can be programmed with an easy-to-use Arduino IDE

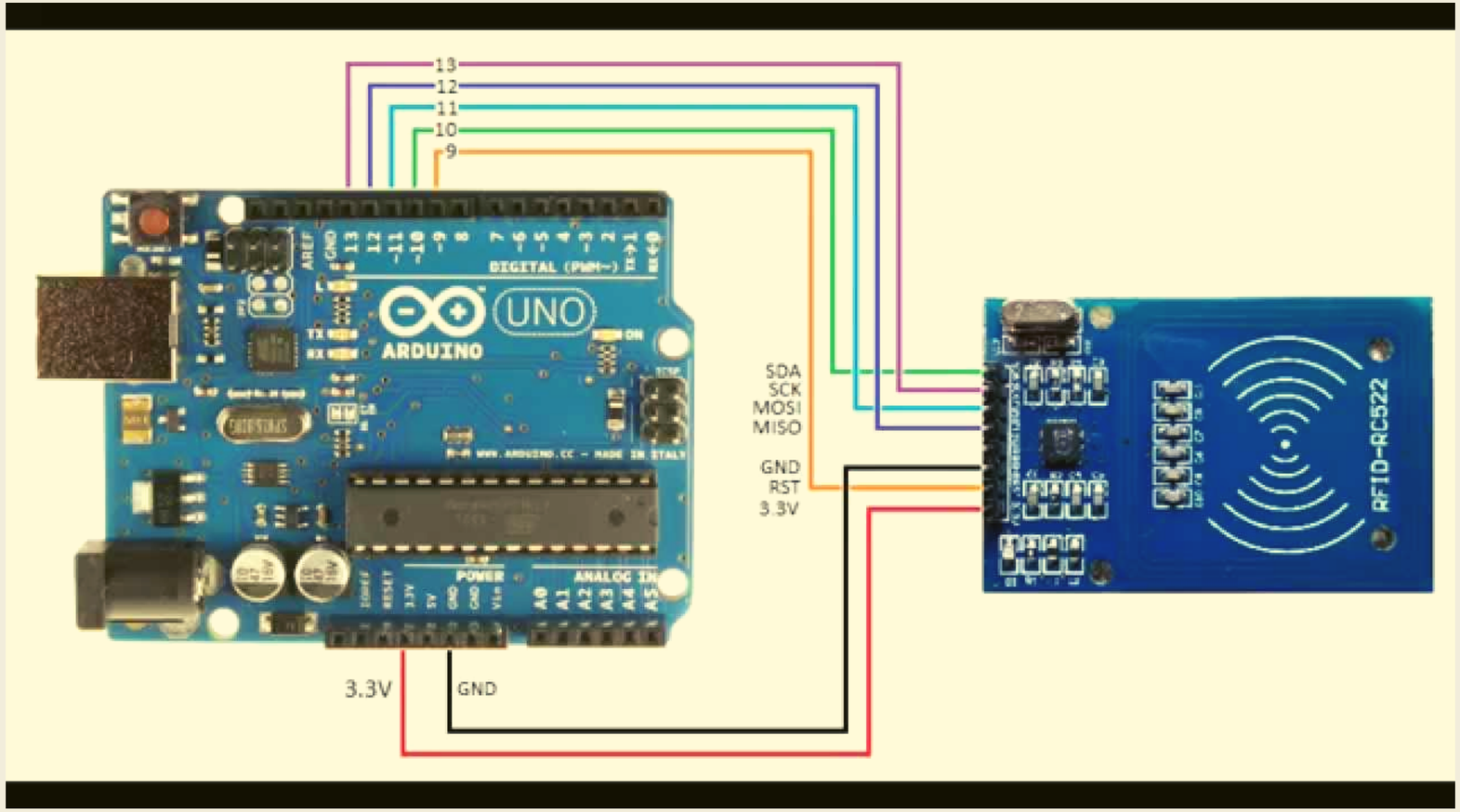
What is RFID SENSOR and TAGS?

Radio Frequency Identification (RFID) refers to a wireless system comprised of two components: tags and readers. The reader is a device that has one or more antennas that emit radio waves and receive signals back from the RFID tag.



CONNECTIONS

1. 3.3V to 3.3V
2. GND to GND
3. buzzer power to D8
4. RST to D9
5. SDA to D10
6. MOST to D11
7. MSO to D12
8. SCK to D13



APPLICATION OF RFID

- vehicle tracking
- customer service and loss control
- improved visibility and distribution in the supply chain
- access control in security situations
- shipping
- healthcare
- manufacturing
- retail sales
- tap-and-go credit card payments

Thank you