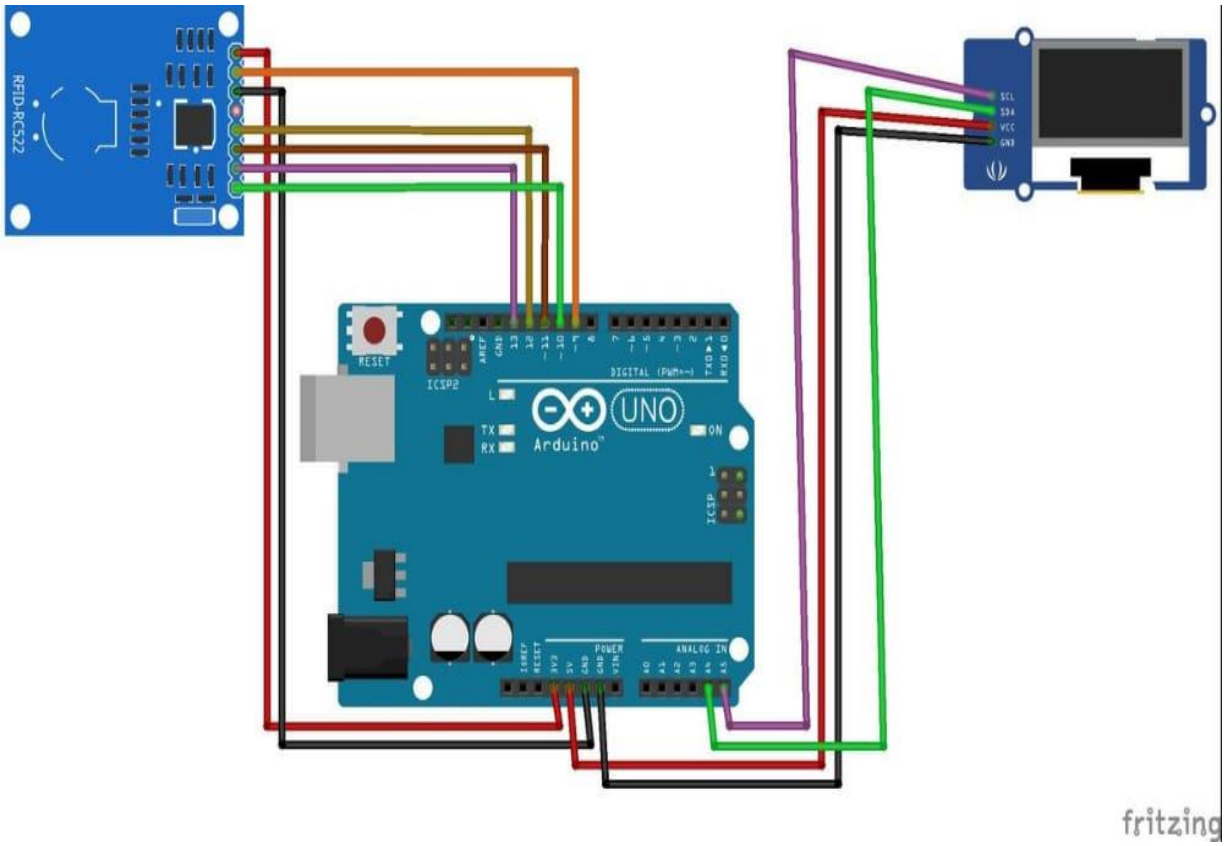
ASSESMENT-1

Smart Locking Door System Using RFID Sensor and Arduino Board



PROGRAM

```
#include <SPI.h>
#include <MFRC522.h>
#define SS_PIN 5
#define RST_PIN 9
#define RELAY 3 //connect the relay to number 3 pin
#define BUZZER 2 // connect the buzzer to 2 pin
#define ACCESS_DELAY 2000
#define DENIED_DELAY 1000
```

```
MFRC522 mfrc522(SS_PIN, RST_PIN);   // Create MFRC522 instance.
void setup()
{
  Serial.begin(9600);   // Initiate a serial communication
  SPI.begin();        // Initiate  SPI bus
  mfrc522.PCD_Init();   // Initiate MFRC522
  pinMode(RELAY, OUTPUT);
  pinMode(BUZZER, OUTPUT);
  noTone(BUZZER);
  digitalWrite(RELAY, HIGH);
  Serial.println("Put your card to the reader for scanning ...");
  Serial.println();
}
void loop()
{
  // Look for new cards
  if ( ! mfrc522.PICC_IsNewCardPresent())
  {
    return;
  }
  // Select one of the cards
  if ( ! mfrc522.PICC_ReadCardSerial())
  {
    return;
  }
  //Show UID on serial monitor
  Serial.print("UID tag :");
  String content= "";
  byte letter;
```

```
  for (byte i = 0; i < mfrc522.uid.size; i++)
  {
    Serial.print(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " ");
    Serial.print(mfrc522.uid.uidByte[i], HEX);
    content.concat(String(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " "));
    content.concat(String(mfrc522.uid.uidByte[i], HEX));
  }
  Serial.println();
  Serial.print("Message : ");
  content.toUpperCase();
  if (content.substring(1) == "AB CD EF GH") // enter your own card number after copying it from serial monitor
  {
    Serial.println("Authorized access");
    Serial.println();
    delay(500);
    digitalWrite(RELAY, LOW);
    delay(ACCESS_DELAY);
    digitalWrite(RELAY, HIGH);
  }
else   {
    Serial.println(" Access denied");
    tone(BUZZER, 300);
    delay(DENIED_DELAY);
    noTone(BUZZER);
  }
```