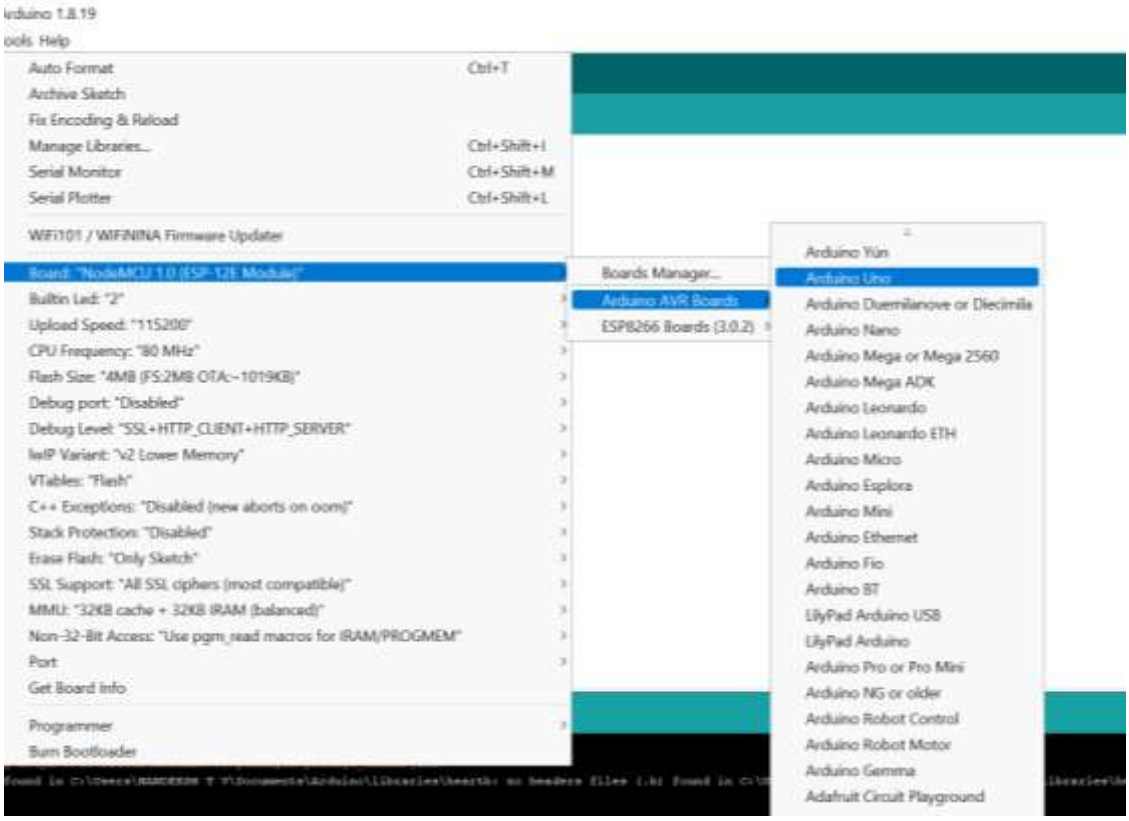
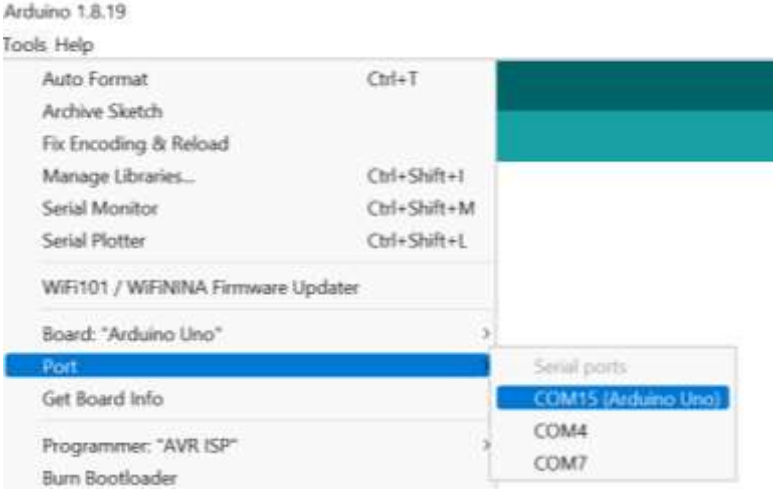
8. RFID based Touchless Attendance with automatic door locking system

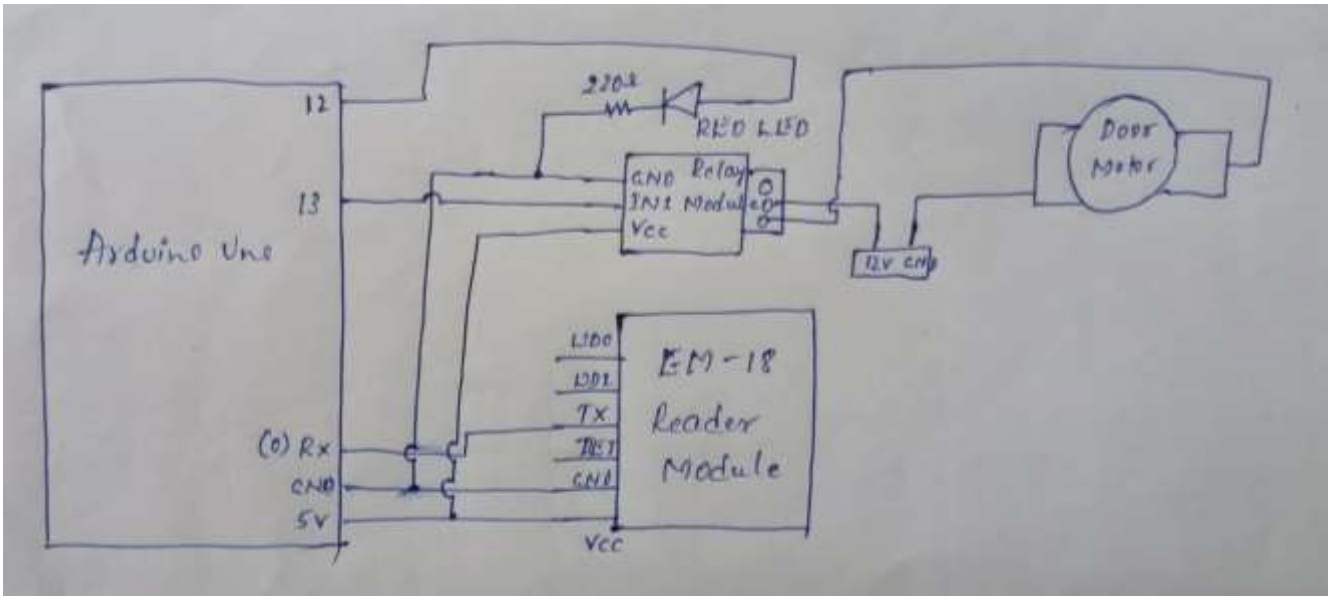
REQUIREMENTS:

A. **Arduino Uno + USB Type-A To USB Type-B**
B. **EM-18 RFID Reader Module**
C. **Jumpers**
D. **Arduino IDE**
E. **Relay Module + Door Motor**
F. **Red Warning Light + Buzzer**





BLOCK DIAGRAM:



CODE:

```
char tag[] ="08006A7A657D";
int relay=13;
int led=12;
char input[12];
int count =0;
boolean flag =0;


void setup()
{
  Serial.begin(9600);
  Serial.println("SPT 5th Sem Touchless Attendance System ");
  pinMode(relay,OUTPUT);
  pinMode(led,OUTPUT);
   digitalWrite(relay,HIGH);
```

```
}

void loop()
{
 if(Serial.available())
 {
  count = 0;

  while(Serial.available() && count < 12)
  {
   input[count] = Serial.read();
   count++;
   delay(5);
  }

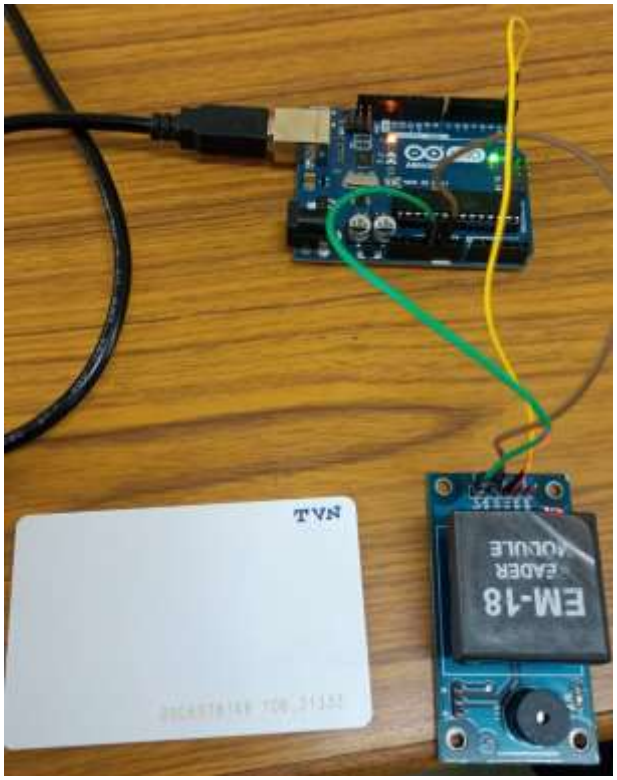
  if(count == 12)
  {
   count =0;
   flag = 1;

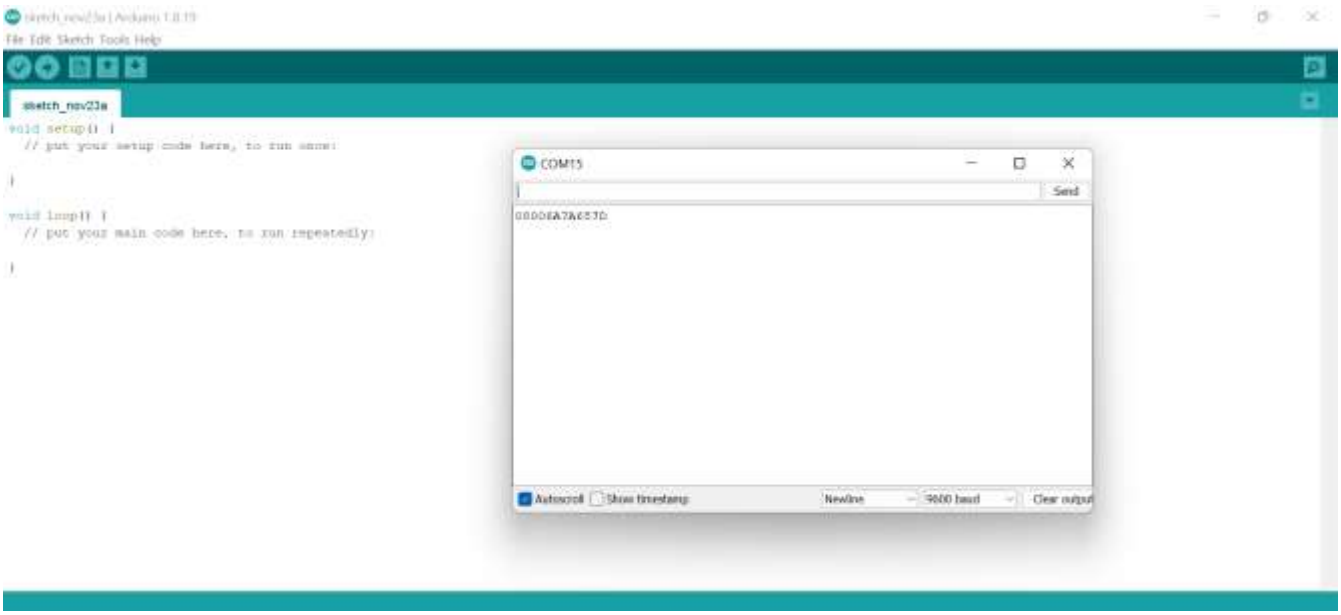
   while(count<12 && flag !=0)
   {
    if(input[count]==tag[count])
    flag = 1;
```

```
      else
      flag= 0;
      count++;
     }
    }

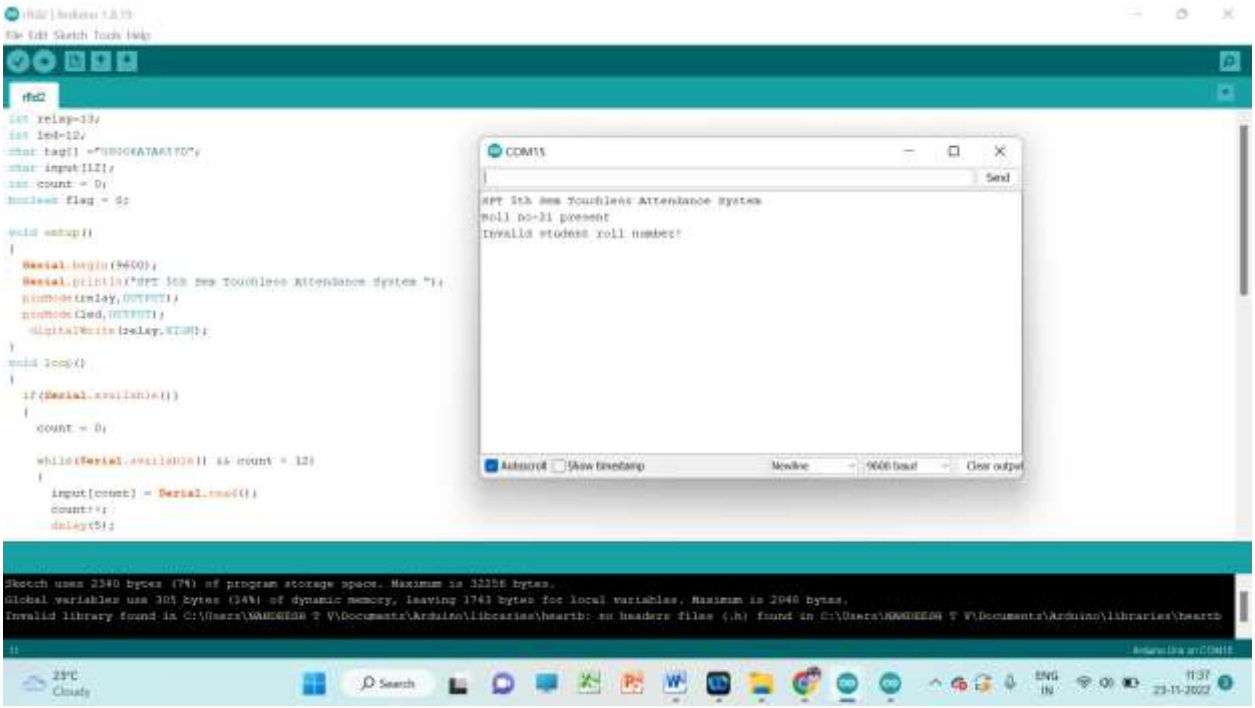
    if(flag == 1)
    {
     Serial.println("Roll no-21 present");
     digitalWrite(relay,LOW);
     delay (5000);
     digitalWrite (relay,HIGH);
    }
    else
    {
     Serial.println("Invalid student roll number!");
     digitalWrite(led,HIGH);
     delay(5000);
     digitalWrite(led,LOW);
    }
  }
}
```

While reading Tag ID: RFID TX pin to Arduino TX pin





After Reading Tag ID: : RFID TX pin to Arduino RX pin



rfid2 | Arduino 1.8.19

File Edit Sketch Tools Help

rfid2 §

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boolean flag =0;

void setup()
{
  Serial.begin(9600);
  Serial.println("SPT 5th Sem Touchless Attendance System ");
  pinMode(relay,OUTPUT);
  pinMode(led,OUTPUT);
   digitalWrite(relay,HIGH);
}
```

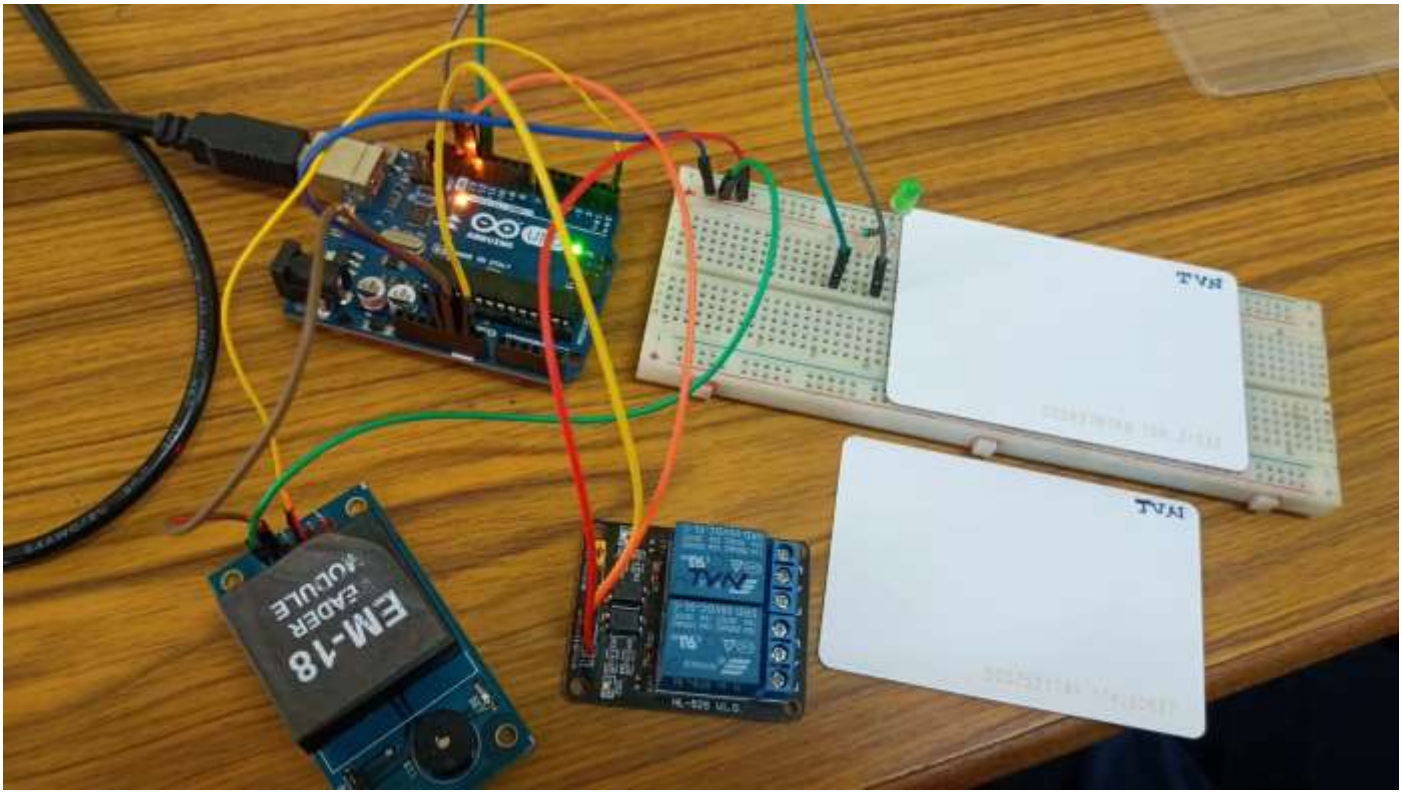
```
void loop()
{
  if(Serial.available())
  {
    count = 0;

    while(Serial.available() && count < 12)
    {
      input[count] = Serial.read();
      count++;
      delay(5);
    }

    if(count == 12)
    {
      count =0;
      flag = 1;

      while(count<12 && flag !=0)
      {
        if(input[count]==tag[count])
        flag = 1;
        else
        flag= 0;
        count++;
      }
    }
    if(flag == 1)
    {
      Serial.println("Roll no-21 present");
      digitalWrite(relay,LOW);
      delay (5000);
      digitalWrite (relay,HIGH);
    }
    else
    {
      Serial.println("Invalid student roll number!");
      digitalWrite(led,HIGH);
      delay(5000);
      digitalWrite(led,LOW);
    }


  }
}
```


EM-18
READER
MODULE