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Sub: IoT

Practical – 3[Batch-71]

Interface PIR Motion Sensor with Arduino and blink LED.

Parts Needed

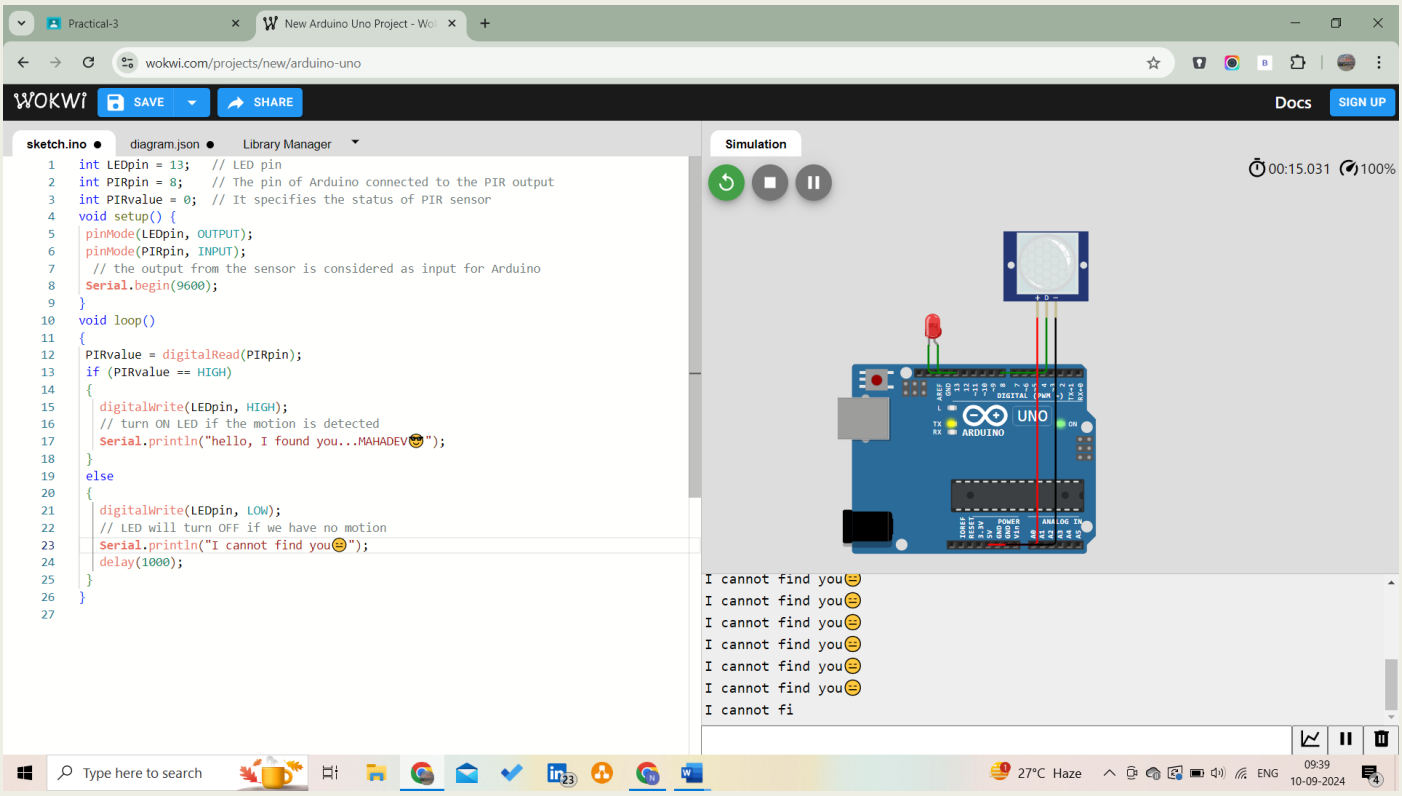
1. Arduino Uno
2. USB A-to-B Cable
3. LED 5mm
4. PIR Motion Sensor
5. Jump wires

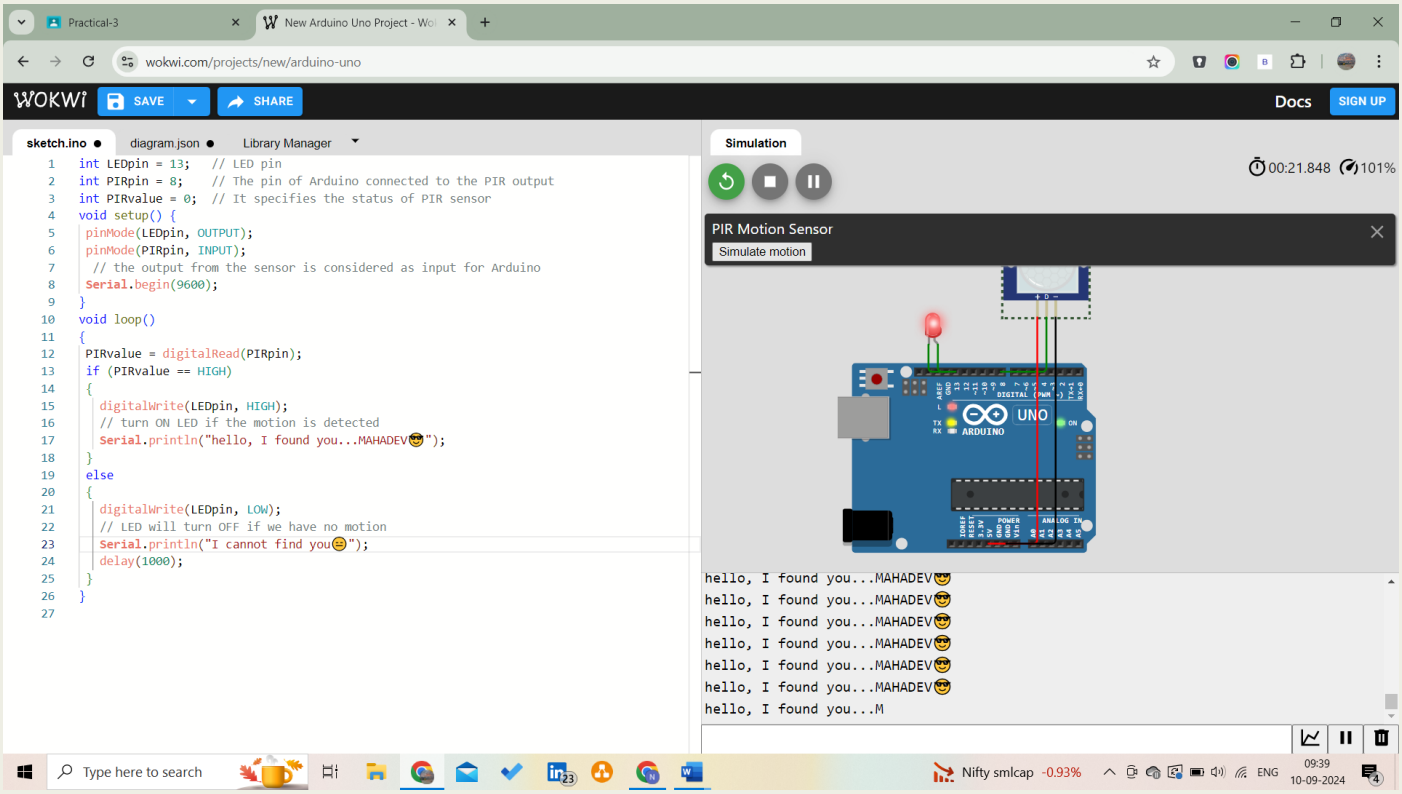
Source Code:

```
int LEDpin = 13;   // LED pin
int PIRpin = 8;    // The pin of Arduino connected to the PIR output
int PIRvalue = 0;  // It specifies the status of PIR sensor
void setup() {
 pinMode(LEDpin, OUTPUT);
 pinMode(PIRpin, INPUT);
  // the output from the sensor is considered as input for Arduino
 Serial.begin(9600);
}
void loop()
{
 PIRvalue = digitalRead(PIRpin);
 if (PIRvalue == HIGH)
 {
   digitalWrite(LEDpin, HIGH);
```

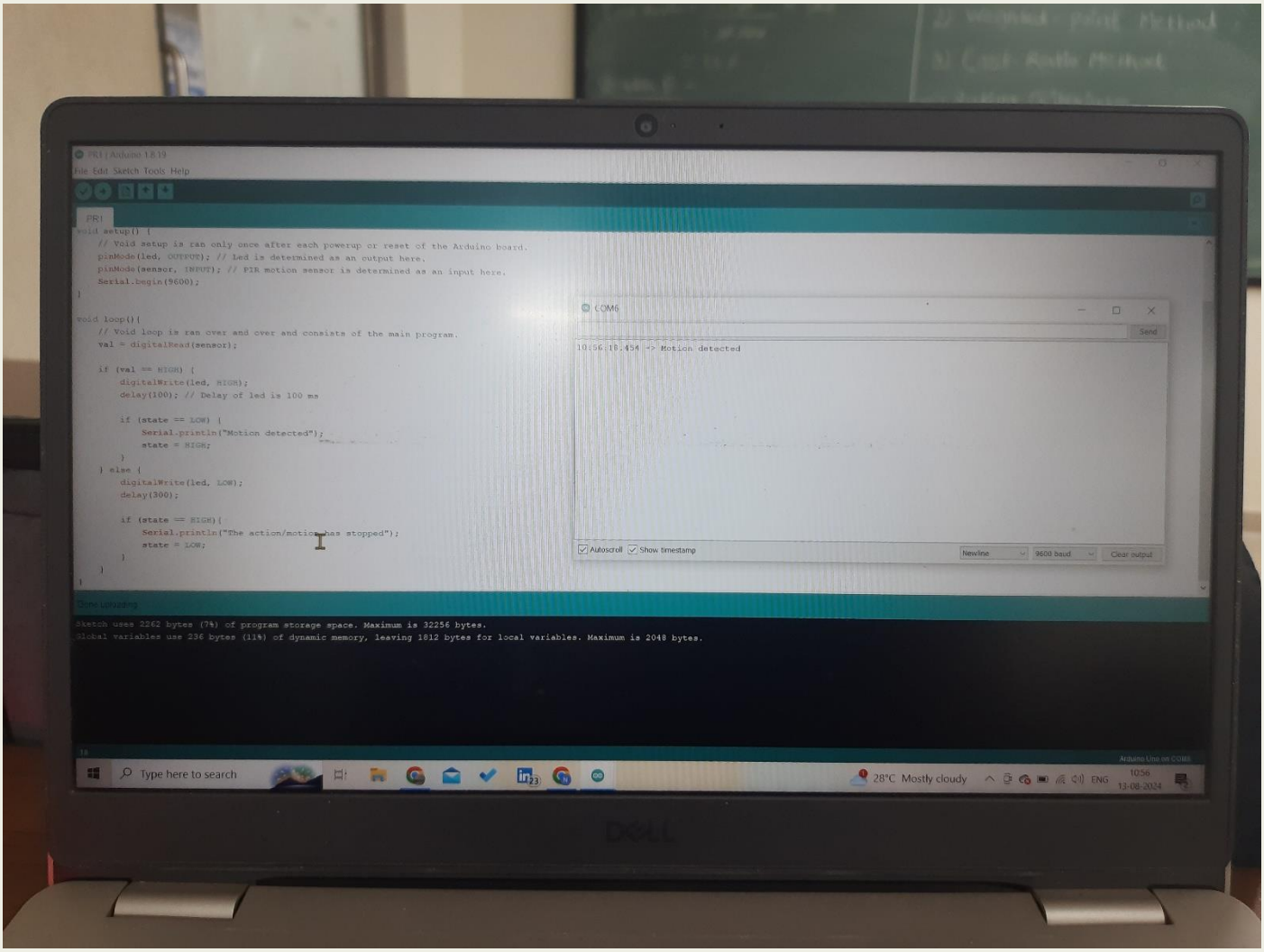
```
  // turn ON LED if the motion is detected
  Serial.println("hello, I found you...MAHADEV😎");
 }
 else
 {
  digitalWrite(LEDpin, LOW);
  // LED will turn OFF if we have no motion
  Serial.println("I cannot find you😑");
  delay(1000);
 }
}
```

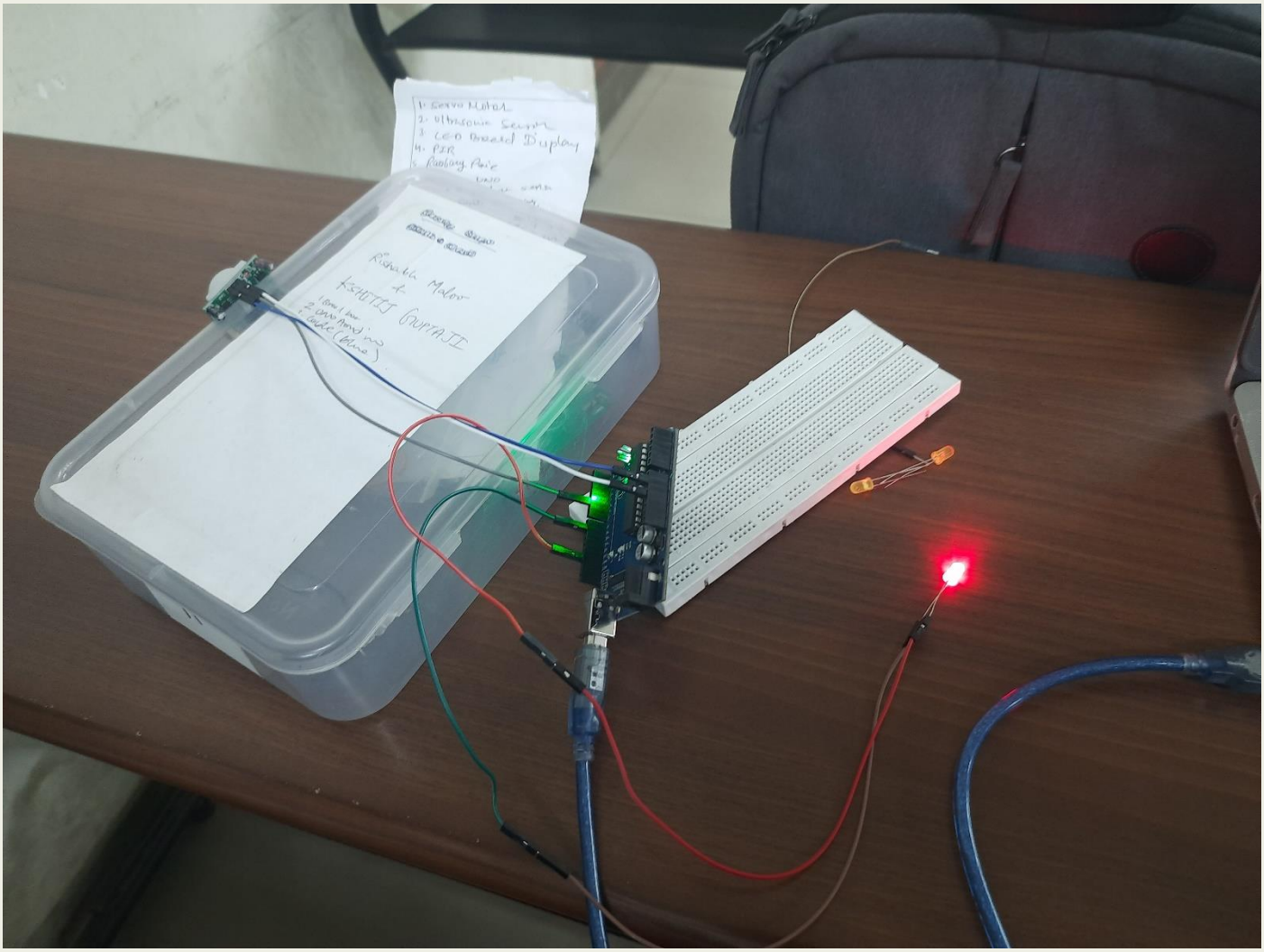
Wakwi Simulation





Circuit Simulation:


PIR1 | Arduino 1.8.19
File Edit Sketch Tools Help
PIR1
void setup() {
// Void setup is ran only once after each powerup or reset of the Arduino board.
pinMode(led, OUTPUT); // Led is determined as an output here.
pinMode(sensor, INPUT); // PIR motion sensor is determined as an input here.
Serial.begin(9600);
}
void loop(){
// Void loop is ran over and over and consists of the main program.
val = digitalRead(sensor);
if (val == HIGH) {
digitalWrite(led, HIGH);
delay(100); // Delay of led is 100 ms
if (state == LOW) {
Serial.println("Motion detected");
state = HIGH;
}
} else {
digitalWrite(led, LOW);
delay(300);
if (state == HIGH){
Serial.println("The action/motion has stopped");
state = LOW;
}
}
}
COM6
Send
10:56:10.454 -> Motion detected
Autoscroll
Show timestamp
Newline
9600 baud
Clear output
Done Uploading.
Sketch uses 2262 bytes (7%) of program storage space. Maximum is 32256 bytes.
Global variables use 236 bytes (11%) of dynamic memory, leaving 1812 bytes for local variables. Maximum is 2048 bytes.
Arduino Uno on COM6
Type here to search
28°C Mostly cloudy
ENG
10:56
13-08-2024
DELL



Google Drive Link: https://drive.google.com/file/d/1cN2b93g-m7zlw8KkA5xs88HAPSXiWw1A/view?usp=sharing