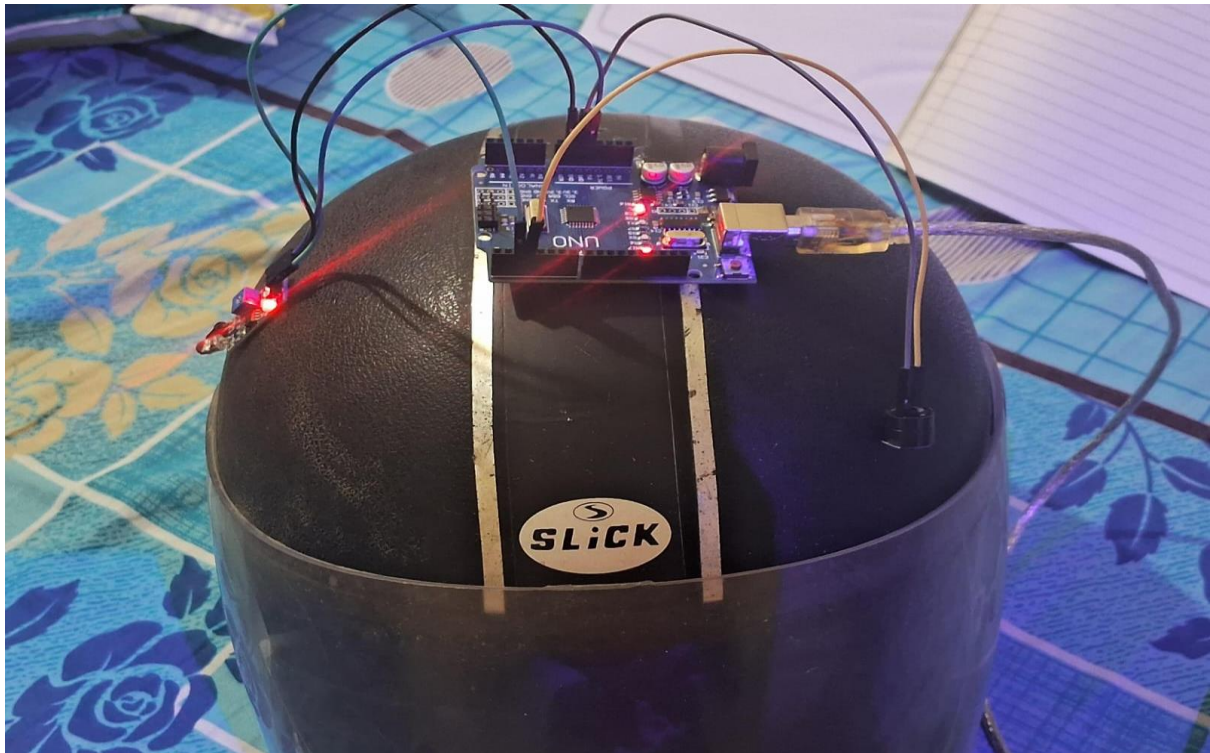


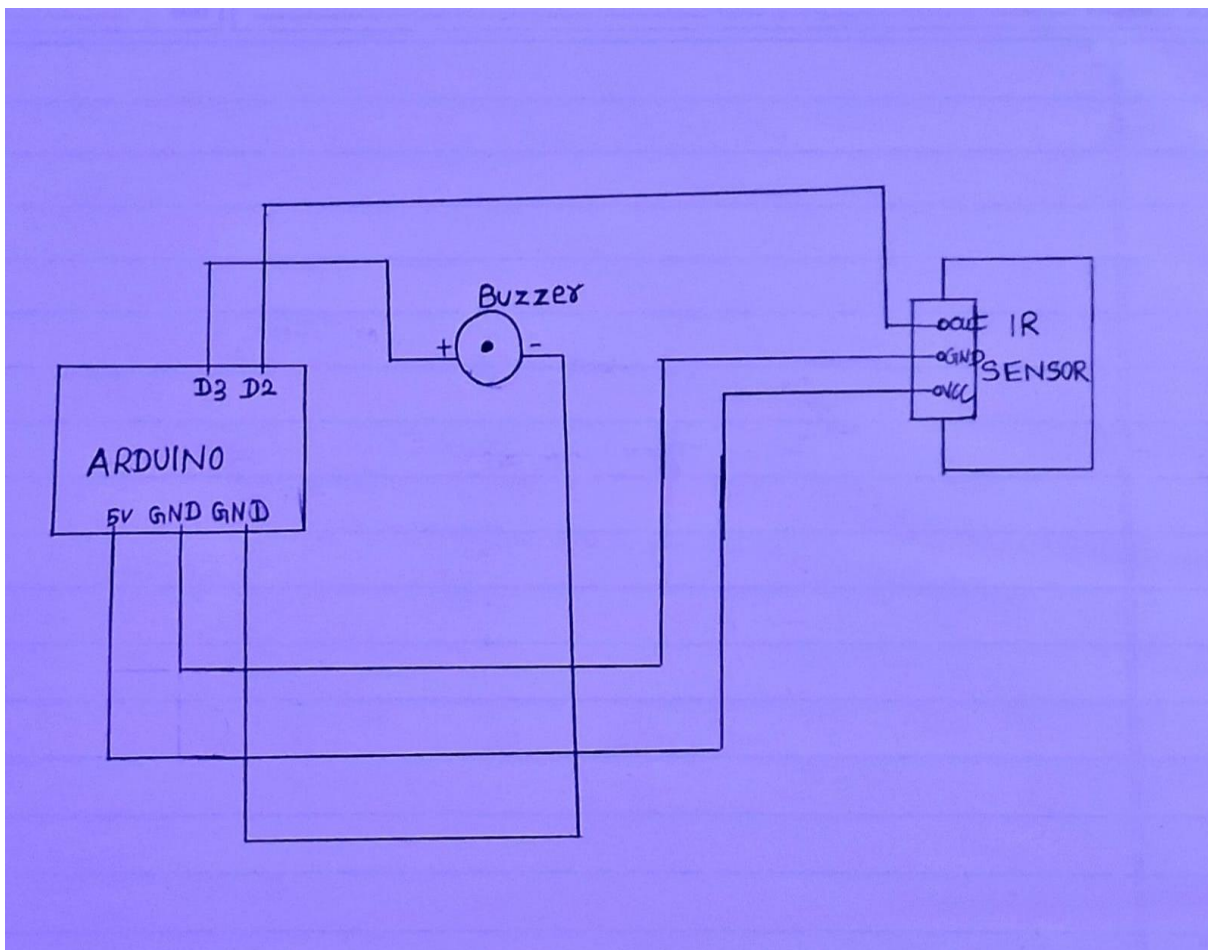
## CODE

```
int irsensor = 2; // IR sensor output pin
int buzzer = 3; // Buzzer pin
void setup () {
    pin Mode (irsensor, INPUT);
    pin Mode (buzzer, OUTPUT);
    Serial.begin(9600);
}
void loop () {
    int helmet Status = digital Read(irsensor);
    if (helmet Status == LOW) {
        // Helmet not worn
        digital Write (buzzer, HIGH);
        Serial.println("Helmet NOT worn!");
    } else {
        // Helmet worn
        digital Write (buzzer, LOW);
        Serial.println("Helmet worn.");
    }
    delay (200);
}
```

## IMAGE OF PROTOTYPE

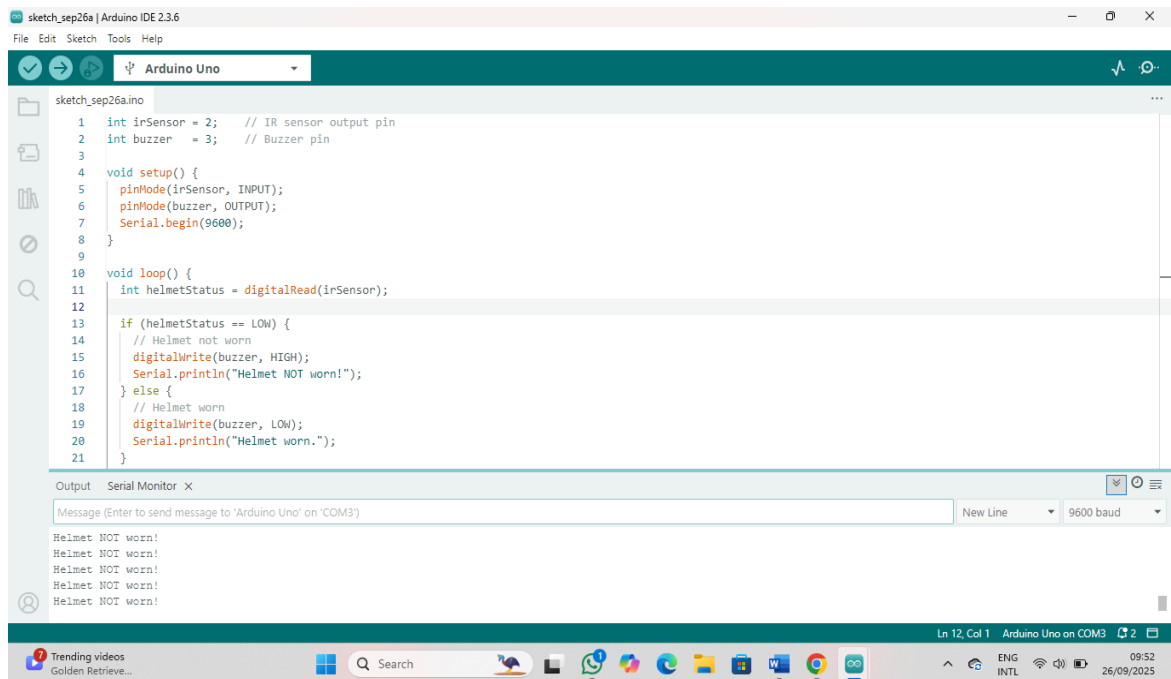


**CIRCUIT DIAGRAM**



## WORKING OUTPUT

- **Helmet not worn**

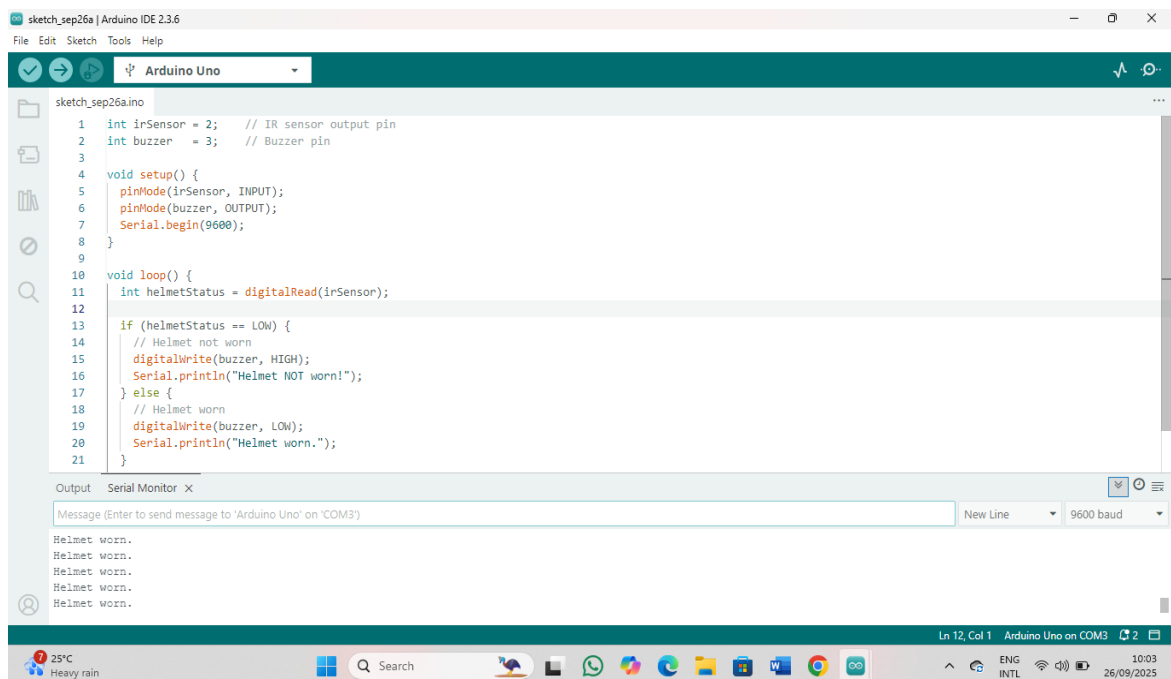


The screenshot shows the Arduino IDE interface with a sketch named 'sketch\_sep26a.ino'. The code defines two pins: 'irSensor' (pin 2) and 'buzzer' (pin 3). In the 'setup' function, both pins are configured as INPUT and OUTPUT, and the serial port is initialized at 9600 baud. The 'loop' function reads the 'irSensor' pin. If the reading is LOW, it triggers the buzzer (HIGH) and prints 'Helmet NOT worn!'. Otherwise, it triggers the buzzer (LOW) and prints 'Helmet worn.'. The Serial Monitor shows five consecutive 'Helmet NOT worn!' messages, indicating the sensor is consistently detecting a low state.

```
1 int irSensor = 2; // IR sensor output pin
2 int buzzer = 3; // Buzzer pin
3
4 void setup() {
5   pinMode(irSensor, INPUT);
6   pinMode(buzzer, OUTPUT);
7   Serial.begin(9600);
8 }
9
10 void loop() {
11   int helmetStatus = digitalRead(irSensor);
12
13   if (helmetStatus == LOW) {
14     // Helmet not worn
15     digitalWrite(buzzer, HIGH);
16     Serial.println("Helmet NOT worn!");
17   } else {
18     // Helmet worn
19     digitalWrite(buzzer, LOW);
20     Serial.println("Helmet worn.");
21   }
```

Output Serial Monitor X  
Message (Enter to send message to 'Arduino Uno' on 'COM3') New Line 9600 baud  
Helmet NOT worn!  
Helmet NOT worn!  
Helmet NOT worn!  
Helmet NOT worn!  
Helmet NOT worn!

- **Helmet worn**



The screenshot shows the same Arduino IDE interface and code as the previous one. However, the Serial Monitor now displays five consecutive 'Helmet worn.' messages, indicating that the sensor is consistently detecting a HIGH state.

```
1 int irSensor = 2; // IR sensor output pin
2 int buzzer = 3; // Buzzer pin
3
4 void setup() {
5   pinMode(irSensor, INPUT);
6   pinMode(buzzer, OUTPUT);
7   Serial.begin(9600);
8 }
9
10 void loop() {
11   int helmetStatus = digitalRead(irSensor);
12
13   if (helmetStatus == LOW) {
14     // Helmet not worn
15     digitalWrite(buzzer, HIGH);
16     Serial.println("Helmet NOT worn!");
17   } else {
18     // Helmet worn
19     digitalWrite(buzzer, LOW);
20     Serial.println("Helmet worn.");
21   }
```

Output Serial Monitor X  
Message (Enter to send message to 'Arduino Uno' on 'COM3') New Line 9600 baud  
Helmet worn.  
Helmet worn.  
Helmet worn.  
Helmet worn.  
Helmet worn.

