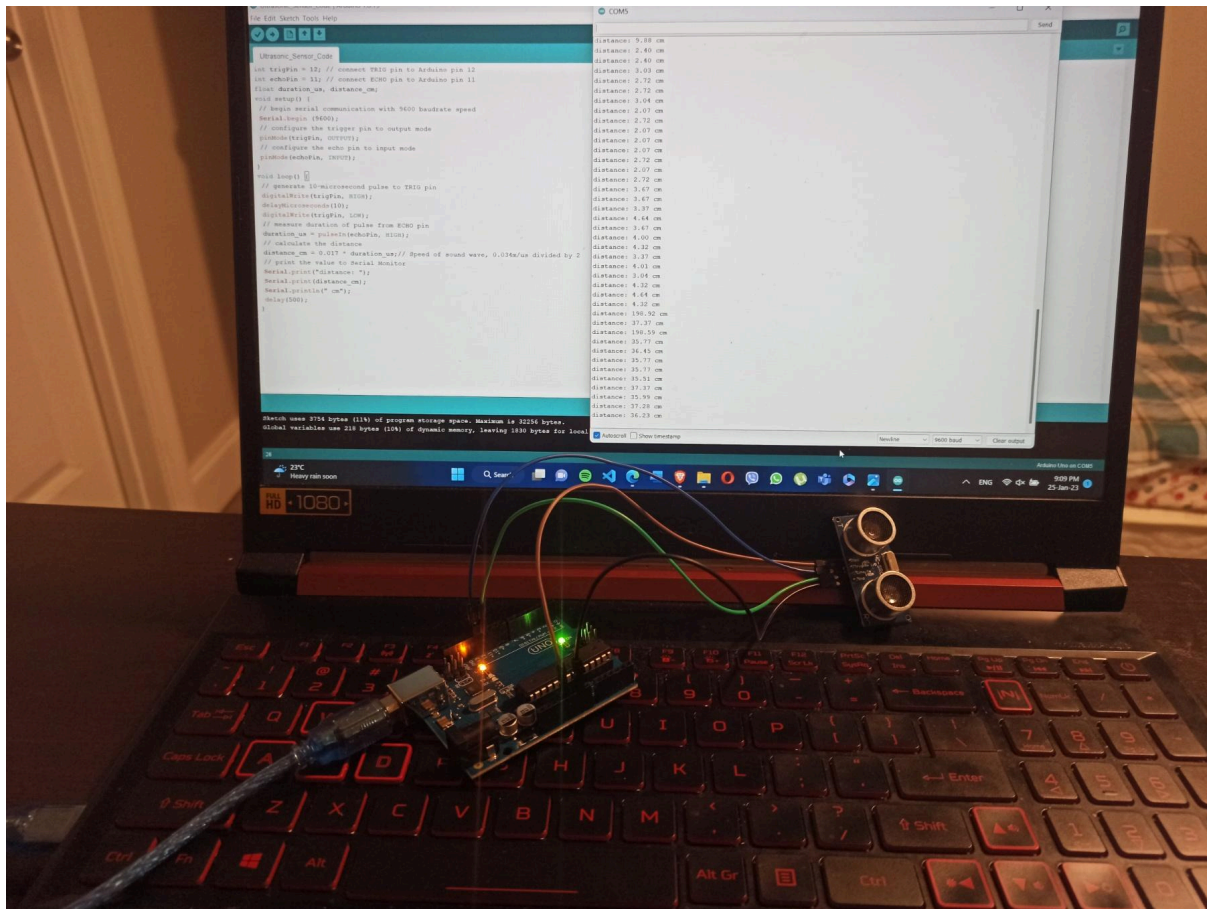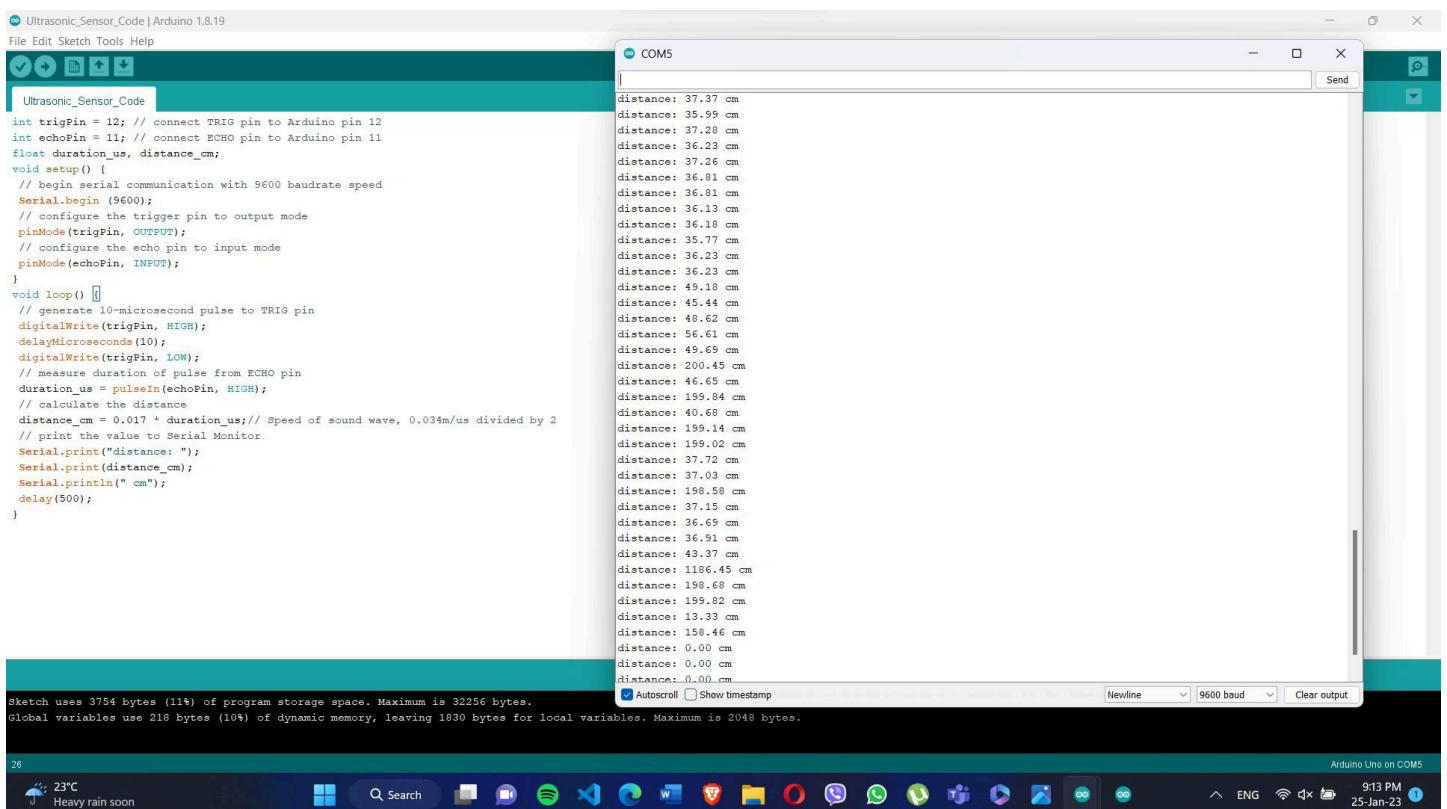# Exercise 1: Ultrasonic Sensor Module
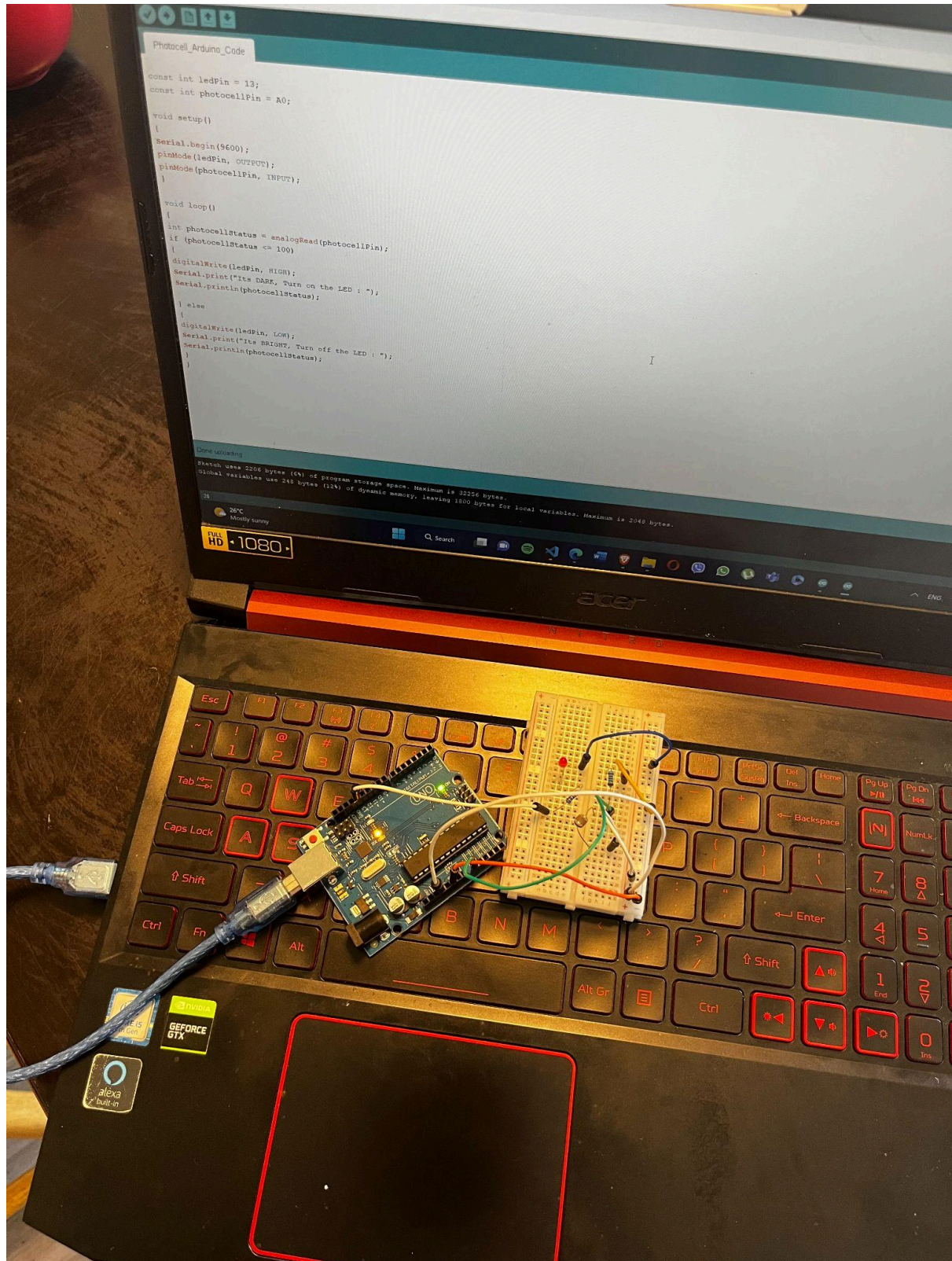

Serial Monitor:
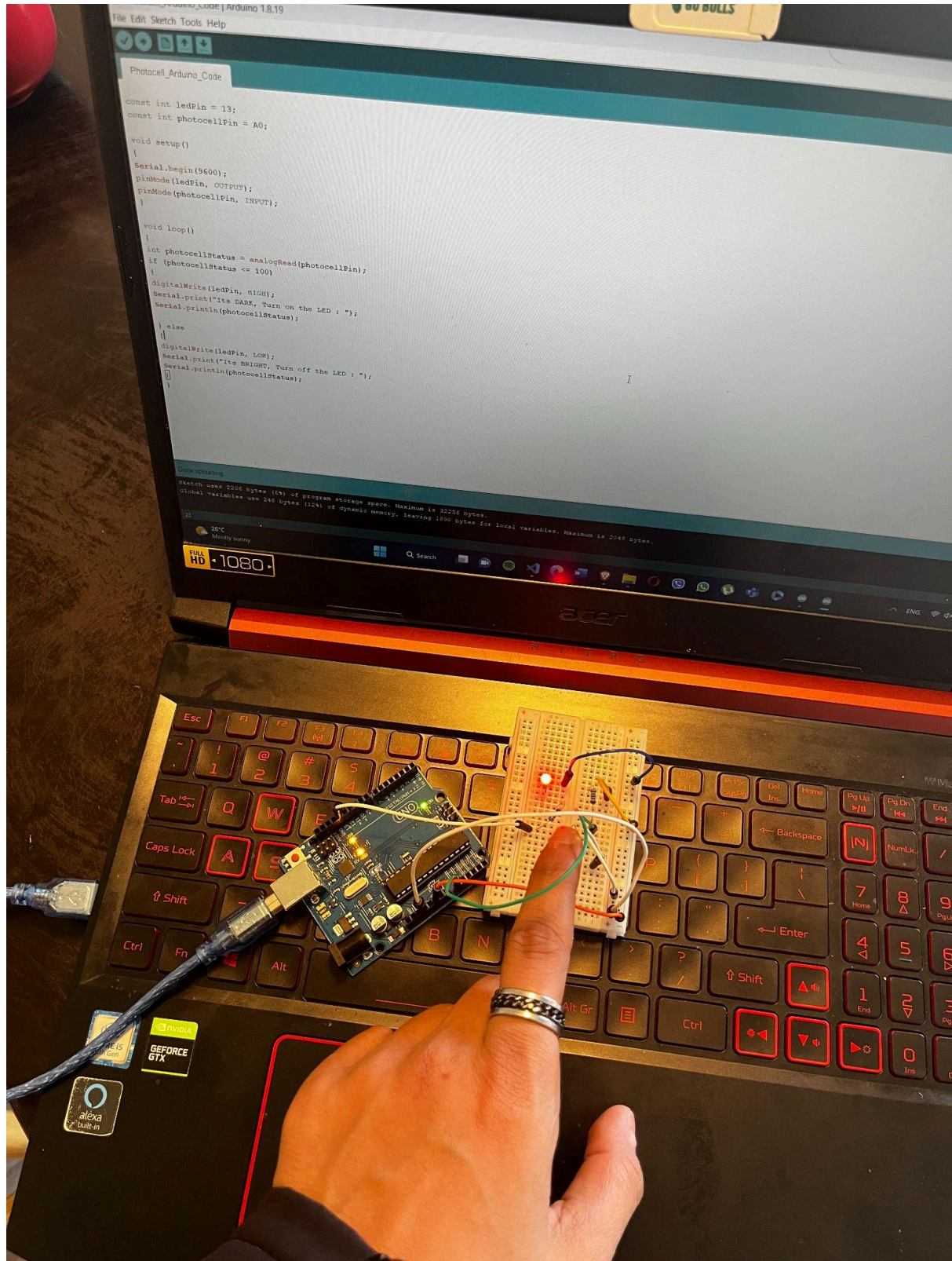
Exercise 2: Photo Sensor Module

In Bright Surrounding:

In Dark Surrounding:

Serial Monitor:

The Arduino IDE shows the following code in the Photocell_Arduino_Code sketch:

```
const int ledPin = 13;
const int photocellPin = A0;

void setup()
{
Serial.begin(9600);
pinMode(ledPin, OUTPUT);
pinMode(photocellPin, INPUT);
}

void loop()
{
int photocellStatus = analogRead(photocellPin);
if (photocellStatus <= 100)
{
digitalWrite(ledPin, HIGH);
Serial.print("Its DARK, Turn on the LED : ");
Serial.println(photocellStatus);

} else
{
digitalWrite(ledPin, LOW);
Serial.print("Its BRIGHT, Turn off the LED : ");
Serial.println(photocellStatus);
}
}
```

The Serial Monitor (COM5) output shows:

```
Its BRIGHT, Turn off the LED : 148
Its BRIGHT, Turn off the LED : 132
Its DARK, Turn on the LED : 77
Its DARK, Turn on the LED : 37
Its DARK, Turn on the LED : 25
Its DARK, Turn on the LED : 22
Its DARK, Turn on the LED : 22
Its DARK, Turn on the LED : 21
Its DARK, Turn on the LED : 21
Its DARK, Turn on the LED : 21
Its DARK, Turn on the LED : 23
Its BRIGHT, Turn off the LED : 124
Its BRIGHT, Turn off the LED : 141
Its BRIGHT, Turn off the LED : 144
Its BRIGHT, Turn off the LED : 144
Its BRIGHT, Turn off the LED : 146
Its BRIGHT, Turn off the LED : 146
Its BRIGHT, Turn off the LED : 147
Its BRIGHT, Turn off the LED : 147
Its BRIGHT, Turn off the LED : 147
Its BRIGHT, Turn off the LED : 147
Its BRIGHT, Turn off the LED : 147
Its BRIGHT, Turn off the LED : 144
Its DARK, Turn on the LED : 74
Its DARK, Turn on the LED : 48
Its DARK, Turn on the LED : 34
Its DARK, Turn on the LED : 26
Its DARK, Turn on the LED : 24
Its DARK, Turn on the LED : 24
Its DARK, Turn on the LED : 23
```

```
Sketch uses 2206 bytes (6%) of program storage space. Maximum is 32256 bytes.
Global variables use 248 bytes (12%) of dynamic memory, leaving 1800 bytes for local variables. Maximum is 2048 bytes.
```