Marwadi University Marwadi Chandarana Group NAAC A+	**Marwadi University** **Faculty of Engineering & Technology** **Department of Information and Communication Technology**	
Subject: Programming With Python (01CT1309)	**Aim:** Python Serial Port Communication Between PC and Arduino Using the PySerial Library	
Experiment 25	**Date:**	**Enrollment No: 92400133037**

Aim: Python Serial Port Communication Between PC and Arduino Using the PySerial Library

Arduino Code:

```
int x;

    void setup() {
      Serial.begin(115200);
      Serial.setTimeout(1);
      pinMode(2,OUTPUT);

    }

void loop() {

      while (!Serial.available());

      x = Serial.readString().toInt();
      Serial.print(x + 1);

    }
```

Python Code:

```
import serial
import time

arduino = serial.Serial(port='COM3', baudrate=115200, timeout=.1)


    def write_read(x):
        arduino.write(bytes(x, 'utf-8'))
        time.sleep(0.05)

        data = arduino.readline() return
        data


while True:
```

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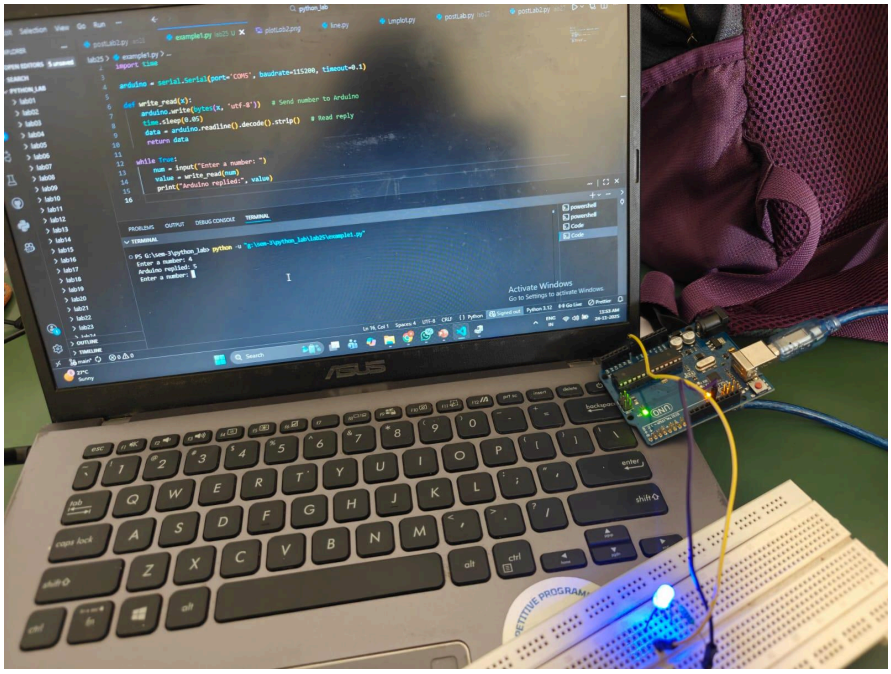
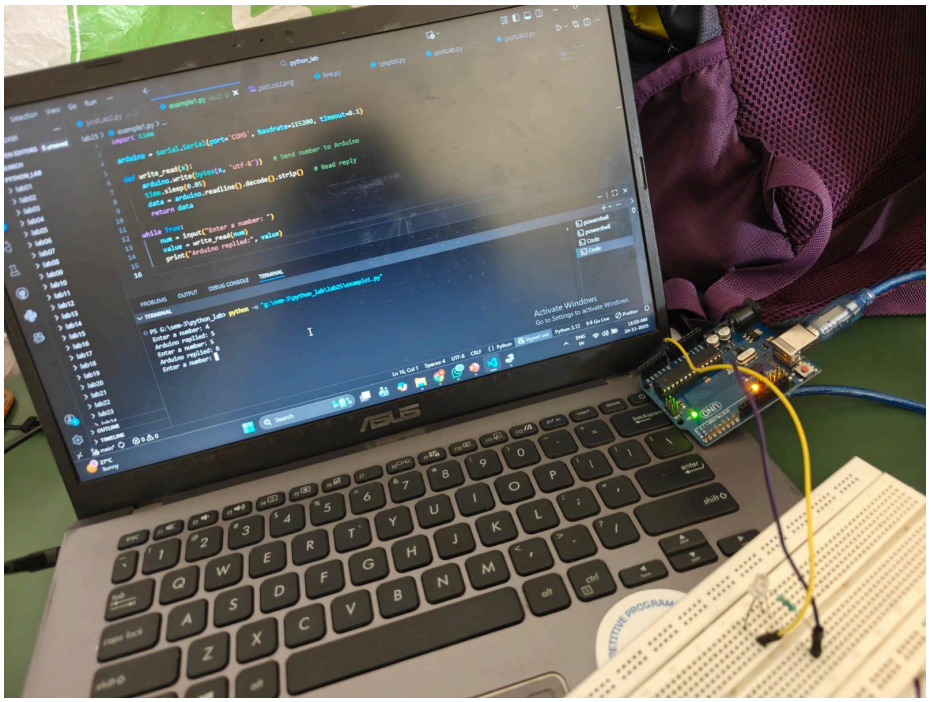
```
num = input("Enter a number: ")
value = write_read(num) print(value)
```

Output:





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Post Lab

Write a Python script to send a message from the PC to Arduino using PySerial.

```python
import serial
import time

arduino=serial.Serial(port='COM5',baudrate=115200,timeout=1)
time.sleep(2)

message=input("Enter message to send to Arduino: ")
arduino.write((message + "\n").encode())

print("Message sent to Arduino!")
```

```
PS G:\sem-3\python_lab> python -u "g:\sem-3\python_lab\lab25\postLab.py"
Enter message to send to Arduino: python@11
Message sent to Arduino!
```

```ino
void setup() {
  Serial.begin(115200);
}

void loop() {
  if (Serial.available()) {
    String msg = Serial.readStringUntil('\n');  // Read message from PC
    Serial.print("Received message: ");
    Serial.println(msg);  // Send it back to PC (optional)
  }
}
```

```
Output  Serial Monitor
Message (Enter to send message to 'Arduino Uno' on 'COM5')
Received message: python@11
```

GITHUB LINK:
https://github.com/Heer972005/Python_Lab