

 Marwadi University <small>Marwadi Chanderana Group</small>	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: 92400133181

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



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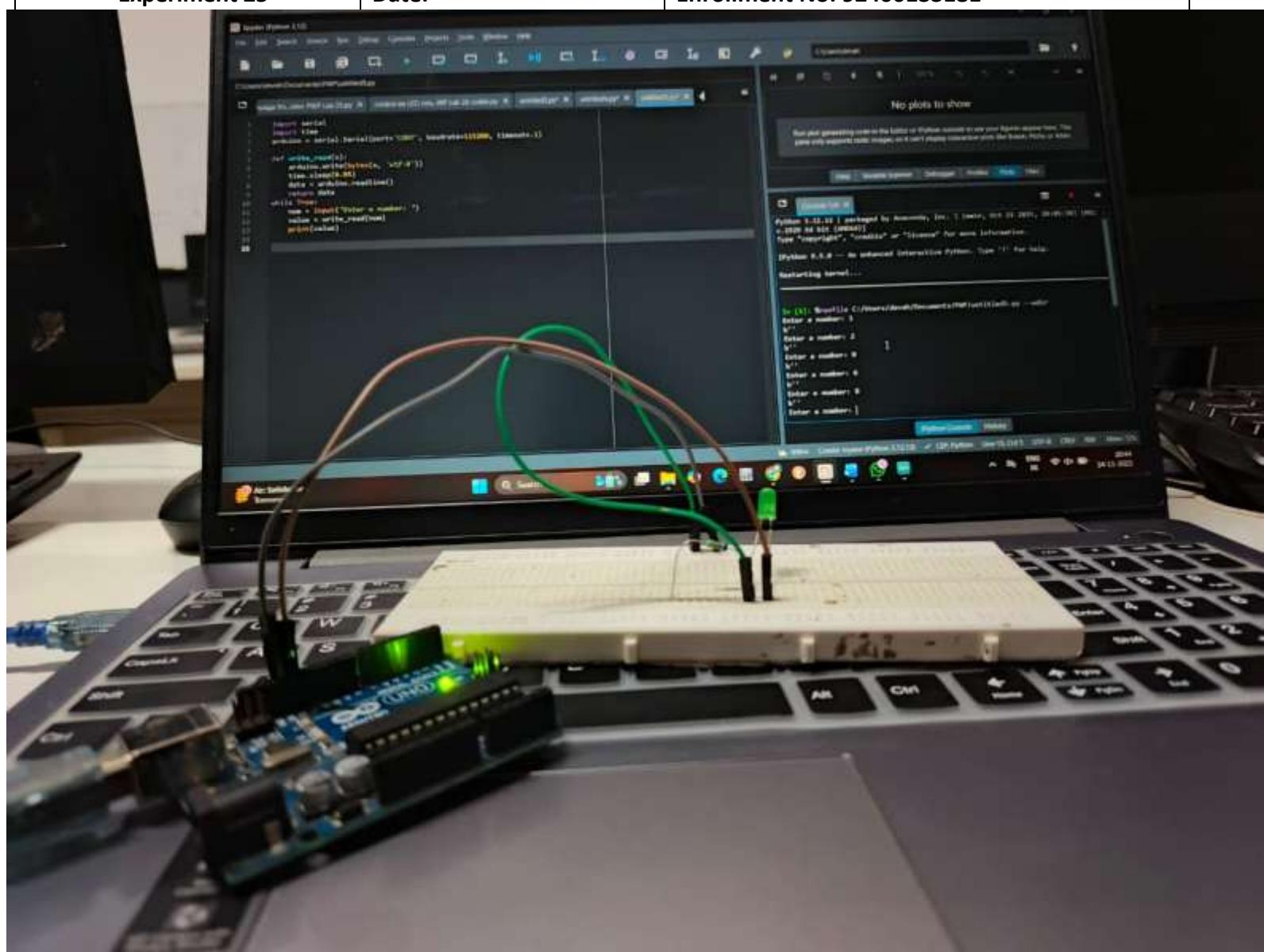
```
import serial
import time
arduino = serial.Serial(port='COM7', baudrate=115200, timeout=.1)

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

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

Output:

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```
In [2]: %runfile C:/Users/devah/Documents/PWP/untitled0.py --wdir
Enter a number: 1
b'2'
Enter a number: 2
b'3'
Enter a number: 0
b'1'
Enter a number: 7
```

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Post Lab

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

Code:

```

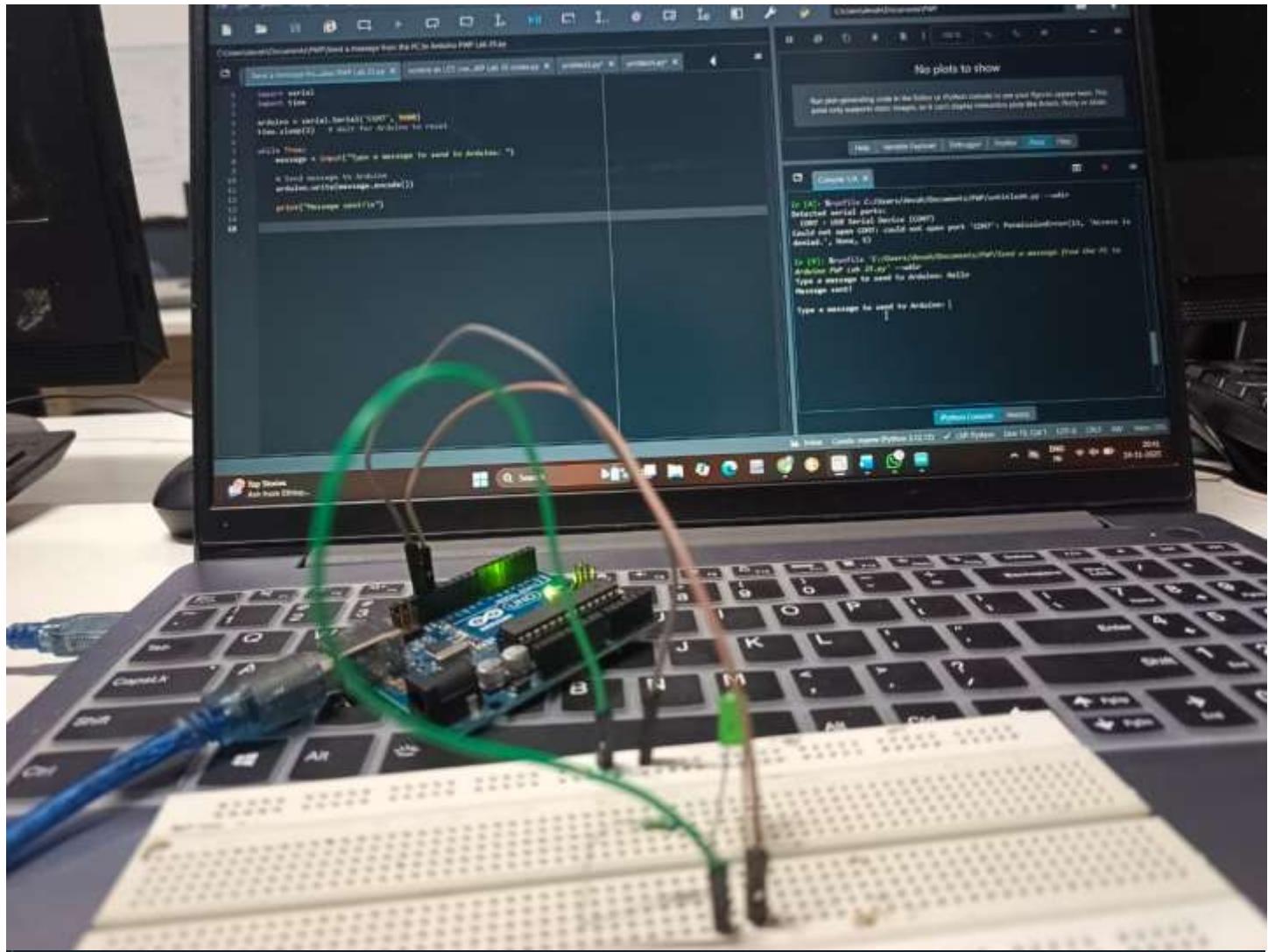
1 import serial
2 import time
3
4 arduino = serial.Serial('COM7', 9600)
5 time.sleep(2) # Wait for Arduino to reset
6
7 while True:
8     message = input("Type a message to send to Arduino: ")
9
10    # Send message to Arduino
11    arduino.write(message.encode())
12
13    print("Message sent!\n")
14

```

Output:



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```
In [3]: %runfile C:/Users/devah/Documents/PWP/untitled1.py --wdir
```

```
Type a message to send to Arduino: Hello
```

```
Message sent!
```

```
Type a message to send to Arduino: Python
```

```
Message sent!
```

```
Type a message to send to Arduino:
```

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<https://github.com/mallaadisrinivasu132035-code/python.git>