
 Marwadi University Marwadi Chandarana Group 	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: 92510133025

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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Output:

```

Enter a number: 5
6
Enter a number: 7
8
Enter a number: 3
4
Enter a number: 5
6
Enter a number: 3
5
:
6

```

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Post Lab

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

Arduino Code:

```
String msg;
void setup() {
  Serial.begin(115200);
  Serial.setTimeout(1);
}
void loop() {
  while (!Serial.available());
  msg = Serial.readString();
  Serial.println("Received: " + msg);
}
```

Python Code:

```
arduino = serial.Serial(port='COM3', baudrate=115200, timeout=0.1)
def send_message(msg):
    arduino.write(bytes(msg, 'utf-8'))
    time.sleep(0.05)
    data = arduino.readline()
    return data
while True:
    text = input("Enter message: ")
    response = send_message(text)
    print(response)
```

```
Enter message:Hello
Received: Hello
Enter message:World
Received: World
Received: World
```

GITHUB Link: https://github.com/JenishDesai5115/PWP_postlabs