
 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:11-11-2025	Enrollment No: 92400133131

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:

```
xe "d:\paython\vs code\exp25.py"
```

```
At line:4 char:36
```

```
+ arduino = serial.Serial(port='COM3', baudrate=9600, timeout=1)
```

```
+ ~
```

Missing argument in parameter list.

```
At line:7 char:26
```

```
+ arduino.write(bytes(x, 'utf-8'))
```

```
+ ~
```

Missing argument in parameter list.

```
At line:9 char:9
```

```
+ data = arduino.readline().decode('utf-8').strip()
```

```
+ ~
```

The Data section is missing its statement block.

```
At line:9 char:29
```

```
+ data = arduino.readline().decode('utf-8').strip()
```

```
+ ~
```

An expression was expected after '('.

```
At line:12 char:6
```

```
+ while True:
```

```
+ ~
```

Missing opening '(' after keyword 'while'.

```
At line:15 char:36
```

```
+ print("Received from Arduino:", value)
```

```
+ ~
```

Missing expression after ','.

```
At line:15 char:37
```

```
+ print("Received from Arduino:", value)
```

```
+ ~~~~~
```

Unexpected token 'value' in expression or statement.

```
At line:15 char:36
```

```
+ print("Received from Arduino:", value)
```

```
+ ~
```

Missing closing ')' in expression.

```
At line:15 char:42
```

```
+ print("Received from Arduino:", value)
```

```
+ ~
```

Unexpected token ')' in expression or statement.

```
+ CategoryInfo          : ParserError: (:) [], ParentContainsErrorRecordException
```

```
+ FullyQualifiedErrorId : MissingArgument
```

```
PS D:\paython\vs code> ^C
```

```
PS D:\paython\vs code> ^C
```

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PS D:\paython\vs code> & C:/Users/ACER/AppData/Local/Programs/Python/Python314/python.exe "d:/paython/vs code/exp25.py"

Traceback (most recent call last):

```
File "d:\paython\vs code\exp25.py", line 4, in <module>
    arduino = serial.Serial(port='COM3', baudrate=9600, timeout=1)
File "C:\Users\ACER\AppData\Local\Programs\Python\Python314\Lib\site-packages\serial\serialwin32.py", line 33, in __init__
    super(Serial, self).__init__(*args, **kwargs)
    ~~~~~^
File "C:\Users\ACER\AppData\Local\Programs\Python\Python314\Lib\site-packages\serial\serialutil.py", line 244, in __init__
    self.open()
    ~~~~~^^
File "C:\Users\ACER\AppData\Local\Programs\Python\Python314\Lib\site-packages\serial\serialwin32.py", line 64, in open
    raise SerialException("could not open port {!r}: {!r}".format(self.portstr, ctypes.WinError()))
serial.serialutil.SerialException: could not open port 'COM3': FileNotFoundError(2, 'The system cannot find the file specified.', None, 2)
```

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    ~~~~~^
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|                                                                                                                                                                                                                          |                                                                                                                                              |                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
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| <b>Subject: Programming With Python (01CT1309)</b>                                                                                                                                                                       | <b>Aim:</b> Python Serial Port Communication Between PC and Arduino Using the PySerial Library                                               |                                   |
| <b>Experiment No: 25</b>                                                                                                                                                                                                 | <b>Date:11-11-2025</b>                                                                                                                       | <b>Enrollment No: 92400133131</b> |

## Post Lab



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

Code :- import serial  
import time

arduino = serial.Serial('COM4', 9600)  
time.sleep(2)

while True:  
    message = input("Enter message to send: ")  
    arduino.write(message.encode())  
    print("Message sent:", message)

output :-

|                                                                                                                                                                                                                          |                                                                                                                                              |                                   |
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```
Enter message to send:
Hello Arduino
Message sent: Hello Arduino
```



```
Enter message to send:
LED ON
Message sent: LED ON
```

```
Enter message to send:
LED OFF
Message sent: LED OFF
```

```
Enter message to send:
exit
Message sent: exit
```

Github link :-

<https://github.com/farhanweb404/farhankaladiya.git>

|                                                                                                                                                                                                                          |                                                                                                                                              |                                   |
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