

 Marwadi University <small>Marwadi Chandarana 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: 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)
```

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)
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File "C:\Users\ACER\AppData\Local\Programs\Python\Python314\Lib\site-packages\serial\serialwin32.py", line 33, in __init__
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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

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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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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)
```



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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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## 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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|                                                    |                                                                                         |                            |
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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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|                                                    |                                                                                         |                                   |
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