



PRACTICAL REPORT

For IoT Practical



JANUARY 1, 2022

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4.6 Serial Communication – Sending binary data from Arduino.

Arduino Code:

```
int intValue;  
int baudRate = 9600;  
  
void setup()  
{  
    pinMode(LEDPin, OUTPUT);  
    /* Established Serial Communication. */  
    Serial.begin(baudRate);  
  
    Serial.println("Connection Establishing connection...!");  
    while(!Serial){}  
    Serial.println("Connection Established!");  
  
    /* Wait until Serial Communication not established. */  
    while(!Serial){}  
  
    /* Send data through Serial Communication. */  
    Serial.println("- Name of Author : DSP -");  
    Serial.println("-----");  
}  
  
void loop()  
{  
    Serial.print('H');  
    intValue = random(599);  
  
    Serial.write(lowByte(intValue));  
    Serial.write(highByte(intValue));  
  
    intValue = random(599);  
  
    Serial.write(lowByte(intValue));  
    Serial.write(highByte(intValue));  
    delay(1000);  
}
```

4.7 Serial Communication – Receiving binary data from Arduino

Here, we receive data in python program which we have send in 4.6.
Requires PySerial library.

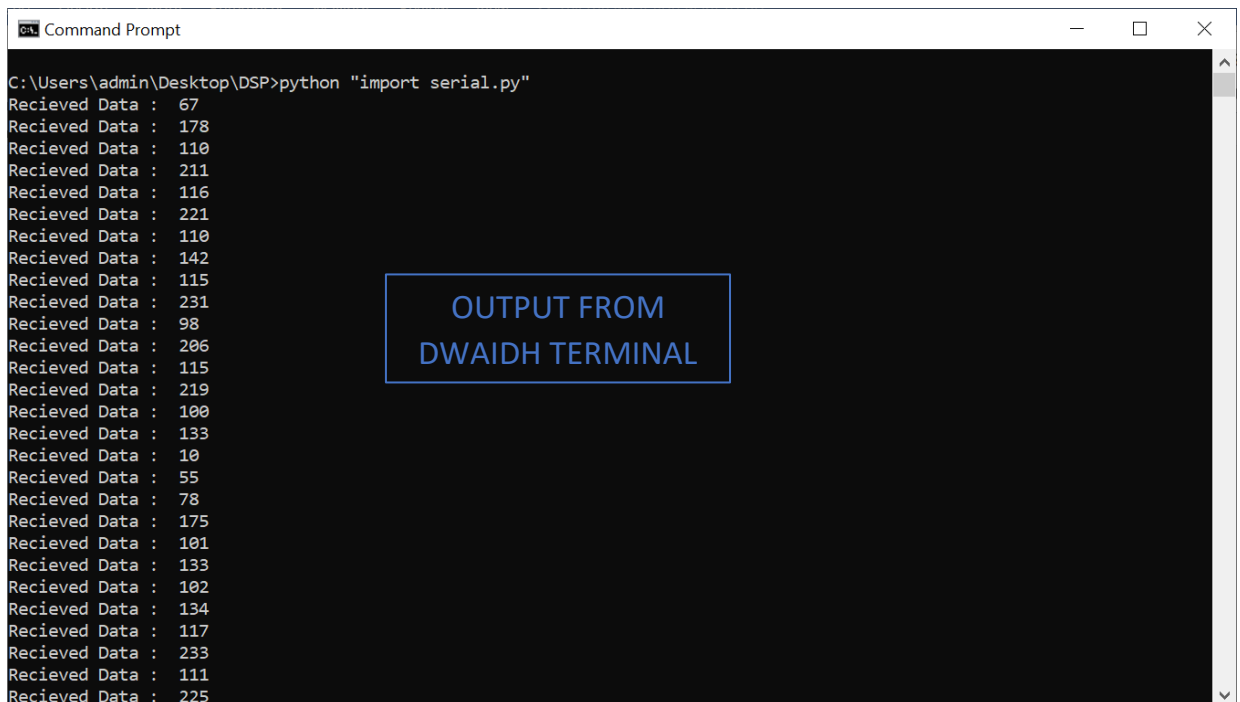
Python Code:

```
import serial

connection = serial.Serial("COM7", 9600)

while True:
    Data : str = connection.read()
    Data = int.from_bytes(bytes(connection.read()), "little")
    print("Recieved Data : ", Data)
    Data += int.from_bytes(bytes(connection.read()), "big")
    print("Recieved Data : ", Data)
```

Output:



```
Command Prompt
C:\Users\admin\Desktop\DSP>python "import serial.py"
Recieved Data : 67
Recieved Data : 178
Recieved Data : 110
Recieved Data : 211
Recieved Data : 116
Recieved Data : 221
Recieved Data : 110
Recieved Data : 142
Recieved Data : 115
Recieved Data : 231
Recieved Data : 98
Recieved Data : 206
Recieved Data : 115
Recieved Data : 219
Recieved Data : 100
Recieved Data : 133
Recieved Data : 10
Recieved Data : 55
Recieved Data : 78
Recieved Data : 175
Recieved Data : 101
Recieved Data : 133
Recieved Data : 102
Recieved Data : 134
Recieved Data : 117
Recieved Data : 233
Recieved Data : 111
Recieved Data : 225
```

OUTPUT FROM
DWAIHDH TERMINAL