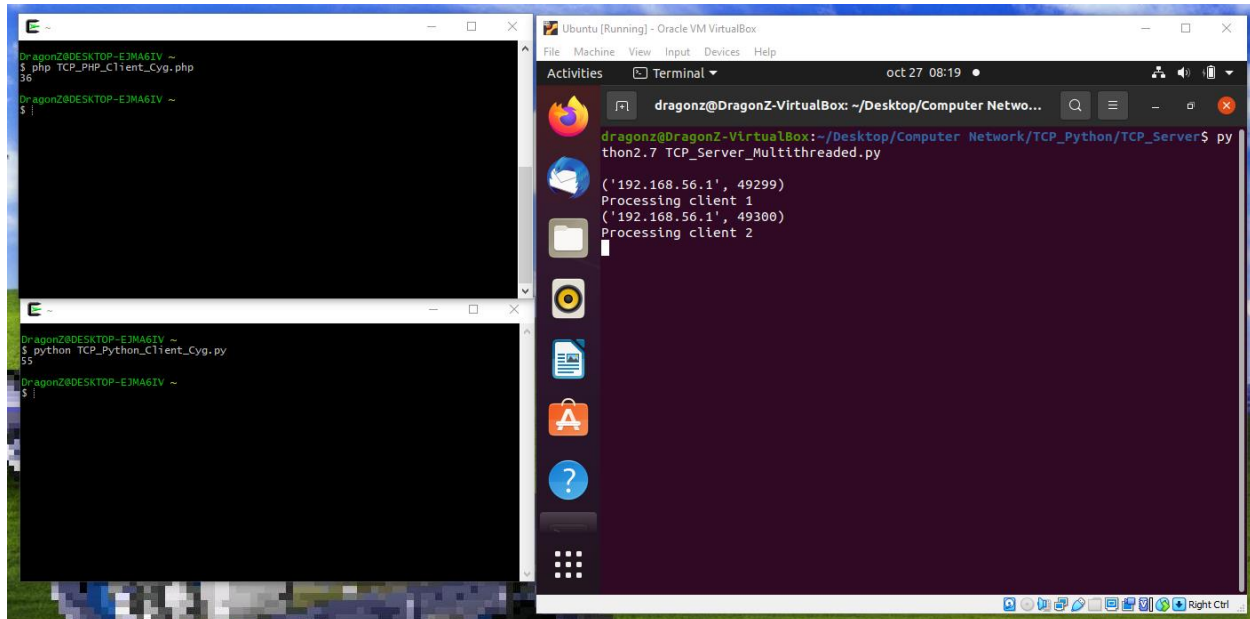
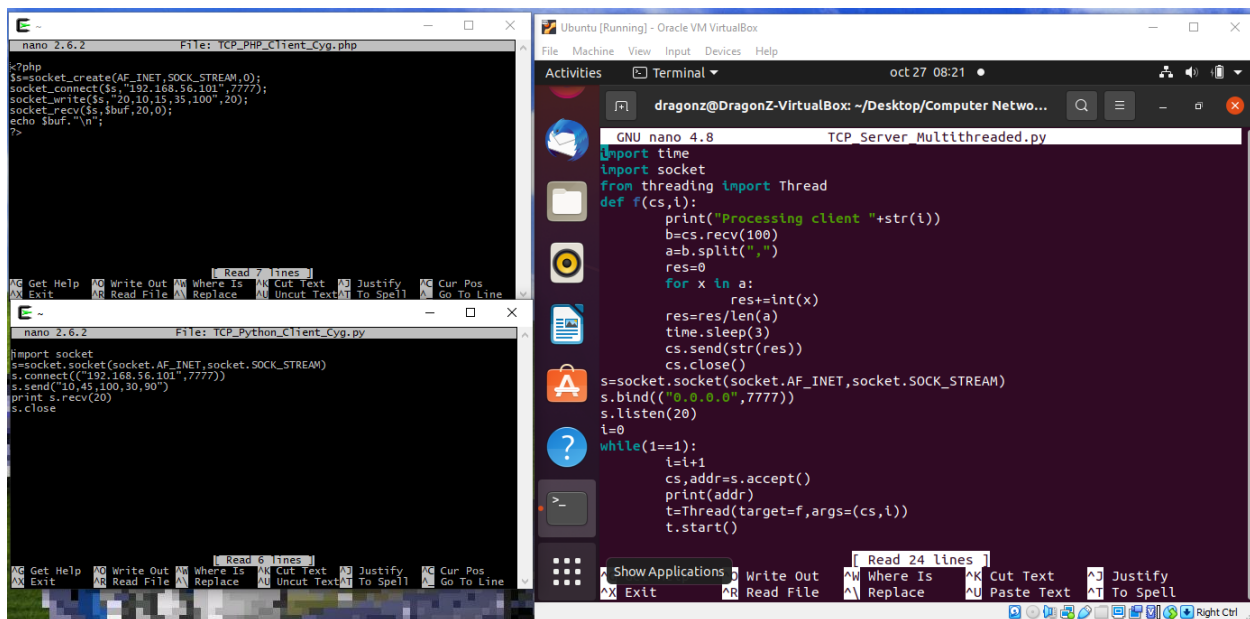


1.Problema TCP: Calculati media numerelor dintr-un sir transmis de client si trimiteti clientului valoarea (FORMAT: "1,12,123,1234" numere separate prin ",")

Multithreading, Server in Ubuntu VM, Python2.7, Client in Cygwin, Python2.7 si PHP



The screenshot shows a virtual machine environment with three windows. The top-left window is a terminal window titled 'DragonZ@DESKTOP-EJMA6IV ~' showing the execution of a PHP script: `$ php TCP_PHP_Client_Cyg.php` and the output `36`. The bottom-left window is another terminal window titled 'DragonZ@DESKTOP-EJMA6IV ~' showing the execution of a Python script: `$ python TCP_Python_Client_Cyg.py` and the output `55`. The right window is a terminal window titled 'Ubuntu [Running] - Oracle VM VirtualBox' showing the execution of a Python script: `python2.7 TCP_Server_Multithreaded.py`. The output of the script is: `('192.168.56.1', 49299)`, `Processing client 1`, `('192.168.56.1', 49300)`, and `Processing client 2`.



The screenshot shows a virtual machine environment with two windows. The left window is a nano editor window titled 'File: TCP\_PHP\_Client\_Cyg.php' showing the source code of the PHP client script. The code is as follows: 

```
<?php
$s=socket_create(AF_INET,SOCK_STREAM,0);
socket_connect($s,"192.168.56.101",7777);
socket_write($s,"20,10,15,35,100",20);
socket_recv($s,$buf,20,0);
echo $buf."<\/pre>
The right window is a nano editor window titled 'File: TCP_Server_Multithreaded.py' showing the source code of the Python server script. The code is as follows:
<pre>
import time
import socket
from threading import Thread

def f(cs,i):
    print("Processing client "+str(i))
    b=cs.recv(100)
    a=b.split(",")
    res=0
    for x in a:
        res+=int(x)
    res=res/len(a)
    time.sleep(3)
    cs.send(str(res))
    cs.close()

s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.bind(("0.0.0.0",7777))
s.listen(20)
i=0
while(1==1):
    i=i+1
    cs,addr=s.accept()
    print(addr)
    t=Thread(target=f,args=(cs,i))
    t.start()
<\/pre>
<\/div>
```

2. Problema UDP: Calculati suma tuturor cifrelor dintr-un sir transmis de client si trimiteti clientului valoarea

Server in Ubuntu VM, Python2.7, Client in Cygwin, Python2.7 si PHP

The image displays a virtual machine environment with two rows of screenshots. The top row shows the server and client running. The bottom row shows the source code for both.

**Top Row - Server and Client Running:**

**Left Window (Cygwin):**

```
DragonZ@DESKTOP-E3MA61V ~  
$ php UDP_PHP_Client_Cyg.php  
Recieved: 25 From IP=192.168.56.101:7777  
DragonZ@DESKTOP-E3MA61V ~  
$  
  
DragonZ@DESKTOP-E3MA61V ~  
$ python UDP_Python_Client_Cyg.py  
25  
DragonZ@DESKTOP-E3MA61V ~  
$
```

**Right Window (Ubuntu VM):**

```
dragonz@DragonZ-VirtualBox: ~/Desktop/Computer Network/UDP_Python/Server$ python 2.7 UDP_Server.py ('192.168.56.1', 56177) abc7def3hi9ji2k3  
dragonz@DragonZ-VirtualBox: ~/Desktop/Computer Network/UDP_Python/Server$ python 2.7 UDP_Server.py ('192.168.56.1', 56178) a8bc4diefg8hi4  
dragonz@DragonZ-VirtualBox: ~/Desktop/Computer Network/UDP_Python/Server$
```

**Bottom Row - Source Code:**

**Left Window (Cygwin):**

**File: UDP\_PHP\_Client\_Cyg.php**

```
<?php  
$s=socket_create(AF_INET,SOCK_DGRAM,0);  
socket_sendto($s,"abc7def3hi9ji2k3",18,0,"192.168.56.101",7777);  
socket_recvfrom($s,$b,10,0,$serv_ip,$serv_port);  
echo "Recieved: ".$b." from IP=".$serv_ip." : ".$serv_port;  
?>
```

**File: UDP\_Python\_Client\_Cyg.py**

```
import socket  
s=socket.socket(socket.AF_INET,socket.SOCK_DGRAM)  
s.sendto("a8bc4diefg8hi4",("192.168.56.101",7777))  
buff,addr=s.recvfrom(10)  
print buff
```

**Right Window (Ubuntu VM):**

**GNU nano 4.8 UDP\_Server.py**

```
import socket  
s=socket.socket(socket.AF_INET,socket.SOCK_DGRAM)  
s.bind(("0.0.0.0",7777))  
buff,addr=s.recvfrom(20)  
print (addr)  
print (buff)  
ret_val=0  
for c in buff:  
    if(c.isdigit()):  
        ret_val+=int(c)  
s.sendto(str(ret_val),addr)
```