

THINK CYBER CYBERIUM ARENA SIMULATOR TRAINING

XE105 – PYTHON FUNDAMENTALS

TITLE: OPERATING SYSTEM INFORMATION (OS-INFO)

(OLALEKAN ILORI – S4)

A Simple python script displaying a summary of my Kali Linux OS information and refreshing every 10 seconds. The script was written using **geany** on linux.

PYTHON SCRIPT

```
#!/bin/python3
import os
import platform
import socket
import psutil
import time
from datetime import datetime
#ThinkCyber Python Fundamental Project XE105 OS-INFO By Olalekan Ilori - s4

s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
s.connect(("8.8.8.8", 80))
ipdetail=s.getsockname()[0]

while [ 1==1 ]: #condition for maintaining a loop sequence
    osname=platform.system()
    osversion=platform.release()
    print("Operating System Version:", osname, osversion)
    #print(os.system('ifconfig'))
    print("-----")
    print("Private IP Address:", ipdetail)
    print("-----")
    public=os.popen('curl -s ifconfig.co').read()
    print ("Public IP Address:", public)
    print("-----")
    hddsize = os.popen('fdisk -l | grep Disk | head -n1 ').read()
    hddlst = hddsize.split()
    hddsize2=os.popen('df -H | grep sda').read()
    hddlst2=hddsize2.split()
    #print("Disk Size:",hddlst[2],hddlst[3])
    print("Disk Size:",hddlst2[1])
    print("Used Disk Space:", hddlst2[2])
    print("Available Disk Space:", hddlst2[3])
    print("-----")
    print("Top 5 Directories")
    a=os.popen('ls / -lSah | grep root | head -5').read()
    b=a.split("\n")
    top1=b[0].split(" ")
    top2=b[1].split(" ")
    top3=b[2].split(" ")
    top4=b[3].split(" ")
    top5=b[4].split(" ")
    print("Size Dir")
```

```

        print("",top1[-5], "",top1[-1], "\n",top2[-5], "",top2[-1], "\n",top3[-7], "",top3[-1], "\n",top4[-5], "",top4[-1], "\n",top5[-7],top5[-1])
    print("-----")
    print("CPU Usage Stats")
    a=psutil.getloadavg()
    cpuusage1 = (a[0]/os.cpu_count()) * 100
    cpuusage2 = (a[1]/os.cpu_count()) * 100
    cpuusage3 = (a[2]/os.cpu_count()) * 100
    #print(cpuusage1,"%")
    #print(cpuusage2,"%")
    print("Number of CPU cores:",os.cpu_count())
    print("The CPU usage last 15mins is : ", cpuusage3)
    print("-----")
    print("Timestamp:", datetime.utcnow())
    print("-----")
    time.sleep(10)
    os.system('clear')

```

SCREEN SHOTS from GEANY

```

1  #!/bin/python3
2  import os
3  import platform
4  import socket
5  import psutil
6  import time
7  from datetime import datetime
8  #ThinkCyber Python Fundamental Project XE105 OS-INFO By Olalekan Ilori - s4
9
10 s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
11 s.connect(("8.8.8.8", 80))
12 ipdetail=s.getsockname()[0]
13
14 while [ 1==1 ]: #condition for maintaining a loop sequence
15     osname=platform.system()
16     osversion=platform.release()
17     print("Operating System Version:", osname, osversion)
18     #print(os.system('ifconfig'))
19     print("-----")
20     print("Private IP Address:", ipdetail)
21     print("-----")
22     public=os.popen('curl -s ifconfig.co').read()
23     print("Public IP Address:", public)
24     print("-----")
25     hddsize = os.popen('fdisk -l|grep Disk|head -n1 ').read()
26     hddlst = hddsize.split()
27     hddsize2=os.popen('df -H|grep sda').read()
28     hddlst2=hddsize2.split()
29     #print("Disk Size2:",hddlst[2],hddlst[3])
30     print("Disk Size:",hddlst[1])
31     print("Used Disk Space:", hddlst[2])
32     print("Available Disk Space:", hddlst[3])
33     print("-----")
34     print("Top 5 Directories")
35     a=os.popen('ls / -lSah |grep root|head -5').read()
36     b=a.split("\n")
37     top1=b[0].split(" ")
38     top2=b[1].split(" ")
39     top3=b[2].split(" ")
40     top4=b[3].split(" ")
41     top5=b[4].split(" ")
42     print("Size Dir")
43     print("",top1[-5], "",top1[-1], "\n",top2[-5], "",top2[-1], "\n",top3[-7], "",top3[-1], "\n",top4[-5], "",top4[-1], "\n",top5[-7],top5[-1])
44     print("-----")
45     print("CPU Usage Stats")
46     a=psutil.getloadavg()
47     cpuusage1 = (a[0]/os.cpu_count()) * 100

```

set: 0 INS TAB mode: LF encoding: UTF-8 filetype: Python scope: unknown

SCREEN SHOTS of script running on the terminal refreshing every 10 seconds

```
File Actions Edit View Help
(kali@kali)-[~]
$ ./PyF-Project.py
Operating System Version: Linux 5.14.0-kali4-amd64

Private IP Address: 192.168.198.134
Public IP Address: 41.184.172.199

fdisk: cannot open /dev/sda: Permission denied
Disk Size: 83G
Used Disk Space: 66G
Available Disk Space: 14G

Top 5 Directories
Size Dir
36K .
36K ..
16K lost+found
12K etc
4.0K boot

CPU Usage Stats
Number of CPU cores: 4
The CPU usage last 15mins is : 1.5

Timestamp: 2022-09-19 00:15:55.524484
error creating proxy: The connection is closed (g-io-error-quark, 18)
error creating proxy: The connection is closed (g-io-error-quark, 18)
error creating proxy: The connection is closed (g-io-error-quark, 18)
error creating proxy: The connection is closed (g-io-error-quark, 18)
```

```
File Actions Edit View Help Login: Hi New email: Parol Write
Operating System Version: Linux 5.14.0-kali4-amd64

Private IP Address: 192.168.198.134
Public IP Address: 41.184.172.199

fdisk: cannot open /dev/sda: Permission denied
Disk Size: 83G
Used Disk Space: 66G
Available Disk Space: 14G

Top 5 Directories
Size Dir
36K .
36K ..
16K lost+found
12K etc
4.0K boot

CPU Usage Stats
Number of CPU cores: 4
The CPU usage last 15mins is : 1.7500000000000002

Timestamp: 2022-09-19 00:16:18.910827
```

```
File Actions Edit View Help Login: HT News X email Parak Write
Operating System Version: Linux 5.14.0-kali4-amd64
Private IP Address: 192.168.198.134
Public IP Address: 41.184.172.199

fdisk: cannot open /dev/sda: Permission denied
Disk Size: 83G
Used Disk Space: 66G
Available Disk Space: 14G

Top 5 Directories
Size Dir
36K .
36K ..
16K lost+found
12K etc
4.0K boot

CPU Usage Stats
Number of CPU cores: 4
The CPU usage last 15mins is : 1.7500000000000002

Timestamp: 2022-09-19 00:16:31.604161
```

```
File Actions Edit View Help Login: HT News X email Parak Write
Operating System Version: Linux 5.14.0-kali4-amd64
Private IP Address: 192.168.198.134
Public IP Address: 41.184.172.199

fdisk: cannot open /dev/sda: Permission denied
Disk Size: 83G
Used Disk Space: 66G
Available Disk Space: 14G

Top 5 Directories
Size Dir
36K .
36K ..
16K lost+found
12K etc
4.0K boot

CPU Usage Stats
Number of CPU cores: 4
The CPU usage last 15mins is : 1.7500000000000002

Timestamp: 2022-09-19 00:17:43.777635
```

