

## ASSIGNMENT NO: 03

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### **Name:**

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### **Roll No.:**

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### **Subject:**

DFCL

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### **Problem Statement:**

Develop a Python program for Log Capturing using a wireless router. Perform suitable event correlation and analysis of network traffic.

### **Objectives:**

1. To create analysis on Log Captured through wireless router.

### **Theory:**

- 1) Fetch logs from Wireless router.
- 2) Load the dataset into a python program.
- 3) Create a function to return the Dataset for the required LIP,DIP & Ports.
- 4) Search for the given input and display all the values of the matching row.

Code:

```
import pandas as pd
```

```
col_list = ["LIP", "DIP", "PN"]
```

```
file = pd.read_csv("./logs1.csv", usecols=col_list)
```

```
def source(ip1, file):
```

```
    selec = pd.DataFrame(file.loc[file["LIP"] == ip1])
```

```
    return selec
```

```
def des(ip1, file):  
    selec = pd.DataFrame(file.loc[file["DIP"] == ip1])
```

```
return selec
```

```
def proto(ip1, file):  
    selec = pd.DataFrame(file.loc[file["PN"] == ip1])  
    return selec
```

```
print("Select an option:") print("a)1.LIP  
->2.BIP ->3.PN")
```

```
print("b)1.LIP ->2.BIP")  
print("c)LIP")
```

```
print("d)BIP")
```

```
print("e)PN") option
```

```
= str(input()) selec
```

```
= file
```

```
if option == "a": sip
```

```
    = str(input()) dip
```

```
    = str(input()) pip
```

```
    = str(input())
```

```
    selec = source(sip, selec)
```

```
    selec = des(dip, selec)
```

```
    selec = proto(pip, selec)
```

```
    print(selec)
```

```
elif option == "b":
```

```
    sip = str(input())
```

```
    dip = str(input())
```

```
    selec = source(sip, selec)
```

```
    selec = des(dip, selec)
```

```
    print(selec)
```

```
elif option == "c":
```

```
    sip = str(input())
```

```
    selec = source(sip, selec)
```

```
    print(selec)
```

```
elif option == "d":
```

```
    dip = str(input())
```

```
    selec = des(dip, selec)
```

```
    print(selec)
```

```
elif option == "e":
```

```
    pip = str(input())
```

```
    selec = proto(pip, selec)
```

```
    print(selec)
```

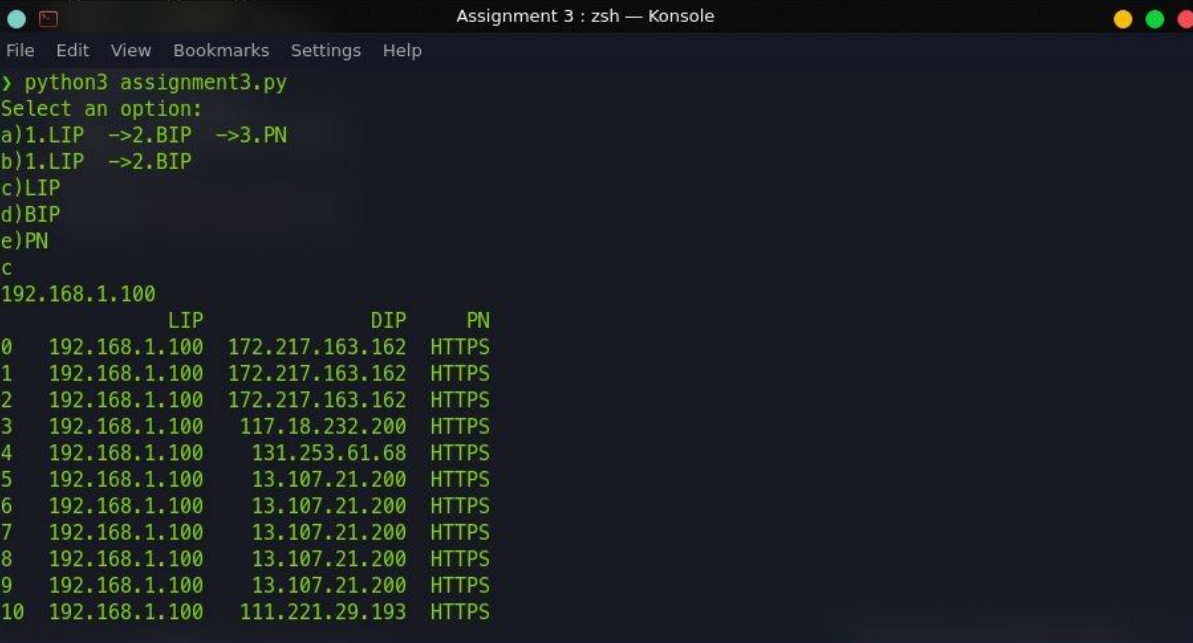
```
else:
```

```
    print("Invalid Option!")
```

**Dataset:** Wireless Router Captured Dataset **Input:**

Local IP and/or Destination IP and/or Ports **Output:**

Matched Dataset in CSV to the Input



```
Assignment 3 : zsh — Konsole
File Edit View Bookmarks Settings Help
> python3 assignment3.py
Select an option:
a)1.LIP ->2.BIP ->3.PN
b)1.LIP ->2.BIP
c)LIP
d)BIP
e)PN
c
192.168.1.100
      LIP      DIP      PN
0  192.168.1.100 172.217.163.162 HTTPS
1  192.168.1.100 172.217.163.162 HTTPS
2  192.168.1.100 172.217.163.162 HTTPS
3  192.168.1.100 117.18.232.200 HTTPS
4  192.168.1.100 131.253.61.68  HTTPS
5  192.168.1.100 13.107.21.200  HTTPS
6  192.168.1.100 13.107.21.200  HTTPS
7  192.168.1.100 13.107.21.200  HTTPS
8  192.168.1.100 13.107.21.200  HTTPS
9  192.168.1.100 13.107.21.200  HTTPS
10 192.168.1.100 111.221.29.193  HTTPS
```

**Platform:** Ubuntu 20.04

**Programming Language Used:** Python.

**Conclusion:** Hence, we analyzed the networking data.