In the log file provided, calculate the following:

1. Average response time for a particular endpoint (The function should take the log file and endpoint as input parameters)

2. Total requests from a particular IP (The function should take the log file and IP as input parameters)

3. Number of requests per endpoint from a particular IP (The function should take the log file and IP as input parameters)

4. Number of requests from a particular IP for a particular endpoint (The function should take the log file, IP, and endpoint as input parameters)

Call all the functions in the main function.

Here is the main function for reference.

import sys

if \_\_name\_\_=="\_\_main\_\_":

avg\_response(sys.argv[1],sys.argv[3])

total\_request\_from\_ip(sys.argv[1],sys.argv[2])

req\_per\_ip\_per\_endpoint(sys.argv[1],sys.argv[2])

req\_ip\_particular\_ep(sys.argv[1],sys.argv[2],sys.argv[3])

Here is the input - python main.py <log\_file> <IP> <endpoint>

**Example Input**

**python main.py** logfile 139.23.98.21 /abc

**Output**

avg\_response -

0.316666666667

total\_request\_from\_ip -

30

req\_per\_ip\_per\_endpoint -

{'/jkl': 10, '/abc': 20}

req\_ip\_particular\_ep -

20

**Logfile:**

**IP Status\_code PATH HOST R\_TIME OK**

129.23.98.21 [200] /jkl xyz 0.5 OK

129.23.98.21 [200] /jkl abc 0.2 OK

129.23.98.21 [200] /abc abc 0.3 OK

139.23.98.21 [200] /abc xyz 0.4 OK

19.23.98.21 [200] /abc xyz 0.1 OK

119.23.98.21 [200] /abc xyz 0.5 OK

130.13.98.21 [200] /abc abc 0.4 OK

39.23.8.21 [200] /jkl xyz 0.6 OK

139.23.98.21 [200] /abc abc 0.2 OK

139.23.98.21 [200] /jkl abc 0.4 OK

129.23.98.21 [200] /jkl xyz 0.5 OK

129.23.98.21 [200] /jkl abc 0.2 OK

129.23.98.21 [200] /abc abc 0.3 OK

139.23.98.21 [200] /abc xyz 0.4 OK

19.23.98.21 [200] /abc xyz 0.1 OK

119.23.98.21 [200] /abc xyz 0.5 OK

130.13.98.21 [200] /abc abc 0.4 OK

39.23.8.21 [200] /jkl xyz 0.6 OK

139.23.98.21 [200] /abc abc 0.2 OK

139.23.98.21 [200] /jkl abc 0.4 OK

129.23.98.21 [200] /jkl xyz 0.5 OK

129.23.98.21 [200] /jkl abc 0.2 OK

129.23.98.21 [200] /abc abc 0.3 OK

139.23.98.21 [200] /abc xyz 0.4 OK

19.23.98.21 [200] /abc xyz 0.1 OK

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139.23.98.21 [200] /jkl abc 0.4 OK

129.23.98.21 [200] /jkl xyz 0.5 OK

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139.23.98.21 [200] /jkl abc 0.4 OK

**------------------------------------------------------------------------------------------------------------------------**

1. Read the file
2. Read each line one by one
3. If col3 == /abc??
4. If yes time = add all the response
5. Result = time taken/no of request where col3 == /abc

import sys

def avg\_response(file\_name,ep):

with open(file\_name,"r") as file:

t = 0

c = 0

for line in file:

stripped\_line = line.strip()

stripped\_array = stripped\_line.split(" ")

if stripped\_array[2] == ep:

t = t + float(stripped\_array[4])

c = c + 1

avg=t/c

print(avg)

if \_\_name\_\_=="\_\_main\_\_":

avg\_response(sys.argv[1],sys.argv[3])

def total\_request\_from\_ip(file\_name, ip):

with open(file\_name, "r") as a\_file:

c = 0

for line in a\_file:

stripped\_line = line.strip()

string\_list=stripped\_line.split(" ")

if string\_list[0] == ip:

c = c + 1

print("total\_request\_from\_ip - ")

print(c)

Endpoint - count

Key : value

Python dict

D = {}

1. Read the file

2. Read line one by one

3. Convert the log line into array

4. Check array[0] == ip???

5. If yes : we will add array[2] into dict and value would be 1 if its not there in dict

6. If yes : we will add value by 1 if its there in dict

def req\_per\_ip\_per\_endpoint(file\_name, ip):

with open(file\_name, "r") as a\_file:

c = 0

d = {}

for line in a\_file:

stripped\_line = line.strip()

string\_list=stripped\_line.split(" ")

if string\_list[0] == ip:

if string\_list[2] in d:

d[string\_list[2]] = d[string\_list[2]] + 1

else:

d[string\_list[2]] = 1

print("req\_per\_ip\_per\_endpoint - ")

print(d)

def req\_ip\_particular\_ep(file\_name, ip, ep):

with open(file\_name, "r") as a\_file:

c = 0

for line in a\_file:

stripped\_line = line.strip()

string\_list=stripped\_line.split(" ")

if string\_list[0

] == ip and string\_list[2] == ep:

c = c + 1

print("req\_ip\_particular\_ep - ")

print(c)