

DAILY ASSESSMENT FORMAT

Date:	23 rd May 2020	Name:	Soundarya NA
Course:	UDEMY	USN:	4AL16EC077
Topic:	PYTHON: Fixing Programming errors Application 3: Build a Website Blocker	Semester & Section:	8 th - B

AFTERNOON SESSION DETAILS

Image of session

```

1 # Copyright (c) 1993-2009 Microsoft Corp.
2 #
3 # This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
4 #
5 # This file contains the mappings of IP addresses to host names. Each
6 # entry should be kept on an individual line. The IP address should
7 # be placed in the first column followed by the corresponding host name.
8 # The IP address and the host name should be separated by at least one
9 # space.
10 #
11 # Additionally, comments (such as these) may be inserted on individual
12 # lines or following the machine name denoted by a '#' symbol.
13 #
14 # For example:
15 #
16 #      102.54.94.97      rhino.acme.com      # source server
17 #      38.25.63.10      x.acme.com          # x client host
18
19 # localhost name resolution is handled within DNS itself.
20 #      127.0.0.1        localhost
21 #      ::1              localhost
22
23 127.0.0.1 www.facebook.com
24 127.0.0.1 dub119.mail.live.com
25
26

```

```

1 import time
2 from datetime import datetime as dt
3
4 hosts_temp="hosts"
5 hosts_path=r"C:\Windows\System32\drivers\etc\hosts"
6 redirect="127.0.0.1"
7 website_list=["www.facebook.com","facebook.com","dub119.mail.live.com","www.dub119.mail.live.com"]
8
9 while True:
10     if dt(dt.now().year,dt.now().month,dt.now().day,16) < dt.now() < dt(dt.now().year,dt.now().month,dt.now().day,19):
11         print("Working hours...")
12         with open(hosts_path,'r+') as file:
13             content=file.read()
14             for website in website_list:
15                 if website in content:
16                     pass
17                 else:
18                     file.write(redirect+" "+website+"\n")
19     else:
20         with open(hosts_path,'r+') as file:
21             content=file.readlines()
22             file.seek(0)
23             for line in content:
24                 if not any(website in line for website in website_list):
25                     file.write(line)
26             file.truncate()
27         print("Fun hours...")
28         time.sleep(5)
29

```

Report:**Code:**

File "script2.py", line 1

```
data = ("Name":"John", "Surname":"Smith")
```

```
^
```

SyntaxError: invalid syntax

That's the entire error message you got. Now here are the steps on how to understand and solve that error.

- Read the error from the beginning. The first line tells you the location of the error. So, the error happened in script1.py (that was the name of my script), on line 1.
- Now you know where the error occurred. For your convenience you also have the line that caused the error printed out in the second line of the error message.
- Next, look at the error type. In this case the error type is a SyntaxError. That means you have written something that doesn't follow the Python syntax rules. So, now you have an idea of what error you are dealing with. For an overview of possible Python error types you can look [here](#).
- Look at the details of the error. On the right of SyntaxError you have the detailed information about the error. In this case this information is "invalid syntax" and you also have an arrow character pointing upward. That error is pointing to the colon character. The arrow is trying to say that the colon doesn't belong there.
- Time to use your logic. Now, the Python interpreter gave you all the information that a robot can give. Now it's your turn as a human to use your logic to fix the error. So, Python executes a script from top to bottom, line by line, and reads each line from left to right. In this case it started to read the first line and it detected round brackets after the assignment operator. That means you are creating a tuple. That's fine. But then after you write the first item ("Name" in this case) you were supposed to write a comma to separate that item from the next item, but you used a colon instead, so the interpreter is saying that a colon is not syntactically correct to use with round brackets. Therefore, you should make up your mind to

either write a tuple like data = ("Name", "John", "Surname", "Smith") or a dictionary of key-value pairs like data = {"Name": "John", "Surname": "Smith"}. The decision is up to you. In this case though I believe the programmer meant to write a dictionary, so I am going to replace the round brackets with curly brackets because I know a dictionary is defined through curly brackets.

Program Architecture:

- Every system has a host file whether it is Mac, Windows or Linux. Host file in Mac and Linux
E.g.: /etc/hosts

Host file in Windows:

E.g.: C:\Windows\System32\drivers\etc

Working of host file: Host is an operating system file which maps hostnames to IP addresses. In this program we will be mapping hostnames of websites to our localhost address. Using python file handling manipulation, we will write the hostname in hosts.txt and remove the lines after your working hours

Code:

```
# Run this script as root
```

```
import time
from datetime import datetime as dt
```

```
# change hosts path according to your OS
```

```
hosts_path = "/etc/hosts"
```

```
# localhost's IP
```

```
redirect = "127.0.0.1"
```

```
# websites That you want to block
```

```
website_list =
```

```
["www.facebook.com", "facebook.com",
 "dub119.mail.live.com", "www.dub119.mail.live.com",
 "www.gmail.com", "gmail.com"]
```

```
while True:
```

```
    # time of your work
```

```
    if dt(dt.now().year, dt.now().month, dt.now().day, 8)
```

```
        < dt.now() < dt(dt.now().year, dt.now().month, dt.now().day, 16):
```

```
print("Working hours...")
with open(hosts_path, 'r+') as file:
    content = file.read()
    for website in website_list:
        if website in content:
            pass
        else:
            # mapping hostnames to your localhost IP address
            file.write(redirect + " " + website + "\n")
else:
    with open(hosts_path, 'r+') as file:
        content=file.readlines()
        file.seek(0)
        for line in content:
            if not any(website in line for website in website_list):
                file.write(line)

    # removing hostnmes from host file
    file.truncate()

print("Fun hours...")
time.sleep(5)
```

Special note for Windows users: Windows user need to create a duplicate of OS's host file. Now provide the path of the duplicate file in hosts_path mentioned in the script.

Scheduling above script in Mac: For scheduling above script in Mac you have to open crontab in your terminal as a root.