DAILY ASSESSMENT FORMAT

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

AFTERNOON SESSION DETAILS
Image of session

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 have 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):
```

```python
        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.