CS4720 Internet Programming

Department of Computer Science

Kennesaw State University

Module5:HTTP Assignment

Summer 2021

Due: Tuesday, July 13, 2021 (by 11:59pm)

Full Marks: 25

There are 2 Questions for a total of 25 points.

Solve ALL the questions

NAME: Mohammad Umar **KSU NetID: mumar2**

1. **[15 pt] HTTP, TCP/IP Socket**

Use a plain `socket` to implement a current-time-service. When a client sends the string *time* to the server, return the current date and time as an ISO string. For your conveniences, I am attaching some sample code snippet:

```
# tcp_server.py

from datetime import datetime

Import socket

address = ('localhost', 6789)

max_size = 1024

server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

server.bind(address)

server.listen(5)

client, addr = server.accept()

data = client.recv(max_size)

print('At', datetime.now(), client, 'said', data)

client.sendall(b'Are you talking to me?')

client.close()

server.close()
```

#---

#tcp_client.py

from datetime import datetime

Import socket

address = (‘localhost’, 6789)

max_size = 1024

client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

client.connect(address)

client.sendall(b’Hey!’)

data = client.recv(max_size)

print(‘At’, datetime.now(), ‘some one replied’, ‘said’, data)

client.close()

tcp_server.py

```
from datetime import datetime

import socket
address = ('localhost', 6789)
max_size = 1024
server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server.bind(address)
server.listen(5)
client, addr = server.accept()
data = client.recv(max_size).decode()
print('At', datetime.now(), client, 'said', data)
client.sendall(datetime.now().isoformat().encode())
print('Are you talking to me?')
client.close()
server.close()
```

tcp_client.py

```
from datetime import datetime

import socket
address = ('localhost', 6789)
max_size = 1024
client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
client.connect(address)
client.send(str(datetime.now()).encode())
data = client.recv(max_size).decode()
print('At', datetime.now(), 'some one replied', 'said', data)
client.close()
```

Screenshots

```
At 2021-07-13 18:42:22.556141 <socket.socket fd=448, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('127.0.0.1', 6789), raddr=('127.0.0.1', 55794)> said
 2021-07-13 18:42:22.556141
Are you talking to me?
```

```
At 2021-07-13 18:42:22.556141 some one replied said 2021-07-13T18:42:22.556141
```

2. **[10 pt]** Write a function called **SavePage** that takes two string parameters website, that is the URL of a website, and another string parameter filename. The function should open the URL and save the page contents to the text file specified by filename. You may assume that **requests** library has already been successfully installed using:

$ pip install requests

Then can simply use starter code as:

import requests

resp = requests.get(URL)

save_page.py

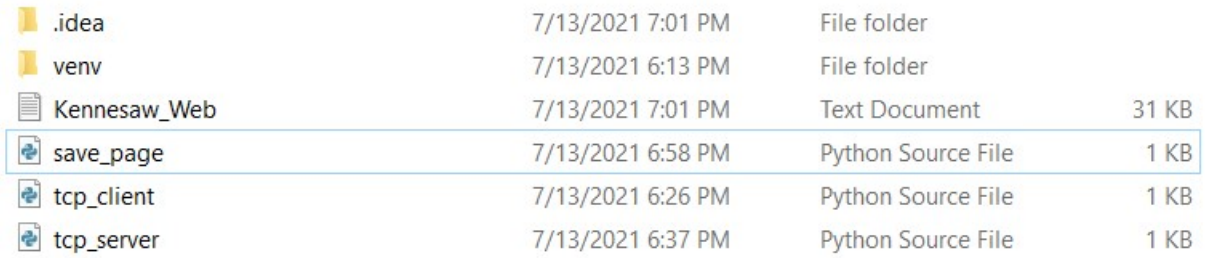
```
import requests


def save_page(url, file_name):
    response = requests.get(url)
    if response.status_code == 200:
        print("Successfully Reached Website!!")
        response.encoding = 'utf-8'
        with open(file_name + '.txt', 'w') as f:
            print('File Created')
            f.write(response.text)
            print('Page Contents Copied Successfully!!')
    else:
        print("An Error Occurred.")


url = input("Enter Page URL: ")
file_name = input("Enter File Name: ")
save_page(url, file_name)
```

Screenshots

```
Enter Page URL: https://www.kennesaw.edu
Enter File Name: Kennesaw_Web
Successfully Reached Website!!
File Created
Page Contents Copied Successfully!!
```



.idea	7/13/2021 7:01 PM	File folder	
venv	7/13/2021 6:13 PM	File folder	
Kennesaw_Web	7/13/2021 7:01 PM	Text Document	31 KB
save_page	7/13/2021 6:58 PM	Python Source File	1 KB
tcp_client	7/13/2021 6:26 PM	Python Source File	1 KB
tcp_server	7/13/2021 6:37 PM	Python Source File	1 KB