GANPAT UNIVERSITY
U. V. PATEL COLLEGE OF ENGINEERING
B.Tech CE/IT Semester IV
2CEIT404: Python Programming

Practical-12: Networking and Multithreading using Python

1. Create server.py and client.py file and create chat applications for continuous communication between both.

INPUT:

CLIENT >

```
import socket
LOCALHOST="127.0.0.1"
PORT=1234
client= socket.socket(socket.AF_INET,socket.SOCK_STREAM)
client.connect((LOCALHOST,PORT))
client.sendall(bytes("This is client",'UTF-8'))
while True:
    in_data=client.recv(1024)
    print('from server:',in_data.decode())
    out_data=input()
    client.sendall(bytes(out_data,'UTF-8'))
    if out_data=='bye':
        break
client.close()
```

SERVER >

```
import socket
LOCALHOST='127.0.0.1'
PORT=1234
server=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
server.bind((LOCALHOST,PORT))
server.listen(1)
print("Server is ready now:")
print("waiting for client")

cc,addr=server.accept()
msg=''
while True:
    in_data=cc.recv(1024)
    msg=in_data.decode()
    if msg=='bye':
```

```
        break
    print('from client:',msg)
    out_data=input()
    cc.send(bytes(out_data,'UTF-8'))
print('Connection terminated')
```

OUTPUT:

```
PS C:\Users\gurup\OneDrive\Desktop\python> python -u "c:\Users\gurup\OneDrive\Desktop\python\server.py"
Server is ready now:
waiting for client
from client: This is client
hii
from client: hello
r their problems
from client: okay that's nice
tell me your problem
from client: i have no problem
bye
Connection terminated
PS C:\Users\gurup\OneDrive\Desktop\python> python -u "c:\Users\gurup\OneDrive\Desktop\python\server.py"
```

```
client.py
from server: hii
hello
from server: how can i help you?
tell me about you?
from server: i am a server which helps people for their problems
okay that's nice
from server: tell me your problem
i have no problem
from server: bye
bye
PS C:\Users\gurup>
```

2. Write a python program to demonstrate usage of multi threading.

    INPUT:
    ```python
    from threading import *
    from time import sleep
    class Th1(Thread):
        def run(self):
            for i in range(10):
                print("welcome to india")
                sleep(1)
    class Th2(Thread):
        def run(self):
            for i in range(10):
                print("Hello Guru")

    ob1=Th1()
    ob2=Th2()
    ob1.start()
    ob2.start()
    ```
    OUTPUT:

```
welcome to india
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
Hello Guru
welcome to india
welcome to india
welcome to india
welcome to india
welcome to india
welcome to india
welcome to india
welcome to india
welcome to india
PS C:\Users\gurup\OneDrive\Desktop\python>
```

3. Write a python code to send email by attaching .jpeg file as a content.
   INPUT:

```python
import smtplib as sl
ob=sl.SMTP("smtp.gmail.com",587)
ob.starttls()
ob.login("gurupatel21@gnu.ac.in","Ethicalhacker@**007")

subject="sending email to AB2 Members"
body="Welcome to AB2 nu Sansad"
message="Subject:{}\n\n{}".format(subject,body)
print(message)
list_email=["gurupatel279@gmail.com","guruatel729@gmail.com "]

ob.sendmail("gurupatel21@gnu.ac.in",list_email,message)
ob.quit()
```

OUTPUT:

```
Subject:sending email to AB2 Members

Welcome to AB2 nu Sansad

(221,
 b'2.0.0 closing connection s18-20020a170902ea1200b001a4edbabad3sm6229449plg.230 - gsmtp')
```

sending email to AB2 Members

G gurupatel21@gnu.ac.in
to bcc: gurupatel279, bcc: guruatel729 ▾

Welcome to AB2 nu Sansad

from:	**gurupatel21@gnu.ac.in**
to:	
bcc:	gurupatel279@gmail.com, guruatel729@gmail.com
date:	May 3, 2023, 2:44 PM
subject:	sending email to AB2 Members
mailed-by:	gnu.ac.in

↩ Reply   → Forward