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

Practical-12: <u>Networking and Multithreading using Python</u>

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

Server.py

```python
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')
```
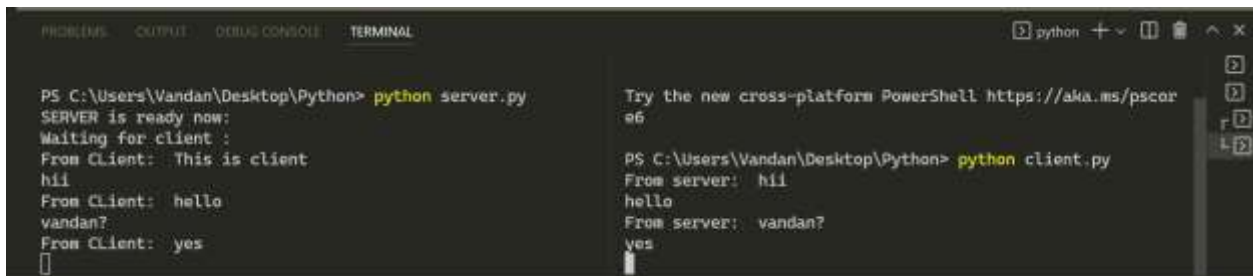
Client.py:

```python
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()
```
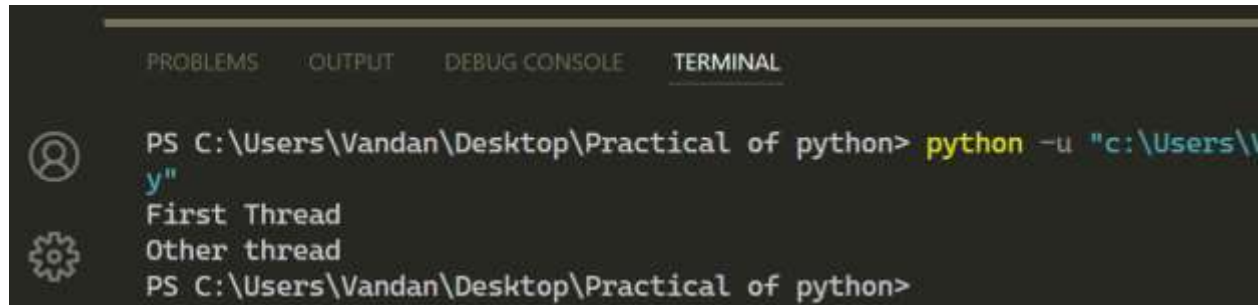
Output:

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

Code:
```
from threading import *
import time
class Myth1(Thread):
    def run(self):
        for i in range(5):
            time.sleep(0.5)
print("First Thread")
class Myth2(Thread):
    def run(self):
        for i in range(5):
            time.sleep(0.5)
print("Other thread")
t1 = Myth1()
t2= Myth2()
t1.start()
t2.start()
```

Output:

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

Code:
```python
import smtplib as s
import imghdr
from email.message import EmailMessage
ob = s.SMTP("smtp.gmail.com",587)
ob.starttls()
ob.login("vandankumarpatel20@gnu.ac.in","passwd")
subject = EmailMessage()
subject['Subject'] = "sending image as a content"
subject['From'] = "vandankumarpatel20@gnu.ac.in"
subject['To'] = "vandanpatel5980@gmail.com"
with open('h1.jpg', 'rb') as f:
 image_data = f.read()
 image_type = imghdr.what(f.name)
 image_name = f.name

subject.add_attachment(image_data, maintype='image', subtype=image_type,
filename=image_name)
ob.send_message(subject)
ob.quit()
```

Output:

vandankumarpatel20@gnu.ac.in
to me ▾

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Any
 views or opinions presented in this email are
solely those of the
author and do not necessarily represent those of the
Ganpat University.

Thanks a lot.   Received, thank you.   Thanks a lot for sharing.