Q1 .

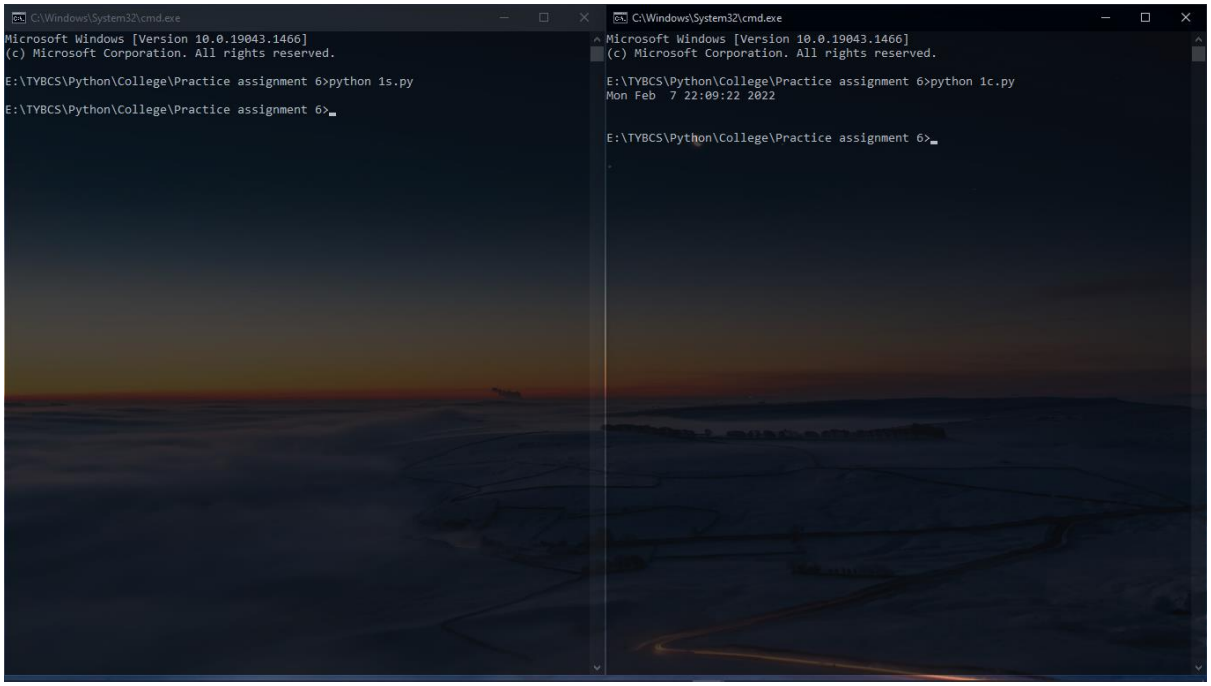
Client:

```
import socket

s=socket.socket()

s.connect(('127.0.0.1',7777))

data=s.recv(1024)

print(data.decode())
s.close()
```

Server :

```
import time
import socket

ss=socket.socket()
ss.bind(("",7777))
ss.listen()

client,addr=ss.accept()

currenttime=time.ctime(time.time())+'\r\n'

client.send(currenttime.encode())
```

Output :



Q2 .

Client:

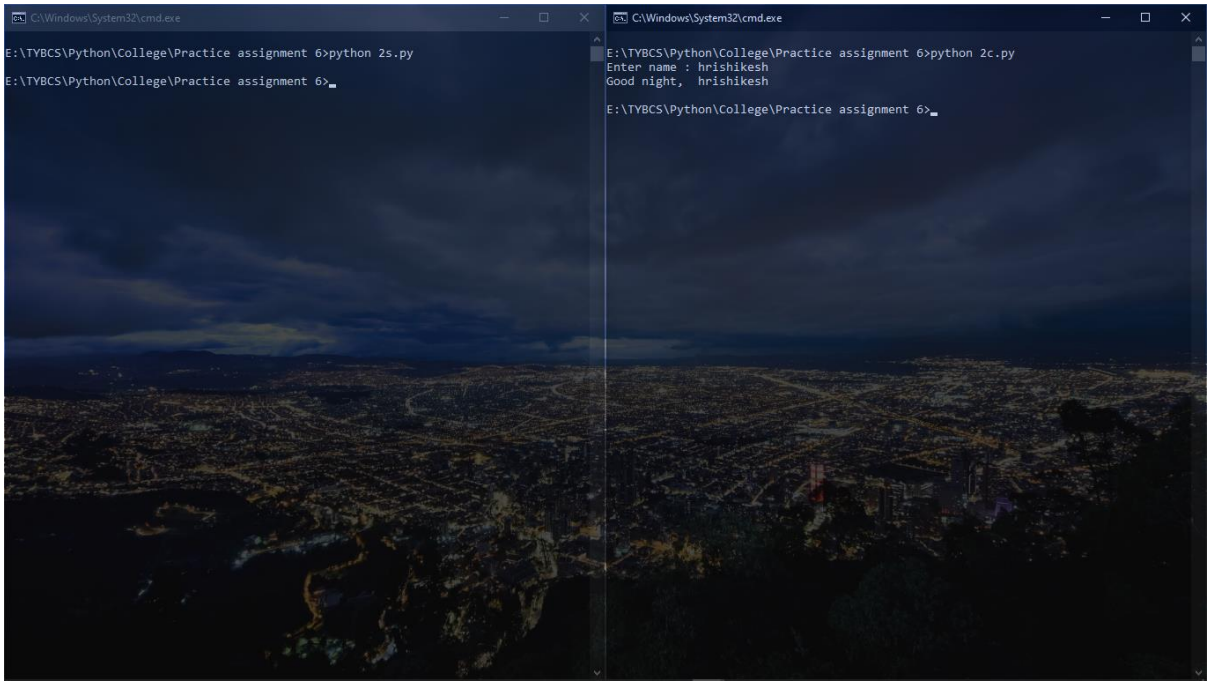
```
import socket

from datetime import datetime

usr=input("Enter name : ")
s=socket.socket()
s.connect(('127.0.0.1',6666))

data=s.recv(1024)

datestr=data.decode()
datetime_obj=datetime.strptime(datestr,"%d%b%Y%H%M%S")

time=datetime_obj.time()

h=time.hour

if h>=0 and h<12:
    print("Good morning, ",usr)
elif h>=12 and h<16:
    print("Good afternoon, ",usr)
elif h>=16 and h<19:
    print("Good evening, ",usr)
elif h>=19 and h<24:
```

```
    print("Good night, ",usr)

s.close()
```

Server :

```
import socket
from datetime import datetime


currenttime=datetime.now()

timestring=currenttime.strftime("%d%b%Y%H%M%S")

ss=socket.socket()
ss.bind(('',6666))
ss.listen()

client,addr=ss.accept()

client.send(timestring.encode())
client.close()
```

Output :



Q3 .

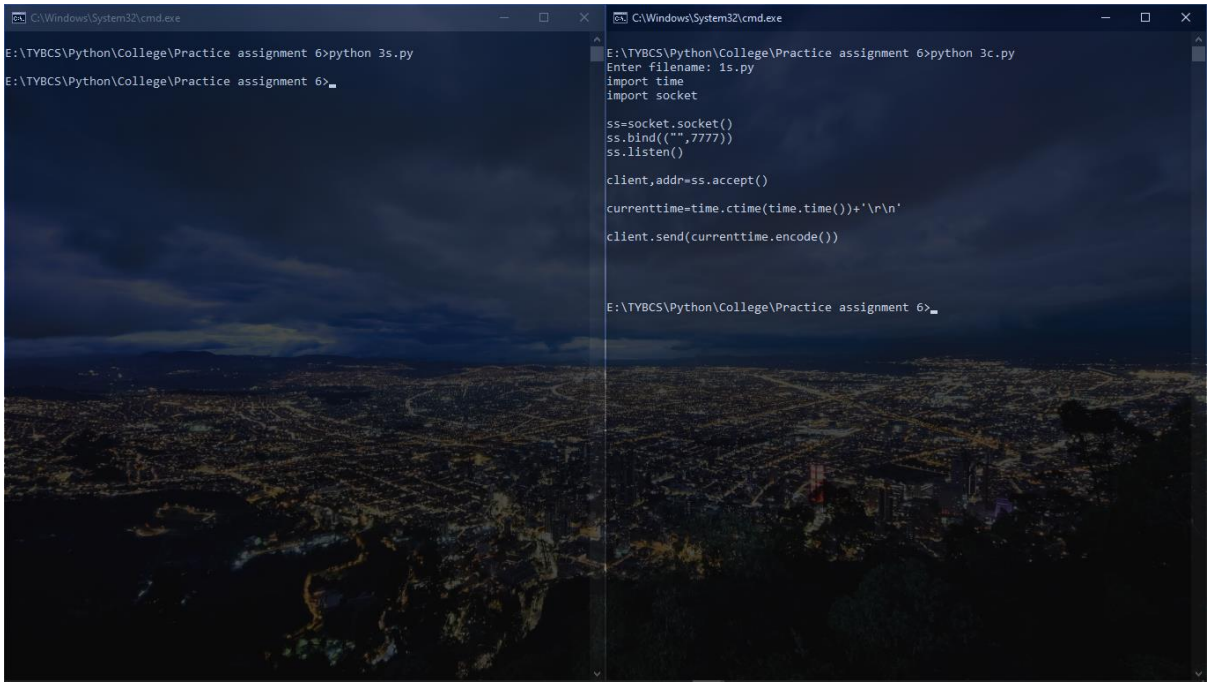
Client:

```
import socket

s=socket.socket()
s.connect(('127.0.0.1',666))

fname=input("Enter filename: ")
s.send(fname.encode())

data=s.recv(1024)
print(data.decode())
s.close()
```

Server :

```
import socket

ss=socket.socket()
ss.bind(('',666))
ss.listen()
client,addr=ss.accept()

fname=client.recv(1024)

fname=fname.decode()
try:
    f=open(fname,'r')
    data=f.read()

    client.send(data.encode())
    f.close()
except FileNotFoundError:
    print("Cannot find file!!")
finally:
    client.close()
```

Output :



Q4

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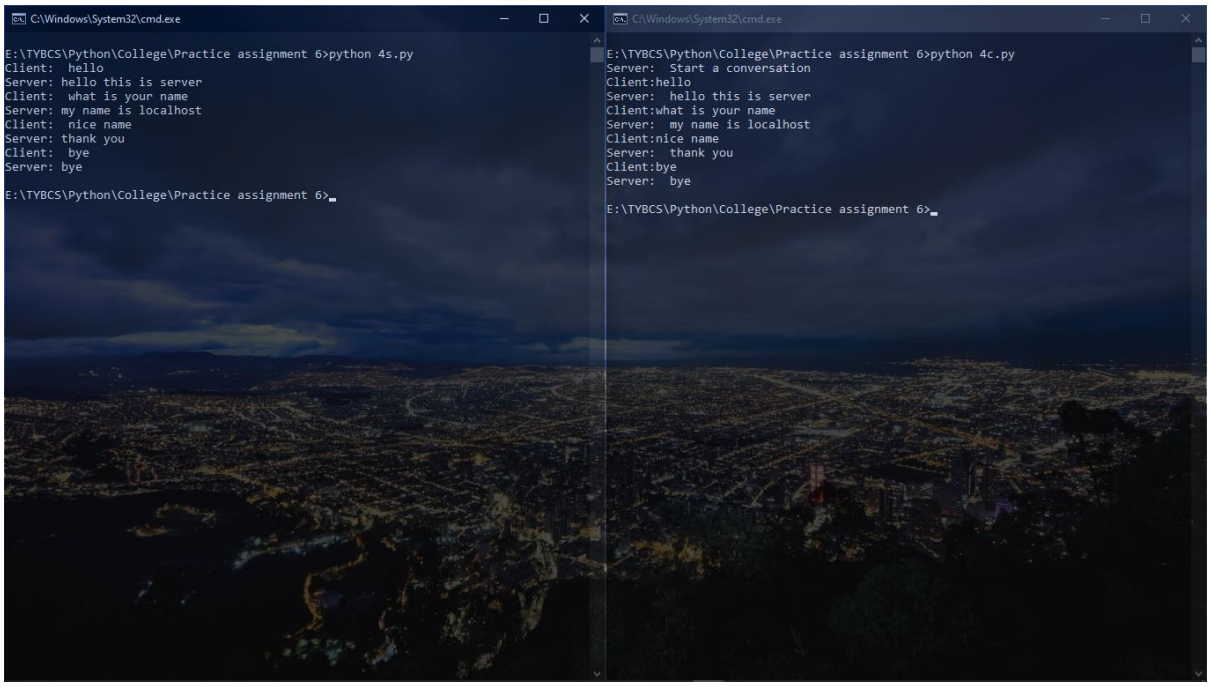
Client:

```
import socket

s=socket.socket()
s.connect(('127.0.0.1',777))


data=s.recv(1024)
print("Server: ",data.decode())

while True:
    msg=input('Client:')
    s.send(msg.encode())
    msg1=s.recv(1024)
    print("Server: ",msg1.decode())

    if msg1.decode()=='bye':

        break
s.close()
```

Server :

```
import socket

ss=socket.socket()
ss.bind(('',777))
ss.listen()
client,addr=ss.accept()
msg="Start a conversation"
client.send(msg.encode())

while True:
    data=client.recv(1024)

    print("Client: ",data.decode())
    msg=input("Server: ")
    client.send(msg.encode())

    if data.decode()=='bye':
        break
client.close()
```

Output :



Q5 .

Client:

```
import pickle
import socket

s = socket.socket()

hostname = socket.gethostname()
portno = 50000

s.connect((hostname, portno))
std1 = s.recv(1024)
std2 = pickle.loads(std1)
print(std2)
s.close()
```

Server :

```
import socket
import pickle

s=socket.socket()
hostname=socket.gethostname()
portno=50000
s.bind((hostname,portno))

s.listen(5)
print('server is waiting...')

while True:
    conn,addr=s.accept()
    print("Connection from: " + str(addr))

    class student:
        def __init__(self,fnm,lnm,rno):
            self.fname=fnm
            self.lname=lnm
            self.rollno=rno

        def display(self):
            print("First name: ",self.fname)
            print("Last name: ",self.lname)
            print("Roll no: ",self.rollno)
```

```
    fnm=input("Enter first name:")
    lnm=input("Enter last name:")
    rno=input("Enter roll no:")
    s1=student(fnm,lnm,rno)
    std_data={"First name":fnm,"Last name":lnm,"Roll no":rno}
    std=pickle.dumps(std_data)
    conn.send(bytes(std))
    conn.close()
    break
s.close()
```

Output :