

File: serverMultipurpose.py

```
import socket
import hashlib
import time
import math

s = socket.socket()
s.bind(("localhost", 8888))
s.listen(5)
c, addr = s.accept()
print "Connected to client ", addr

choice = int(c.recv(1))

hashObject = hashlib.sha1()

if( choice == 1 ):
    print "Client has requested for Text File...\n"
    with open('text.txt', 'rb') as text:
        message = text.read(1024)
        while(message):
            c.send(message)
            hashObject.update(message)
            message = text.read(1024)
elif( choice == 2 ):
    print "Client has requested for Image File...\n"
    with open('image.jpg', 'rb') as image:
        message = image.read(1024)
        while(message):
            c.send(message)
            hashObject.update(message)
            message = image.read(1024)
elif( choice == 3 ):
    print "Client has requested for Audio File...\n"
    with open('audio.mp3', 'rb') as audio:
        message = audio.read(1024)
        while(message):
            c.send(message)
            hashObject.update(message)
            message = audio.read(1024)
elif( choice == 4 ):
    print "Client has requested for Video File...\n"
    with open('video.mp4', 'rb') as video:
        message = video.read(1024)
        while(message):
            c.send(message)
            hashObject.update(message)
            message = video.read(1024)

hexDig = hashObject.hexdigest()
hashS = str(hexDig)
time.sleep(1)
c.send("BRK" + "\t" + hashS)

c.close()
```

File: clientMultipurpose.py

```
import socket
import hashlib

s = socket.socket()
s.connect(("localhost", 8888))

choice = int(raw_input("1. Text\n2. Image\n3. Audio\n4. Video\nEnter
Choice: "))
s.send(str(choice))

hashObject = hashlib.sha1()
receivedData=""

if( choice == 1 ):
    fw = open('received.txt','wb')
    print "Received text file is in 'received.txt'"
    receivedData = s.recv(1024)
    while(receivedData):
        if (receivedData.split("\t")[0] == "BRK"):
            break
        fw.write(receivedData)
        hashObject.update(receivedData)
        receivedData = s.recv(1024)
elif( choice == 2 ):
    fw = open('received.jpg','wb')
    print "Received image file is in 'received.jpg'"
    receivedData = s.recv(1024)
    while(receivedData):
        if (receivedData.split("\t")[0] == "BRK"):
            break
        fw.write(receivedData)
        hashObject.update(receivedData)
        receivedData = s.recv(1024)
elif( choice == 3 ):
    fw = open('received.mp3','wb')
    print "Received audio file is in 'received.mp3'"
    receivedData = s.recv(1024)
    while(receivedData):
        if (receivedData.split("\t")[0] == "BRK"):
            break
        fw.write(receivedData)
        hashObject.update(receivedData)
        receivedData = s.recv(1024)
elif( choice == 4 ):
    fw = open('received.mp4','wb')
    print "Received video file is in 'received.mp4'"
    receivedData = s.recv(1024)
    while(receivedData):
        if (receivedData.split("\t")[0] == "BRK"):
            break
        fw.write(receivedData)
        hashObject.update(receivedData)
        receivedData = s.recv(1024)
```

```

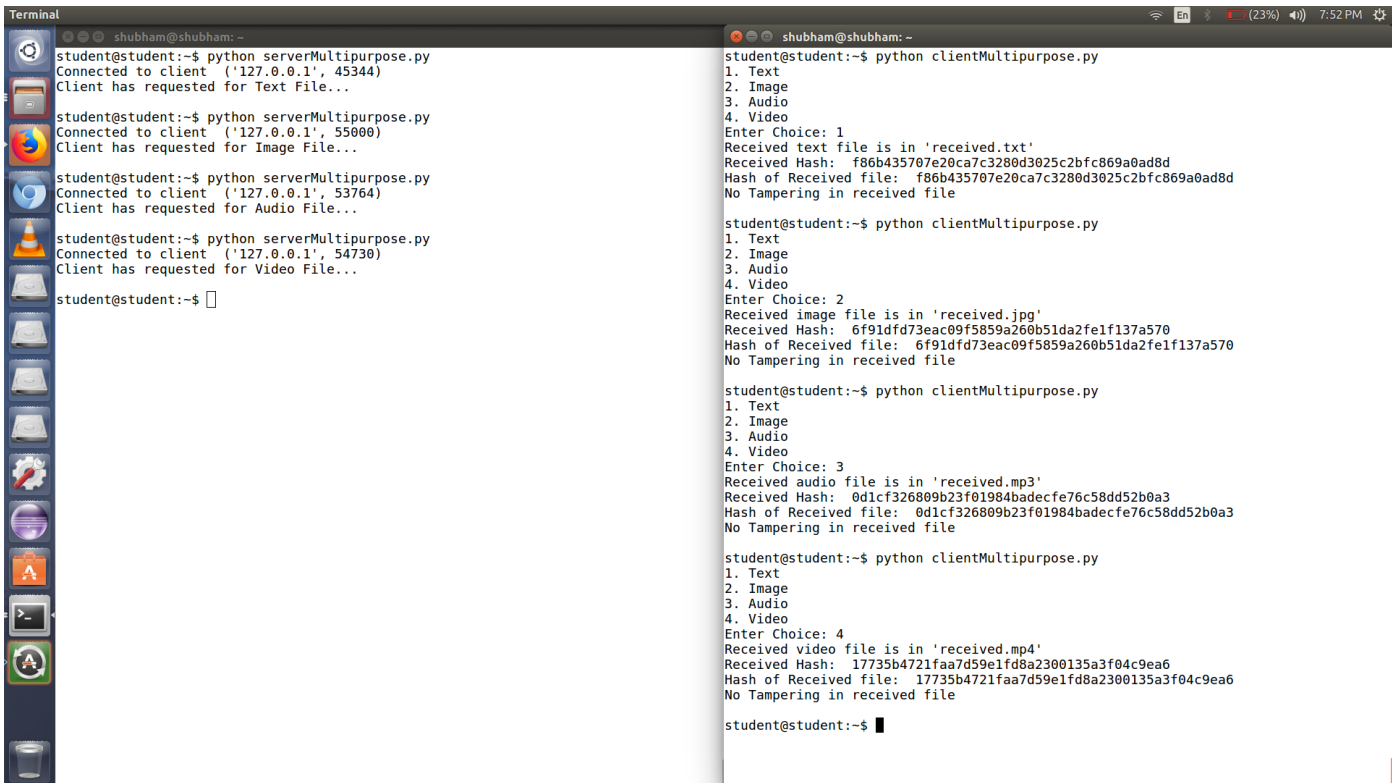
receivedHash = receivedData.split("\t")[1]
print "Received Hash: ", receivedHash

hexDig = hashObject.hexdigest()
hashS = str(hexDig)
print "Hash of Received file: ", hashS

if(receivedHash == hashS):
    print "No Tampering in received file\n"
else:
    print "Tampering in received file\n"

```

#OUTPUT:



```

Terminal
shubham@shubham: ~
student@student:~$ python serverMultipurpose.py
Connected to client ('127.0.0.1', 45344)
Client has requested for Text File...

student@student:~$ python serverMultipurpose.py
Connected to client ('127.0.0.1', 55000)
Client has requested for Image File...

student@student:~$ python serverMultipurpose.py
Connected to client ('127.0.0.1', 53764)
Client has requested for Audio File...

student@student:~$ python serverMultipurpose.py
Connected to client ('127.0.0.1', 54730)
Client has requested for Video File...

student@student:~$ █

shubham@shubham: ~
student@student:~$ python clientMultipurpose.py
1. Text
2. Image
3. Audio
4. Video
Enter Choice: 1
Received text file is in 'received.txt'
Received Hash: f86b435707e20ca7c3280d3025c2bfc869a0ad8d
Hash of Received file: f86b435707e20ca7c3280d3025c2bfc869a0ad8d
No Tampering in received file

student@student:~$ python clientMultipurpose.py
1. Text
2. Image
3. Audio
4. Video
Enter Choice: 2
Received image file is in 'received.jpg'
Received Hash: 6f91dfd73eac09f5859a260b51da2felf137a570
Hash of Received file: 6f91dfd73eac09f5859a260b51da2felf137a570
No Tampering in received file

student@student:~$ python clientMultipurpose.py
1. Text
2. Image
3. Audio
4. Video
Enter Choice: 3
Received audio file is in 'received.mp3'
Received Hash: 0d1cf326809b23f01984badecfe76c58dd52b0a3
Hash of Received file: 0d1cf326809b23f01984badecfe76c58dd52b0a3
No Tampering in received file

student@student:~$ python clientMultipurpose.py
1. Text
2. Image
3. Audio
4. Video
Enter Choice: 4
Received video file is in 'received.mp4'
Received Hash: 17735b4721faa7d59elfd8a2300135a3f04c9ea6
Hash of Received file: 17735b4721faa7d59elfd8a2300135a3f04c9ea6
No Tampering in received file

student@student:~$ █

```