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: