# **WEEK 14**

# Program 3

Using TCP/IP sockets, write a client-server program to make client sending the file name and the server to send back the contents of the requested file if present.

## **Observation:**

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Solution:			
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Server CP. py.			
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sentence = connect	ion oched . see (11	224). decompers	

file = Gren (sentence, "r") l = file. read (102g) Connection Sochol, send (I. encode()) print (" ) o Sout contents of " + sentence file. cloud connection Socket, close() Outrut: First Run Schusteppy Shan sun clienttep.py. output on scrustce. The serves is leady to receive. The survey is ready to receive. Output on clark TCP terminal. Enter file name: sernesTEP.py. From Server: Contents in seems TCP, py is displayed here

#### **SOLUTION:**

# ClientTCP.py from socket import \* serverName = '127.0.0.1' serverPort = 12000 clientSocket = socket(AF\_INET, SOCK\_STREAM) clientSocket.connect((serverName,serverPort)) sentence = input("\nEnter file name: ") clientSocket.send(sentence.encode()) filecontents = clientSocket.recv(1024).decode() print ('\nFrom Server:\n')

## ServerTCP.py

print(filecontents)
clientSocket.close()

```
from socket import *
serverName="127.0.0.1"
serverPort = 12000
serverSocket = socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
    print ("The server is ready to receive")
    connectionSocket, addr = serverSocket.accept()
    sentence = connectionSocket.recv(1024).decode()

file=open(sentence,"r")
l=file.read(1024)

connectionSocket.send(l.encode())
print ("\nSent contents of ' + sentence)
```

file.close()
connectionSocket.close()

## **OUTPUT:**

#### **Client:**

```
▶ IDLE Shell 3.10.8
File Edit Shell Debug Options Window Help
    Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
    = RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/clientTCP.py =
    Enter file name:serverTCP.py
    From Server:
    from socket import *
    serverName = "127.0.0.1"
    serverPort = 12000
    serverSocket = socket(AF INET, SOCK STREAM)
    serverSocket.bind((serverName, serverPort))
    serverSocket.listen(1)
    while(1):
        print("The server is ready to recieve")
        connectionSocket,addr=serverSocket.accept()
        sentence = connectionSocket.recv(1024).decode()
        file = open(sentence, "r")
        1 = file.read(1024)
        connectionSocket.send(l.encode())
        print('\nsent contents of'+sentence)
        file.close()
        connectionSocket.close()
```

```
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/clientTCP.py =
    Enter file name:aab.py
    From Server:
    Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32 Type "help", "copyright", "credits" or "license()" for more information.
    class Node:
        def _init_(self,data):
             self.data=data
             self.left=None
             self.right=None
             self.height=1
    class AVL Tree:
         def getHeight(self,root):
             if not root:
                 return 0
             return root.height
         def getBalance(self,root):
             if not root:
                 return 0
             return self.getHeight(root.left)-self.getHeight(root.right)
         def rightRotate(self,z):
             v=z.left
             T3=y.right
             y.right=z
             z.left=T3
             {\tt z.height=l+max(self.getHeight(z.left),self.getHeight(z.right))}
             y.height=l+max(self.getHeight(y.left),self.getHeight(y.right))
             return y
        def insert(self,root,data):
             if not root:
                 return Node (data)
             if data < root.data
                 root.left=self.insert(root.left,data)
             else:
                 root.right=se
>>>
```

#### **Server:**

```
File Edit Shell 3.10.8* — — X

File Edit Shell Debug Options Window Help

Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit ( AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/serverTCP.py = The server is ready to recieve

sent contents ofserverTCP.py
The server is ready to recieve

sent contents ofaab.py
The server is ready to recieve
```

# Program 4

Using UDP sockets, write a client-server program to make client sending the file name and the server to send back the contents of the requested file if present.

# **Observation:**

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	PROGRAM 4.  Lesing UPP sochels, write a client-scines program  le make client sending the file name and the  some to send back the contents of the requested file;  breverel		
	present.		
	Solution:		
	Client UDP. py		
	from socket infort >		
	client Socket = 12000 (AF_INGT, SOCK_DEGRAM)		
	sentonce = inful ("In Enter file name:").		
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	pseid (Takply from Serves: (n')  pseid (filexontents. decode ("cilf-8")).		
	If for I en filsesments:		
	# print (str.(i), end = 1)		
	Server CDP, py.		
	som socket emport *		
110	reques Post = 12000 comes Socket = socket (AF-INET, SOCK DEJRAM)		
d	unos Sockel beind ("127.0.0.1", serus Post)) suit ("The serues is ready to receive")		

#### **SOLUTION:**

```
ClientUDP.py
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF INET, SOCK DGRAM)
sentence = input("\nEnter file name: ")
clientSocket.sendto(bytes(sentence, "utf-8"), (serverName, serverPort))
filecontents, serverAddress = clientSocket.recvfrom(2048)
print ('\nReply from Server:\n')
print (filecontents.decode("utf-8"))
# for i in filecontents:
  # print(str(i), end = ")
clientSocket.close()
clientSocket.close()
ServerUDP.py
from socket import *
serverPort = 12000
serverSocket = socket(AF INET, SOCK DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
print ("The server is ready to receive")
while 1:
   sentence, clientAddress = serverSocket.recvfrom(2048)
   sentence = sentence.decode("utf-8")
   file=open(sentence,"r")
   con=file.read(2048)
   serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
```

```
print ('\nSent contents of ', end = ' ')
print (sentence)
# for i in sentence:
    # print (str(i), end = ")
file.close()
```

### **OUTPUT:**

#### **Client:**

```
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/clientUDP.py =
    Enter file name: serverUDP.py
    Reply from Server:
    from socket import *
    serverPort = 12000
    serverSocket = socket(AF INET, SOCK DGRAM)
    serverSocket.bind(("127.0.0.1", serverPort))
    print ("The server is ready to receive")
    while 1:
         sentence, clientAddress = serverSocket.recvfrom(2048)
         sentence = sentence.decode("utf-8")
        file=open(sentence, "r")
         con=file.read(2048)
         serverSocket.sendto(bytes(con, "utf-8"), clientAddress)
        print ('\nSent contents of ', end = ' ')
         print (sentence)
        # for i in sentence:
            # print (str(i), end = '')
         file.close()
>>>
```

#### **Server:**

```
>>> = RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/serverUDP.py = The server is ready to receive

Sent contents of serverUDP.py
```