

Aim-16

16. 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.

Code:

25/08/23

Aim-4

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.

Code

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:
    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()
```

clientUDP.py

from ~~import~~

from socket import *

serverName = "127.0.0.1"

serverPort = 12000

clientSocket = socket(AF_INET, SOCK_DGRAM)

sentence = input("Enter file name: ")

clientSocket.sendto(bytes(sentence, "utf-8"),

(serverName, serverPort))

filecontents, serverAddress = clientSocket.recvfrom(2048)


```
print ('\n Reply from Server: \n')  
Print (filecontents.decode("utf-8"))  
# for i in filecontents:  
# print (str(i), end = '')  
clientSocket.close()
```

Output

from Server shell

Enter file name:

The server is ready to receive

Sent contents of "Serverudp.py (after sending)"

entering the file name by client):

from client shell

Enter the file name: Serverudp.py

Reply from Server:

(The contents of Serverudp.py will be displayed/shown as per request).

Output:

The screenshot displays two Python scripts running in separate IDLE shells. The top-left shell, titled 'serverUdp.py', contains the server code. It imports the 'socket' module, sets a server port of 12000, and binds a socket to the address '127.0.0.1'. It prints 'The server is ready to receive' and enters a loop where it receives data from a client, decodes it, and reads the contents of a file named 'serverUdp.py' to send back. The top-right shell, titled 'clientUdp.py', contains the client code. It imports the 'socket' module, sets a server name of '127.0.0.1' and a server port of 12000. It creates a client socket, sends the file name to the server, receives the file contents, and prints them. The bottom-left shell, titled 'serverUdp.py', shows the server's output. It prints 'The server is ready to receive' and then 'Sent contents of serverUdp.py'. The bottom-right shell, titled 'IDLE Shell 3.10.5', shows the client's output, which is the contents of 'serverUdp.py'.

```
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> = RESTART: D:\even-sem-re-registration-2023\computer networks\socket_udp_tcp\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()
```

```
clientUdp.py - D:\even-sem-re-registration-2023\computer networks\socket_udp_tcp\clientUdp.py (3.10.5)
File Edit Format Run Options Window Help
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 - D:\even-sem-re-registration-2023\computer networks\socket_udp_tcp\serverUdp.py (3.10.5)
File Edit Format Run Options Window Help
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()
```

```
IDLE Shell 3.10.5
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> = RESTART: D:\even-sem-re-registration-2023\computer networks\socket_udp_tcp\serverUdp.py
The server is ready to receive
Sent contents of serverUdp.py
```