

## EXPERIMENT-13

TITLE: 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.

AIM: To demonstrate UDP sockets by writing a client-server program

Python 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 1: sentence, clientAddress =
serverSocket.recvfrom(2048) sentence = sentence.decode("utf-
8") file=open(sentence,"r") con=file.read(1024)

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 socket import *

serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)
try:    sentence = input("\nEnter file name: ")
        clientSocket.sendto(bytes(sentence, "utf-8"), (serverName,
serverPort))
        filecontents, serverAddress = clientSocket.recvfrom(1024)
print("\nReply from Server:\n")    print(filecontents.decode("utf-
8")) except Exception as e:    print(f"An error occurred: {e}")

clientSocket.close()

```

## OUTPUT



The screenshot shows a code editor with two tabs: 'ServerUDP.py' and 'ClientUDP.py'. The 'ServerUDP.py' tab is active, displaying the following Python code:

```

1  from socket import *
2  serverPort = 12000
3  serverSocket = socket(AF_INET, SOCK_DGRAM)
4  serverSocket.bind(("127.0.0.1", serverPort))
5  print ("The server is ready to receive")
6  while 1:
7      sentence, clientAddress = serverSocket.recvfrom(2048)
8      sentence = sentence.decode("utf-8")
9      file=open(sentence,"r")
10     con=file.read(1024)

```

Below the code editor, the 'TERMINAL' tab is active, showing the command used to run the program and its output:

```

PS D:\jyothika\CN> & C:/Users/jyothika/AppData/Local/Programs/Python/Python311/python.exe d:/jyothika/CN/UDP/ServerUDP.py
The server is ready to receive

```

```
ServerUDP.py ClientUDP.py X
UDP > ClientUDP.py > ...
1 from socket import *
2
3 serverName = "127.0.0.1"
4 serverPort = 12000
5 clientSocket = socket(AF_INET, SOCK_DGRAM)
6
7 try:
8     sentence = input("\nEnter file name: ")
9     clientSocket.sendto(bytes(sentence, "utf-8"), (serverName, serverPort))
10    filecontents, serverAddress = clientSocket.recvfrom(1024)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS D:\jyothika\CN> & C:/Users/Jyothika/AppData/Local/Programs/Python/Python311/python.exe d:/jyothika/CN/UDP/ClientUDP.py
Enter file name: d:\jyothika\CN\UDP\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(1024)
    serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
    print ('\nSent contents of ', end = ' ')
    print (sentence)
    # for i in sentence:
    # print (str(i), end = '')
    file.close()
PS D:\jyothika\CN> []
```

```
ServerUDP.py X ClientUDP.py
UDP > ServerUDP.py > ...
1 from socket import *
2 serverPort = 12000
3 serverSocket = socket(AF_INET, SOCK_DGRAM)
4 serverSocket.bind(("127.0.0.1", serverPort))
5 print ("The server is ready to receive")
6 while 1:
7     sentence, clientAddress = serverSocket.recvfrom(2048)
8     sentence = sentence.decode("utf-8")
9     file=open(sentence,"r")
10    con=file.read(1024)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS D:\jyothika\CN> & C:/Users/Jyothika/AppData/Local/Programs/Python/Python311/python.exe d:/jyothika/CN/UDP/ServerUDP.py
The server is ready to receive
Sent contents of d:\jyothika\CN\UDP\ServerUDP.py
```