PROJECT

Name of Laboratory: Computer Network Lab

Paper Code: EC 692

Department: Electronics and Communication Engineering

Year: 3rd

Semester: 6th

Group Number: 06

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QUESTION:

Design a GUI-based interface for implementing computer network□based applications using the concept of socket programming that may be effective for real-time problems

INPUT CODE:

for server

Server.py - C:\Users\user\Desktop\group 6\gui project\Server\Server.py (3.8.3)

File Edit Format Run Options Window Help

```
import pyautogui as pag
import socket
import os , shutil
import time
from PIL import Image
address = 0
m = 0
data = ""
data1 = ''
s = socket.socket()
s.bind(("192.168.0.102",9090))
s.listen(5)
dirs = os.listdir("transfer image")

while address == 0:
    c , address = s.accept()
time.sleep(0.1)
for file in dirs:
    i = open("transfer image/" + file , "rb") #read in binary mode
    for k in i:
        c.send(k)
    print(file + " image sent sucessfully")
    time.sleep(0.5)
    c.send(b"next")
while True:
    pass
```

for client

Client.py - C:\Users\user\Desktop\group 6\gui project\Client\Client.py (3.8.3)

File Edit Format Run Options Window Help

```
import socket
import os, shutil , sys
from PIL import ImageTk, Image
c = socket.socket()
import time
c.connect(("192.168.0.102" , 9090))
m = 0
condition = True
i = open((str(m) + ".JPG") , "wb") #write in binary mode
while True:
    l = c.recv(1024)
    if l == b'next':
        c.send(b"data")
        m = m + 1
        i = open((str(m) + ".JPG") , "wb")
        print(str(m) + "  received")
    if l != b'next' and l != b'':
        i.write(l)
```

CONNECTION BETWEEN SERVER AND CLIENT:

for server side

Python 3.8.3 Shell

File Edit Shell Debug Options Window Help

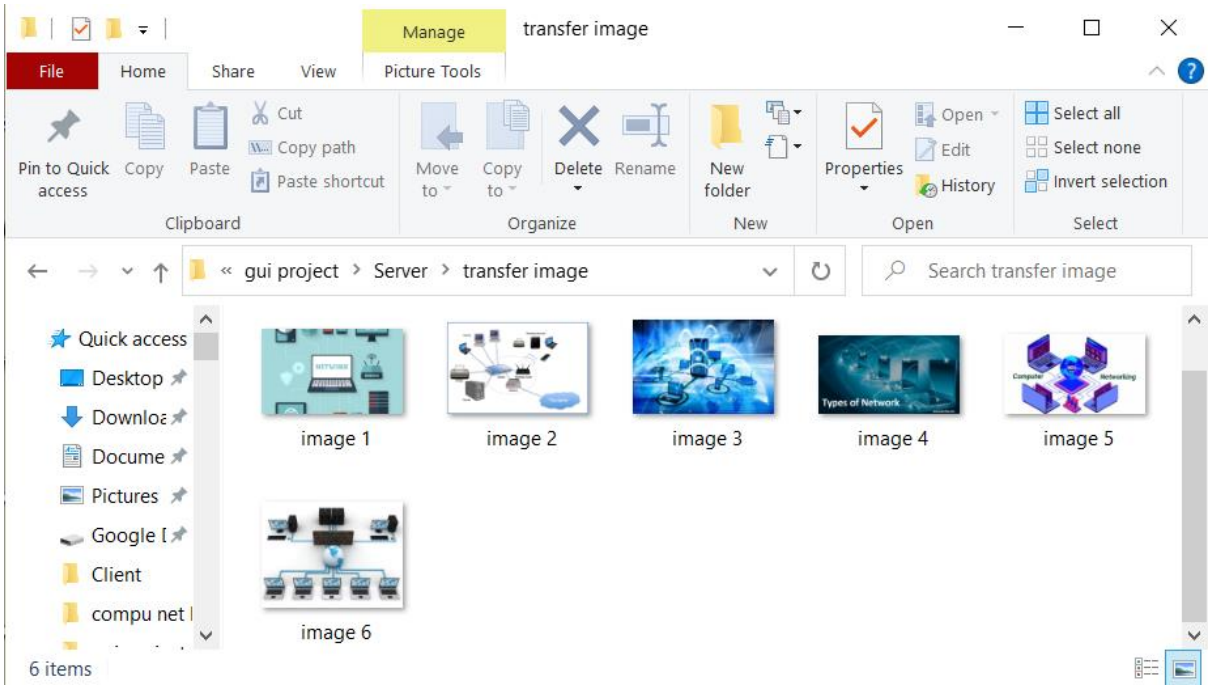
```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:20:19) [MSC v.1925 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\user\Desktop\group 6\gui project\Server\Server.py =====
image 1.png image sent sucessfully
image 2.png image sent sucessfully
image 3.jpg image sent sucessfully
image 4.png image sent sucessfully
image 5.jpg image sent sucessfully
image 6.jpg image sent sucessfully
```

for client side

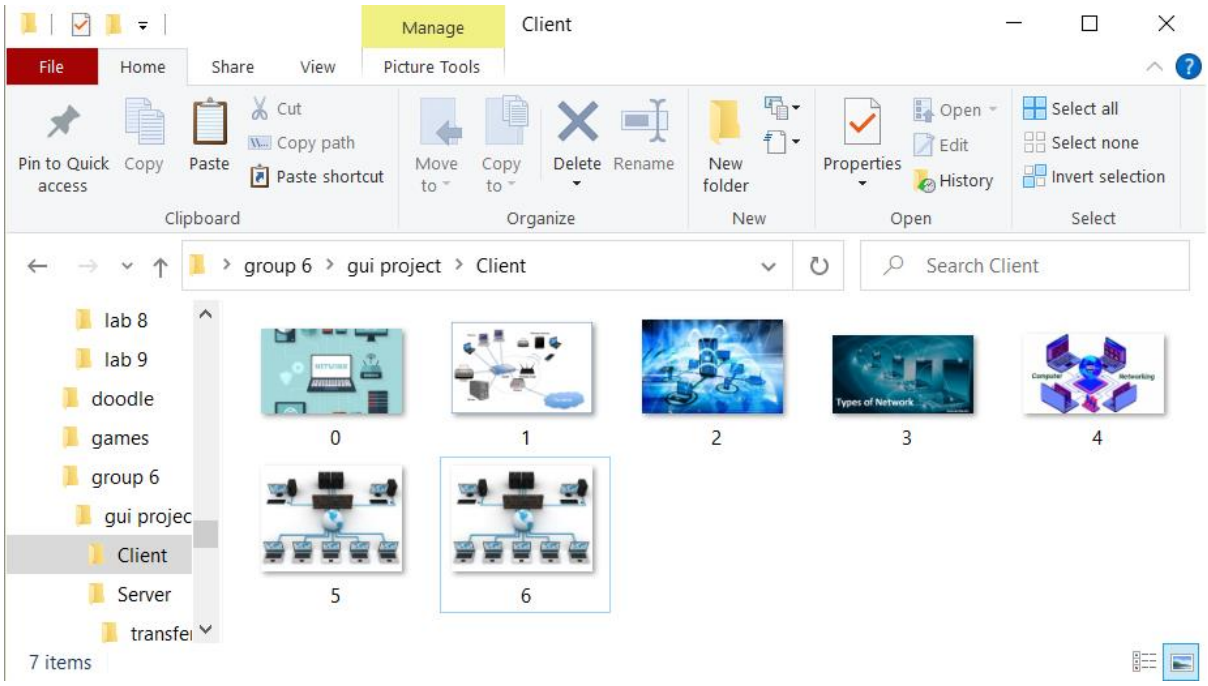
```
Python 3.8.3 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:20:19) [MSC v.1925 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\user\Desktop\group 6\gui project\Client\Client.py =====
1  received
2  received
3  received
4  received
5  received
6  received
```

FINAL OUTPUT:

Images that should be transferred to client



Images that are received from the server



CONCLUSION:

Thus we have designed a GUI-based interface for implementing computer network based application using socket programming for transferring images that may be effective for solving real-time problems.