LAB 4

Computer Networks

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BSCS-5A

**TCP Client:**

**from** socket **import** \*  
**import** base64  
serverIP =**'192.168.8.100'**serverPort=50017  
clientSocket = socket(AF\_INET, SOCK\_STREAM)  
sentence = raw\_input (**'enter the file name : '**)  
clientSocket.connect((serverIP,serverPort))  
clientSocket.send(sentence)  
**print** clientSocket.recv(1024)  
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**print** clientSocket.recv(1024)  
content=clientSocket.recv(1024)  
f=open(sentence,**"wb"**) *#create a file*f.write(base64.b64decode(content)) *#writes the content received from server into the file*clientSocket.close()

**TCP Server:**

**from** socket **import** \*  
**import** os  
**import** base64  
  
serverPort=50017  
serverSocket=socket(AF\_INET,SOCK\_STREAM)  
serverSocket.bind((**''**,serverPort))  
serverSocket.listen(1)  
**print "The server is ready to receive"  
def** find\_all(name, path):  
 result = []  
 **for** root, dirs, files **in** os.walk(path):  
 **if** name **in** files:  
 result.append(os.path.join(root, name))  
 fl = open(os.path.join(root, name),**"rb"**) *#opening file for reading* content = base64.b64encode(fl.read()) *#adding content*

**else**:  
 result.append(**"file not found"**)

**return** result,content  
**def** size(path):  
 **if** os.path.isfile(path):  
 file\_info = os.stat(path)  
 **return** file\_info.st\_size  
  
**while** 1:  
 connectionSocket, addr = serverSocket.accept()  
 sentence = connectionSocket.recv(1024)  
 a,data = find\_all(sentence, **"F:\Downloads"**)  
 **for** u **in** a:  
 b=str(size(u)) *#size of file* b+=**" bytes"**

dict[u]=b *#maintaing dictionary of path and size*connectionSocket.send(u) *#path of file* connectionSocket.send(b)  
 connectionSocket.send(data) *#content of file to copy in client machine* connectionSocket.close()

