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CSC 138
Professor Sun
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TCP/UDP Server-Client

TCP server code

TCPserver.py	TCPClient.py	
<pre>1 from socket import * 2 serverPort = 12543 3 serverSocket = socket(AF_INET, SOCK_STREAM) #create the welcoming socket 4 serverSocket.bind(('', serverPort)) 5 serverSocket.listen(1) #listen for incoming requests 6 print 'The server is ready to recieve' 7 8 while 1: 9 connectionSocket, addr = serverSocket.accept() #wait on accept for incoming requests 10 11 sentence = connectionSocket.recv(1024).decode() 12 capitalizedSentence = sentence.upper() 13 connectionSocket.send(capitalizedSentence.encode()) 14 connectionSocket.close() 15</pre>		

TCP server run

```
python /home/aser1206/CSCClasses/CSC138
File Edit View Search Terminal Help
~/C/CSC138 ➤ python TCPserver.py
The server is ready to recieve
```

TCP client code

TCPserver.py	TCPClient.py
<pre>1 from socket import * 2 serverName = '127.0.0.1' 3 serverPort = 12543 4 clientSocket = socket(AF_INET, SOCK_STREAM) 5 clientSocket.connect((serverName, serverPort)) 6 sentence = raw_input('Enter a sentence all lowercase: \n') 7 clientSocket.send(sentence.encode()) 8 modifiedSentence = clientSocket.recv(1024) 9 print('From server: ', modifiedSentence.decode()) 10 clientSocket.close() 11</pre>	

TCP client run

```
fish /home/asner1206/CSCClasses/CSC138
File Edit View Search Terminal Help
~/C/CSC138
~/C/CSC138 python TCPClient.py
Enter a sentence all lowercase:
What a programmer can do in a month two programmers can do in two
('From server: ', u'WHAT A PROGRAMMER CAN DO IN A MONTH TWO PROGRAMMERS CAN DO I
N TWO')
~/C/CSC138 |
```

UDP server code

TCPserver.py	TCPClient.py	UDPServer.py
<pre>1 from socket import * 2 serverPort = 12544 3 serverSocket = socket(AF_INET, SOCK_DGRAM) #create UDP socket 4 serverSocket.bind(('', serverPort)) 5 #serverSocket.listen(1) #listen for incoming requests 6 print 'The server is ready to recieve' 7 8 while 1: 9 message, clientAddress = serverSocket.recvfrom(2048) #read from udp socket into message 10 modifiedMessage = message.decode().upper() 11 serverSocket.sendto(modifiedMessage.encode(), clientAddress)</pre>		

UDP server run

```
python /home/asr1206/CSCClasses/CSC138

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~/C/CSC138 ➤ python UDPServer.py
The server is ready to recieve
|
```

UDP client code

TCPserver.py	TCPClient.py	UDPServer.py	UDPClient.py
<pre>1 from socket import * 2 serverName = '127.0.0.1' 3 serverPort = 12544 4 clientSocket = socket(AF_INET, SOCK_DGRAM) 5 sentence = raw_input('Enter a sentence all lowercase: \n') 6 clientSocket.sendto(sentence.encode(), (serverName, serverPort)) 7 modifiedSentence, serverAddress = clientSocket.recvfrom(1024) 8 print 'From server: ', modifiedSentence.decode() 9 clientSocket.close() 10</pre>			

UDP client run

```
fish /home/asr1206/CSCClasses/CSC138

File Edit View Search Terminal Help

~/C/CSC138 ➤ python UDPClient.py
Enter a sentence all lowercase:
in csc if you are wrong it is not that bad because you are only a bit off
From server: IN CSC IF YOU ARE WRONG IT IS NOT THAT BAD BECAUSE YOU ARE ONLY A
BIT OFF
~/C/CSC138 ➤ |
```