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CSC 138
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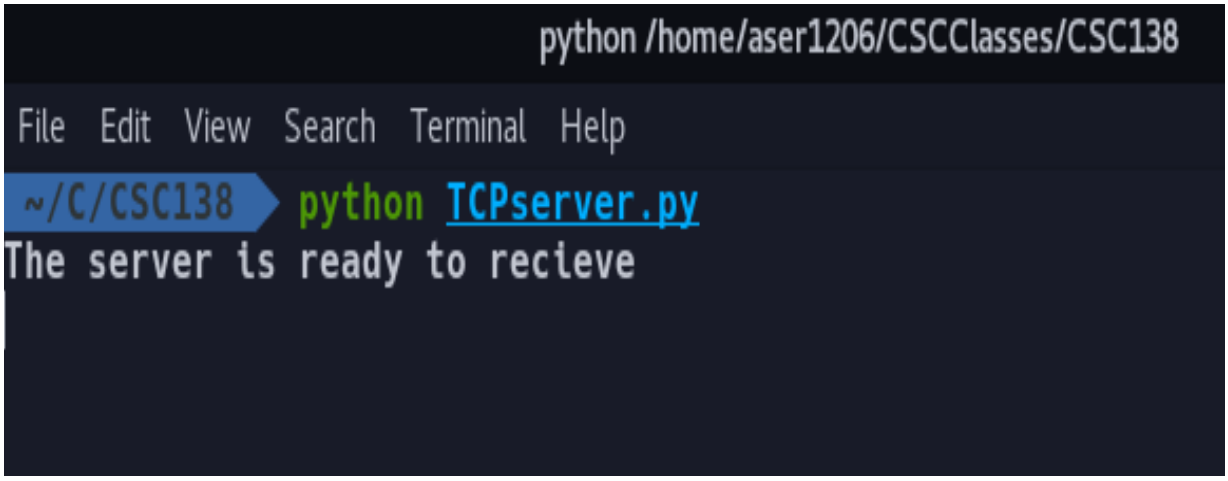
TCP/UDP Server-Client

TCP server code

TCPserver.py

```
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
```

TCP server run



TCP client code

TCPserver.py | TCPClient.py

```
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
```

TCP client run

fish /home/aser1206/CSCClasses/CSC138

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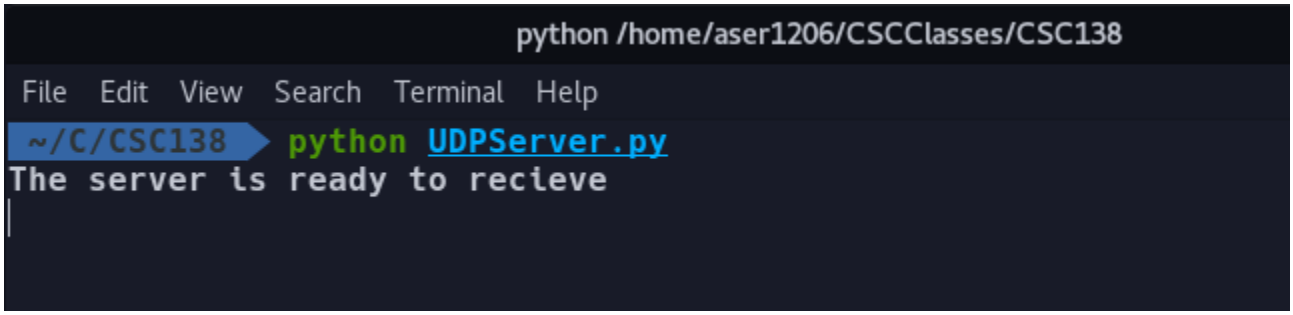
```
~/C/CSC138
~/C/CSC138 python TCPClient.py
Enter a sentence all lowercase:
What a programmer can do in a month two programmers can do in two
('From server: ', u'WHAT A PROGRAMMER CAN DO IN A MONTH TWO PROGRAMMERS CAN DO I
N TWO')
~/C/CSC138
```

UDP server code

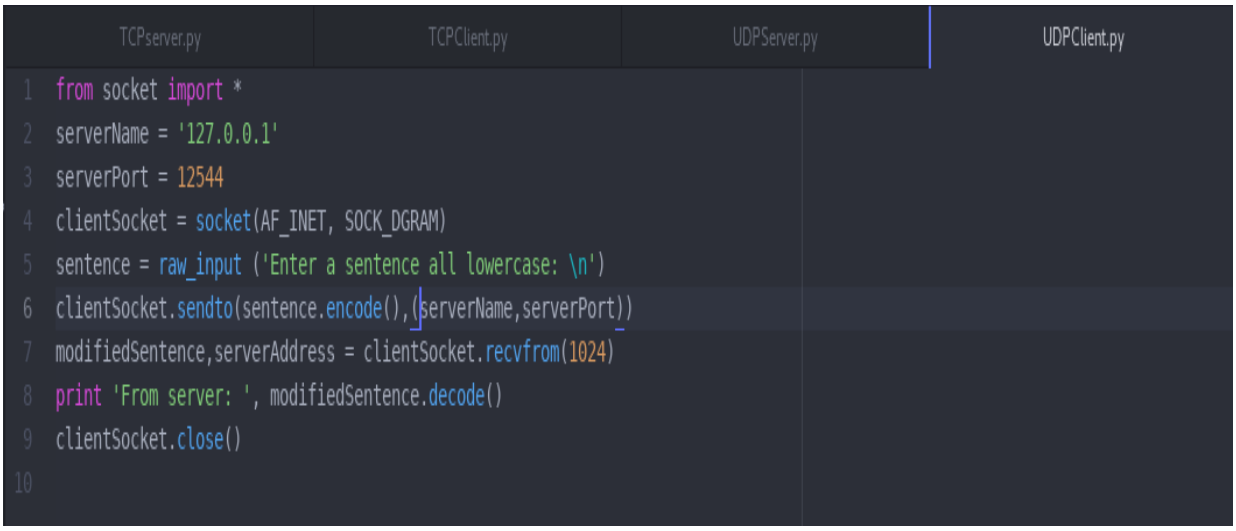
TCPserver.py | TCPClient.py | UDPServer.py

```
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     modiffiedMessage = message.decode().upper()
11     serverSocket.sendto(modiffiedMessage.encode(),clientAddress)
```

UDP server run



UDP client code



UDP client run