Jaskarn Jagpal
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Csc 138 T, TH 1240-410

Socket Programming- Assignment 1

- **UDP implementation:**
  - **Client**:
    - **From socket import***
    - **serverName = 'localhost'**
    - **serverPort = 12000**
    - **clientSocket = socket(AF_INET, SOCK_DGRAM)**
    - **message = raw_input('Input lowercase sentence: ')**
    - **clientSocket.sendto(message, (serverName, serverPort))**
    - **modifiedMessage, serverAddress = clientSocket.recvfrom(2048)**
    - **print modifiedMessage**
    - **clientSocket.close()**

```
from socket import*

serverName = 'localhost'
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)

message = raw_input('Input lowercase sentence:')
clientSocket.sendto(message,(serverName, serverPort))

modifiedMessage, serverAddress = clientSocket.recvfrom(2048)
print modifiedMessage

clientSocket.close()
~
~
~
```

```
[[jagpalj@athena:28]> ls
client.py  server.py
[[jagpalj@athena:29]> python client.py
[Input lowercase sentence:hello how are you doing today?
HELLO HOW ARE YOU DOING TODAY?
[jagpalj@athena:30]>
```

- **Server**:
  - **From socket import***
  - **serverPort = 12000**
  - **serverSocket = socket(AF_INET, SOCK_DGRAM)**
  - **serverSocket.bind((‘ ‘, serverPort))**
  - **print ‘The server is ready to receive’**
  - **while 1:**
    - **message, clientAddress = serverSocket.recvfrom(2048)**
    - **modifedMessage = message.upper()**
    - **serverSocket.sendto(modifedMessage, clientAddress)**

```
from socket import*
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(('', serverPort))
print 'The server is ready to recieve'
while 1:
        message, clientAddress = serverSocket.recvfrom(2048)
        modifiedMessage = message.upper()
        serverSocket.sendto(modifiedMessage, clientAddress)
~
~
~
~
~
```

```
[[jagpalj@athena:36]> ls
TCP/  UDP/
[[jagpalj@athena:37]> cd UDP
[[jagpalj@athena:38]> ls
client.py  server.py
[[jagpalj@athena:39]> python server.py
The server is ready to recieve
```

- **TCP Implementation:**
  - **Client**
    - **From socket import***
    - **serverName = 'localhost'**
    - **serverPort = 12000**
    - **clientSocket = socket(AF_INET, SOCK_STREAM)**
    - **clientSocket.connect((serverName, serverPort))**
    - **sentence = raw_input('input lowercase sentence: ')**
    - **clientSocket.send(sentence)**
    - **modifiedSentence = clientSocket.recv(1024)**
    - **print 'From Server: ', modifiedSentence**
    - **clientSocket.close()**

```
from socket import *
serverName = 'localhost'
serverPort = 12000

clientSocket = socket(AF_INET, SOCK_STREAM)
clientSocket.connect((serverName, serverPort))

sentence = raw_input('input lowercase sentence:')
clientSocket.send(sentence)
modifiedSentence = clientSocket.recv(1024)

print 'From Server:', modifiedSentence
clientSocket.close()
~
~
```

```
[[jagpalj@athena:32]> ls
TCP/  UDP/
[[jagpalj@athena:33]> cd TCP
[[jagpalj@athena:34]> ls
client.py  server.py
[[jagpalj@athena:35]> python client.py
[input lowercase sentence:Hello how are you doing today?
From Server: HELLO HOW ARE YOU DOING TODAY?
 [jagpalj@athena:36]>
```

- **Server**
  - **From socket import***
  - **serverPort = 12000**
  - **serverSocket = socket(AF_INET, SOCK_STREAM)**
  - **serverSocket.bind((‘ ‘, serverPort))**
  - **serverSocket.listen(1)**
  - **print ‘The server is ready to receive’**
  - **while 1:**
    - **connectionSocket, addr = serverSocket.accept()**
    - **sentence = connectionSocket.recv(1024)**
    - **capitalizedSentence = sentence.upper()**
    - **connectionSocket.send(capitalizedSentence)**
    - **conectionScoket.close()**

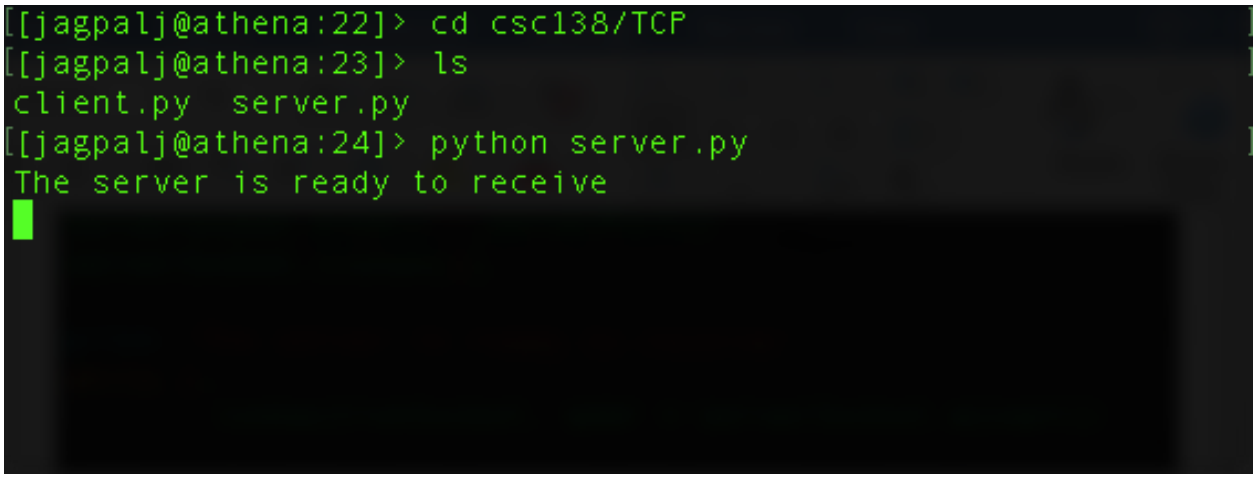
```
from socket import*

serverPort = 12000
serverSocket = socket(AF_INET, SOCK_STREAM)
serverSocket.bind(('',serverPort))
serverSocket.listen(1)

print 'The server is ready to receive'
while 1:
        connectionSocket, addr = serverSocket.accept()

        sentence = connectionSocket.recv(1024)
        capitalizedSentence = sentence.upper()
        connectionSocket.send(capitalizedSentence)

        connectionSocket.close()
```

- 
[[jagpalj@athena:22]> cd csc138/TCP
[[jagpalj@athena:23]> ls
client.py server.py
[[jagpalj@athena:24]> python server.py
The server is ready to receive