NYIT

**Fall 2021**

Homework No: 08

Title: InetAddress and IO TCP/IP

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**Class ID#:**  11

**School ID#:** 1284979

**Course:** Java Networking

**Course ID:** CSCI 725

**Date:** 14/11/2021

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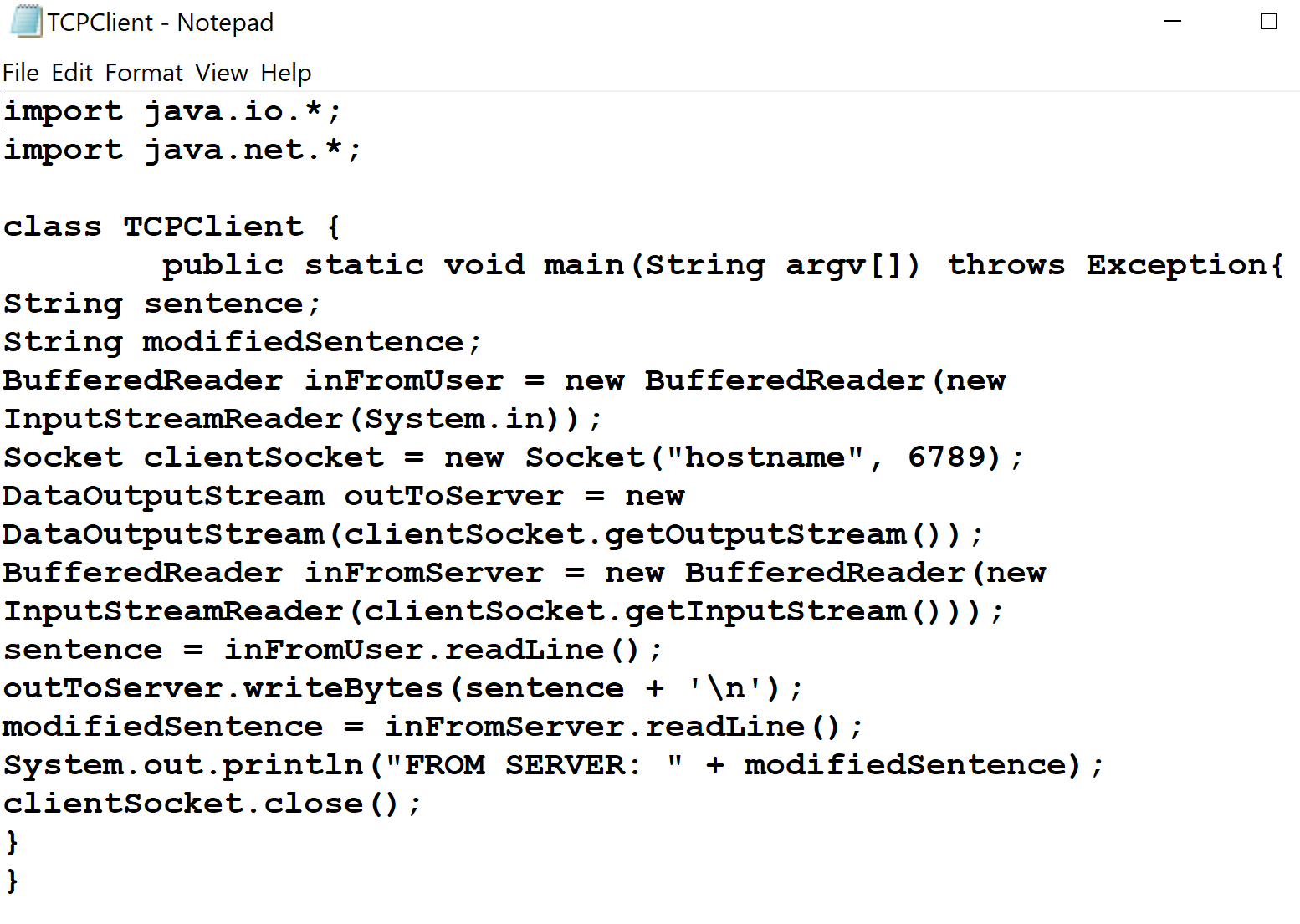
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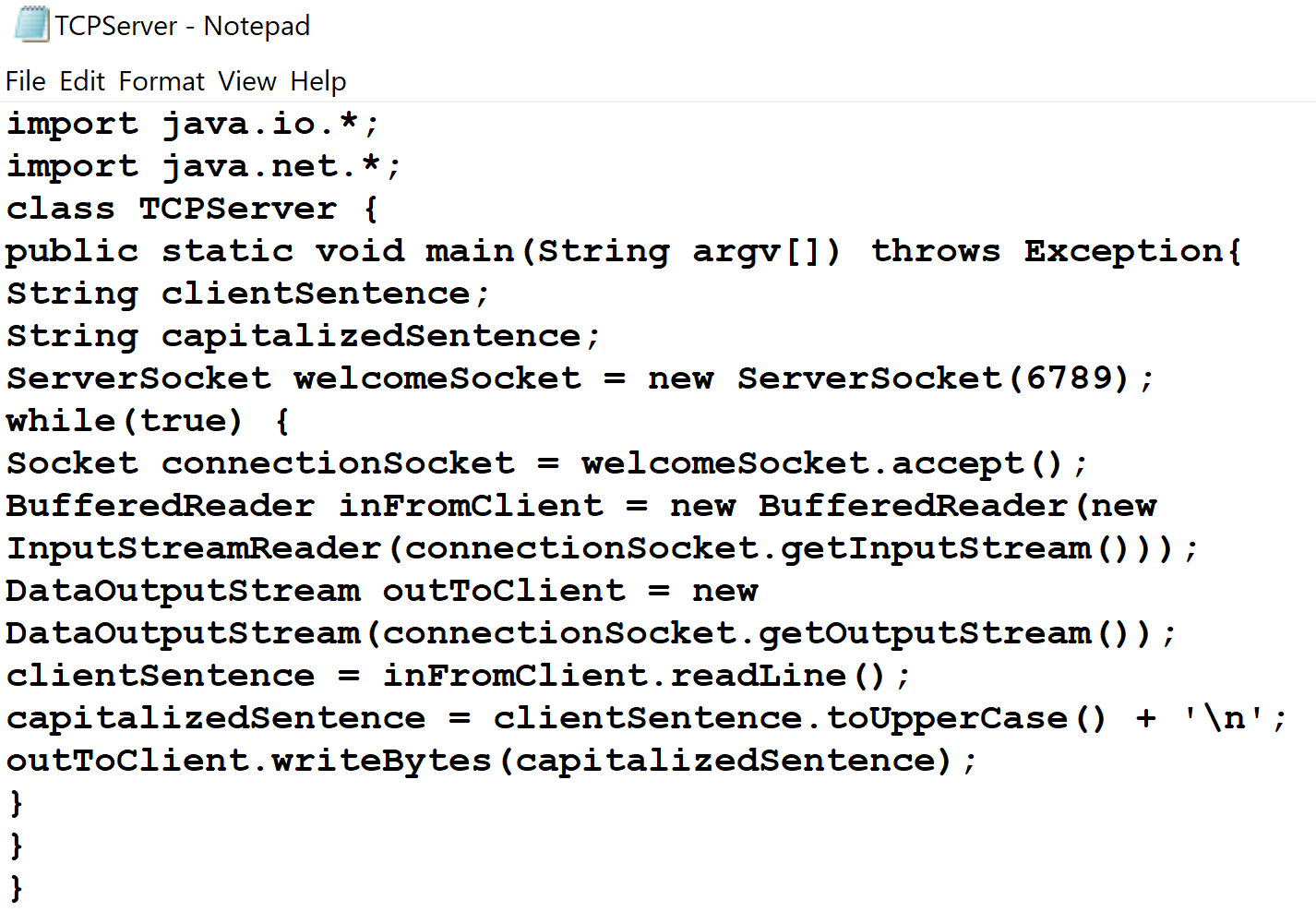
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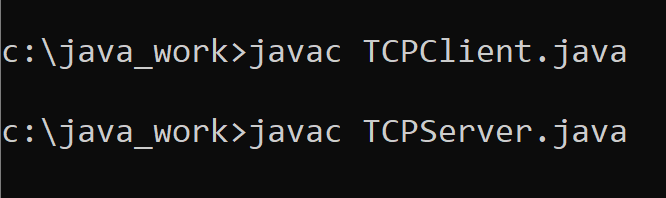
# 1) TCP Client:



# 2) TCP Server:



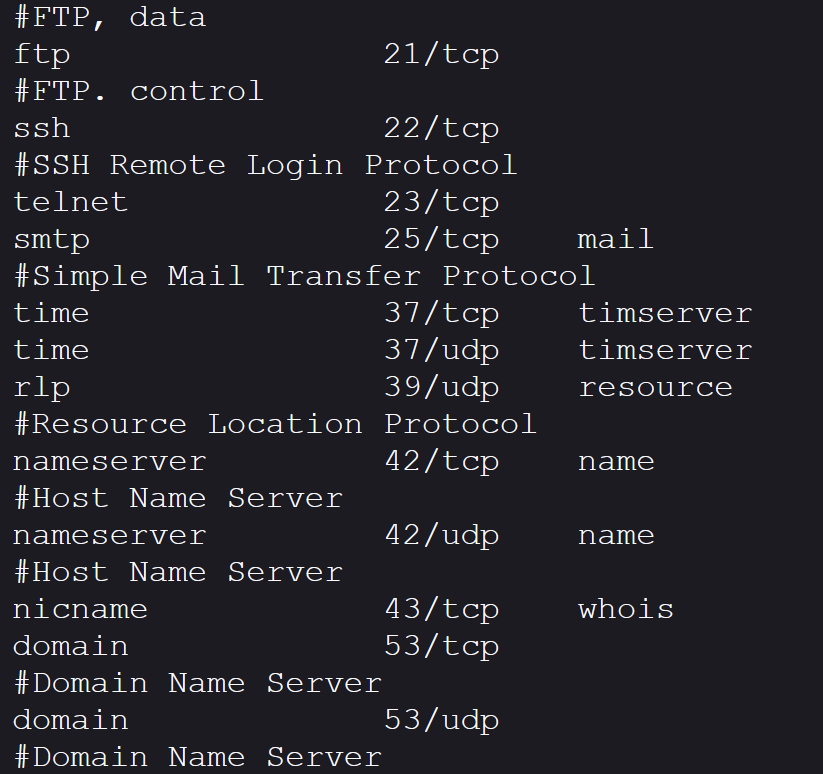
Result:



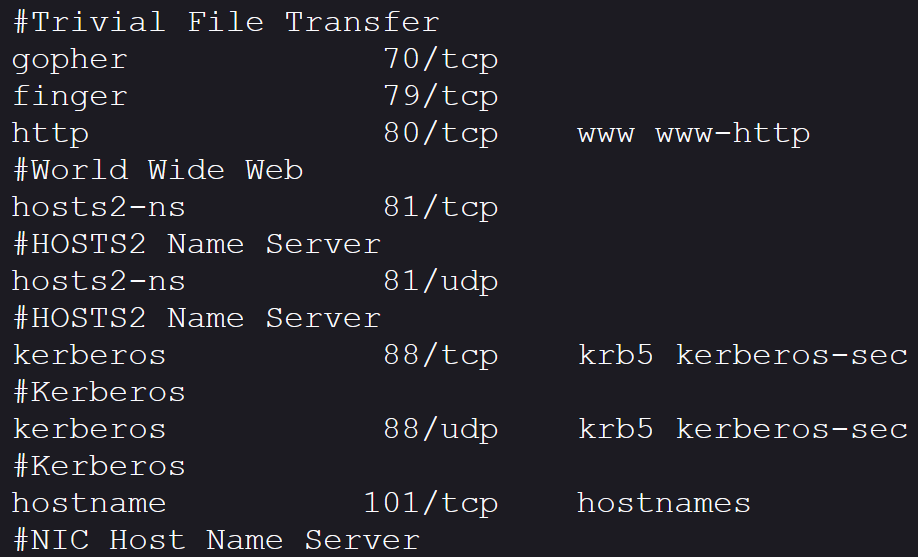
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## Windows: %windir%\System32\drivers\etc\services

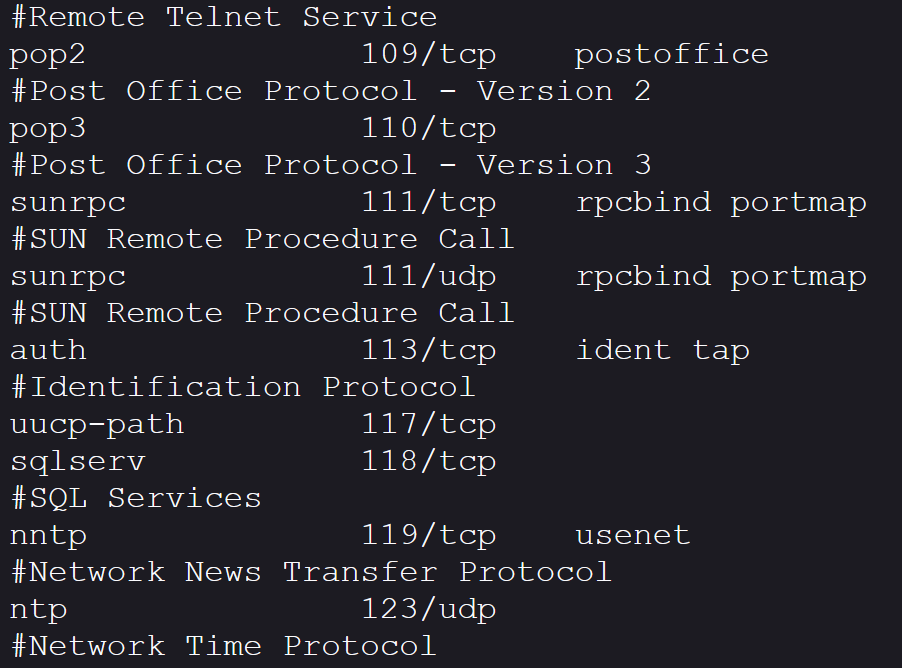
# 3) Port 25 = SMTP



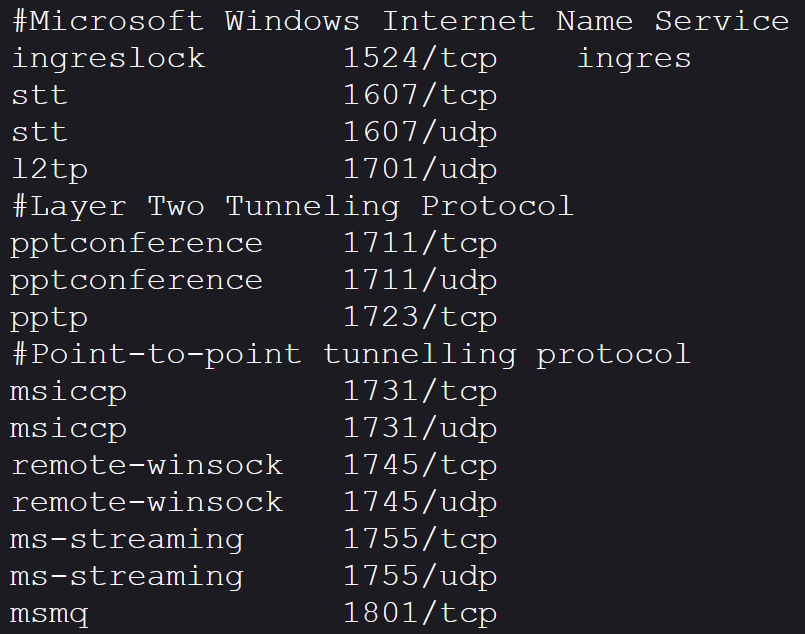
# 4) Port 80 = HTTP



# 5) Port 110 = POP3

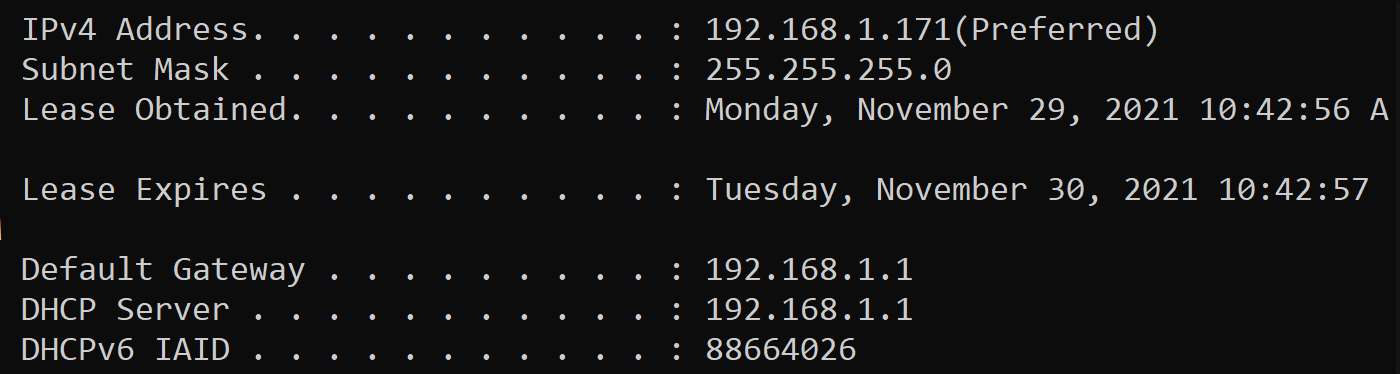


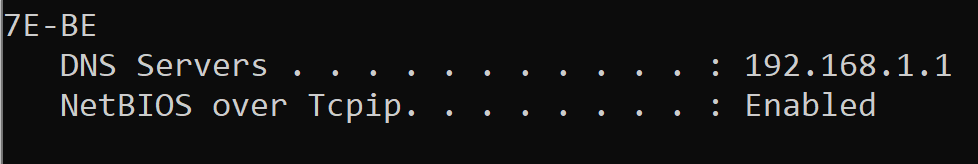
# 6) Port 1723 = PPTP



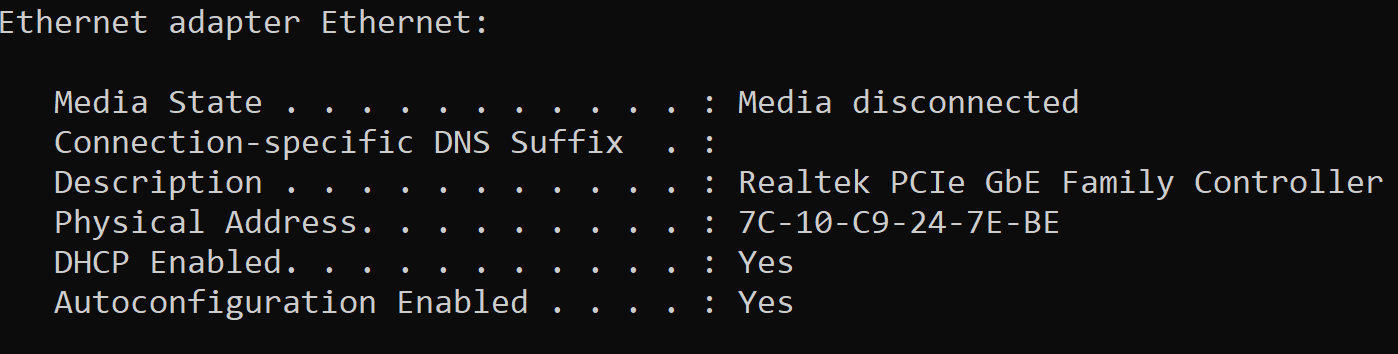
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# 7) TCP/IP Configuration Parameters.

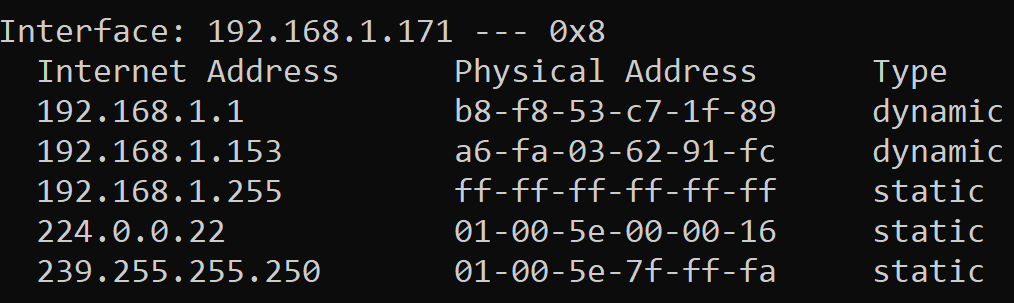




# 8) Basic TCP/IP Configuration Parameters.

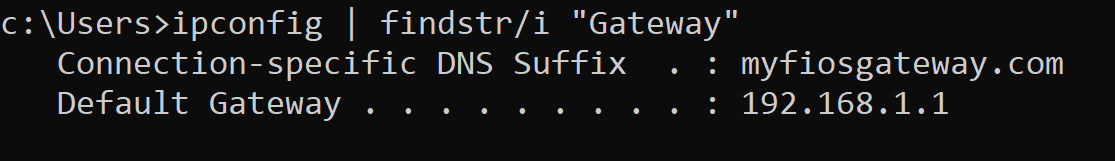


# 9) Using arp command.

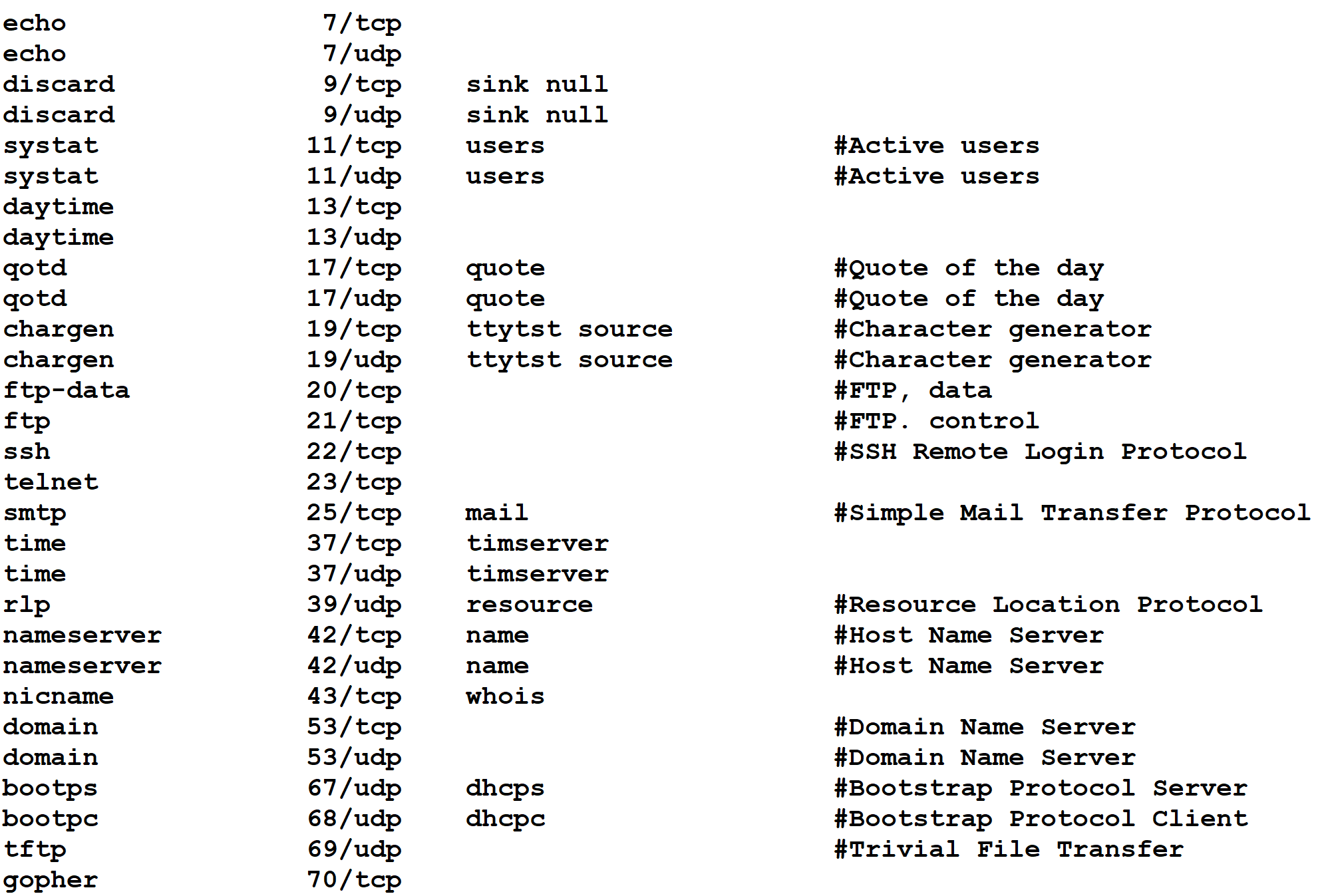


# 10) Local Router IP Number.

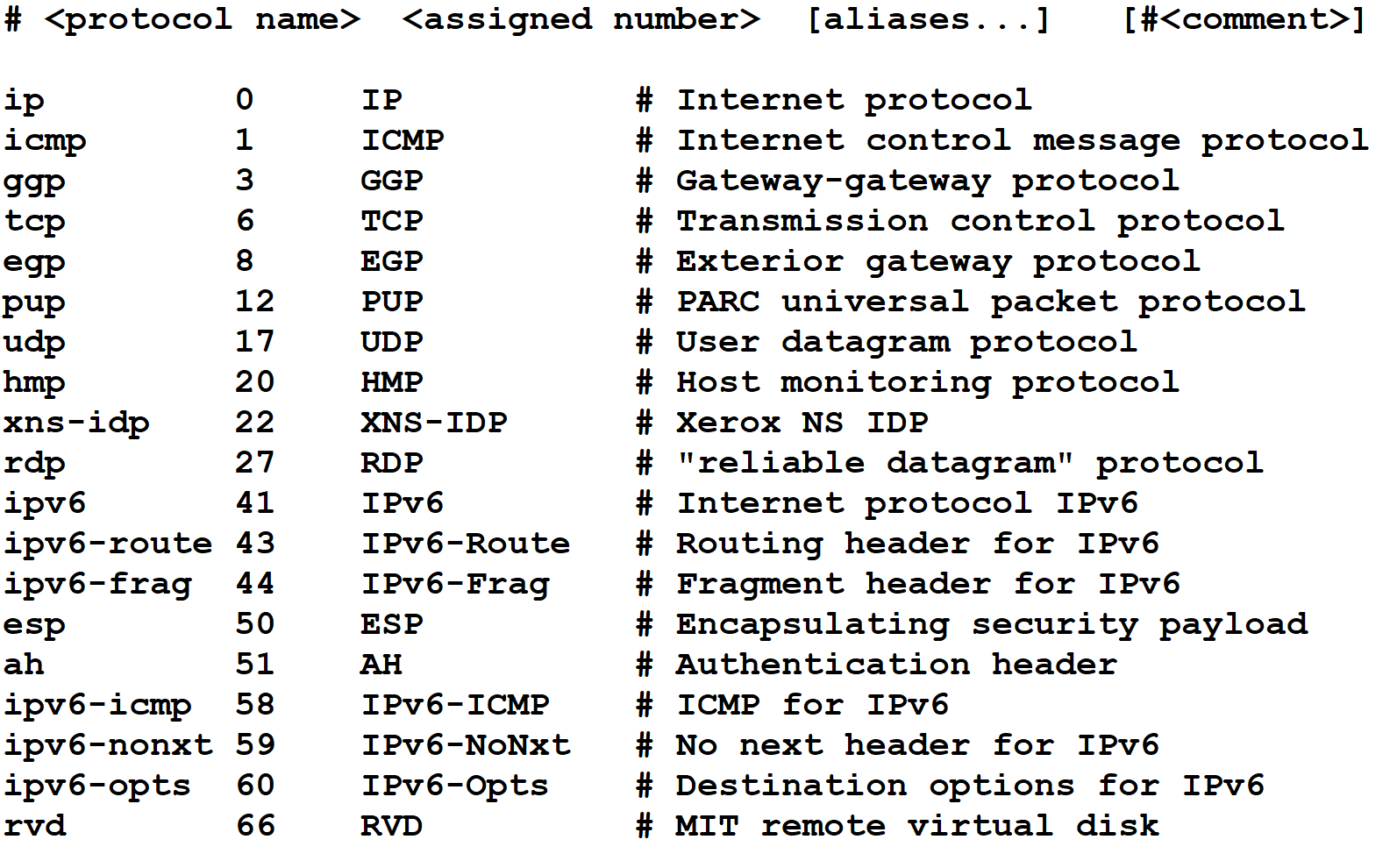
## **ipconfig | findstr /i "Gateway"**



# 11) **/etc/services** file.



# 12) **/etc/protocol** file.

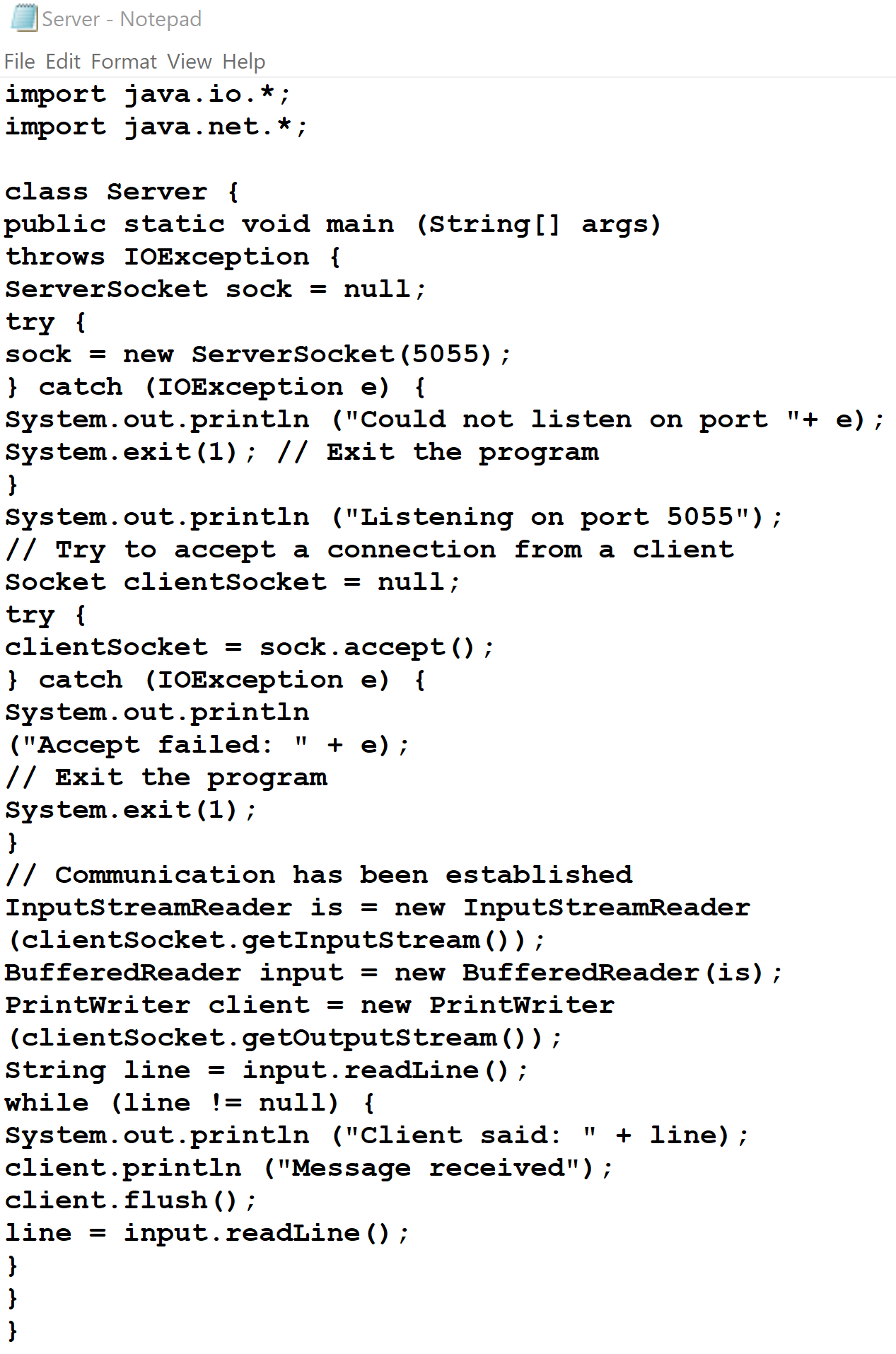


# Work from: [Client/server computing (tfbor.com)](http://tfbor.com/02_725/08_c_IO_TCPip/725_08_Text_02_Homework_ClientServer.pdf)

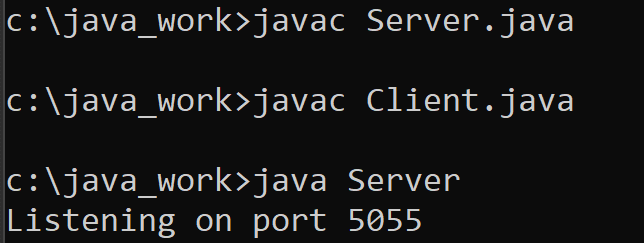
# 13) Client Program.



# 14) Server Program.



Result:

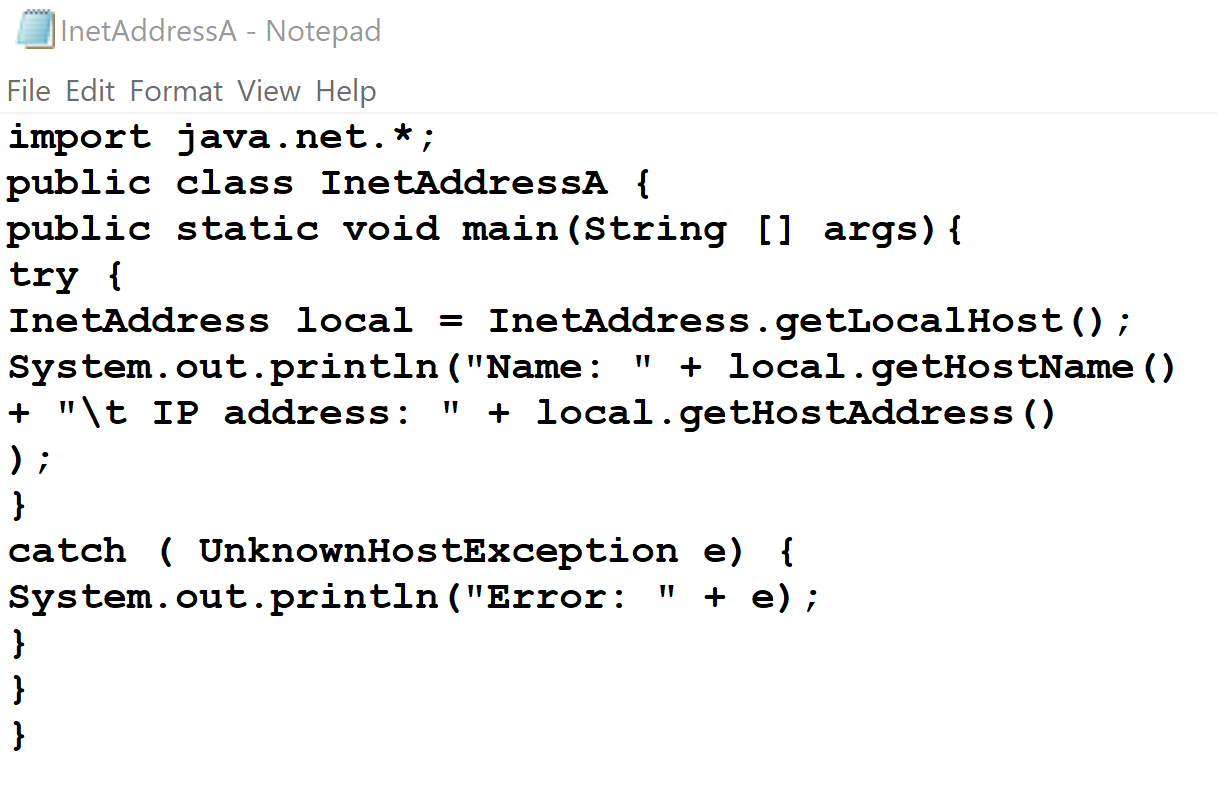


Work from: [Microsoft PowerPoint - 725\_08\_Lecture\_02\_InetAddress\_Examples\_\_\_\_\_\_\_\_.pptx (tfbor.com)](http://tfbor.com/02_725/08_InetAddress/725_08_Lecture_02_InetAddress_Examples________.pdf)

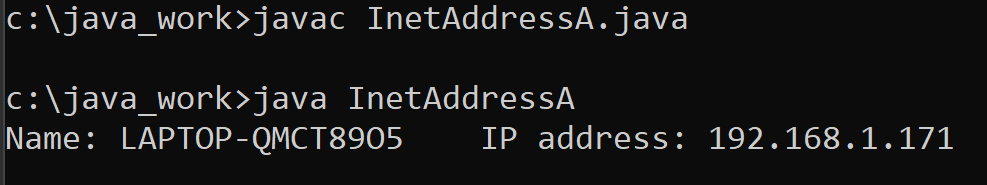
# 15) What does IP address identify precisely?

Ans) Operating system providing IP kernel service.

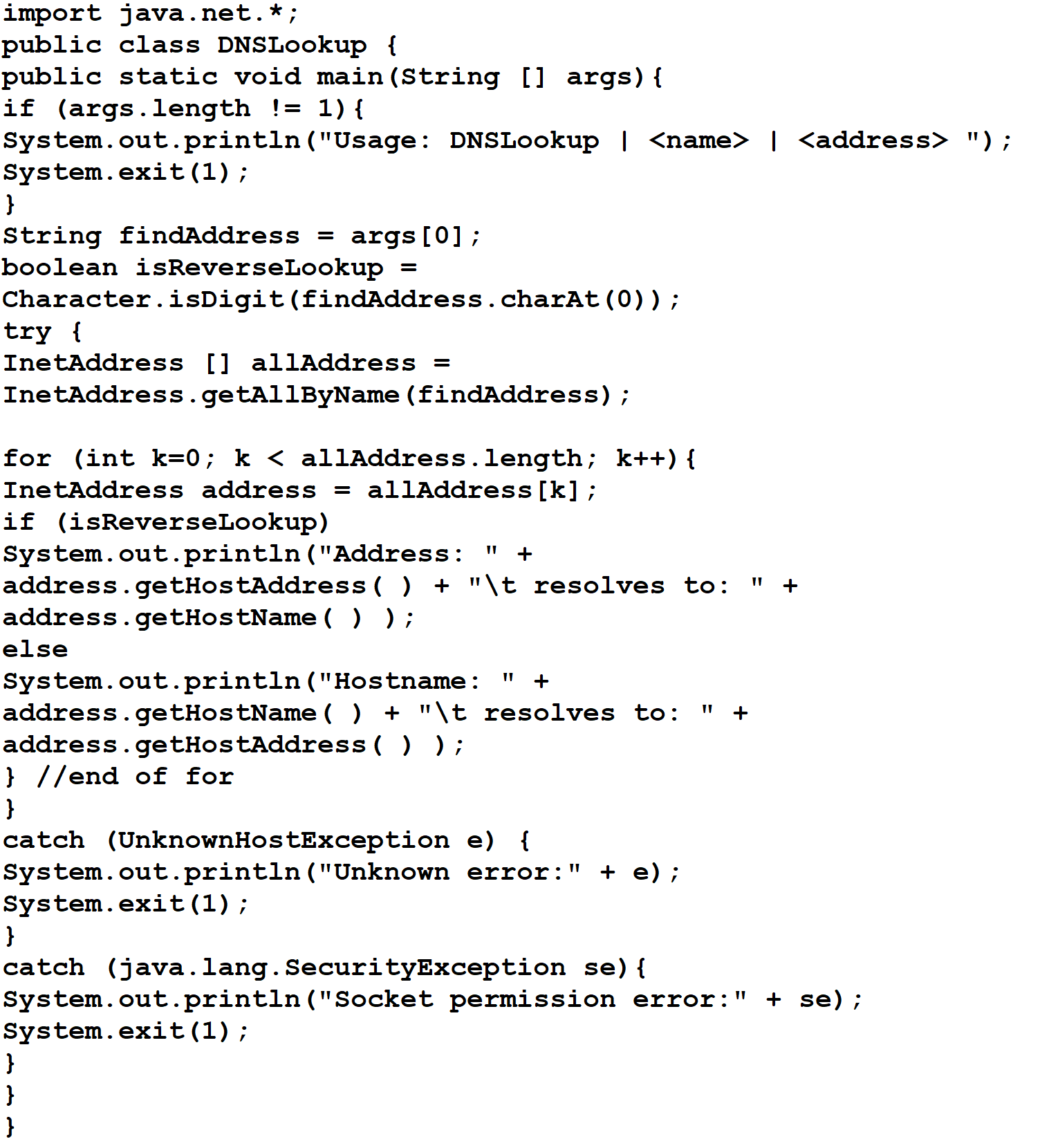
# 16) InetAddressA Class.



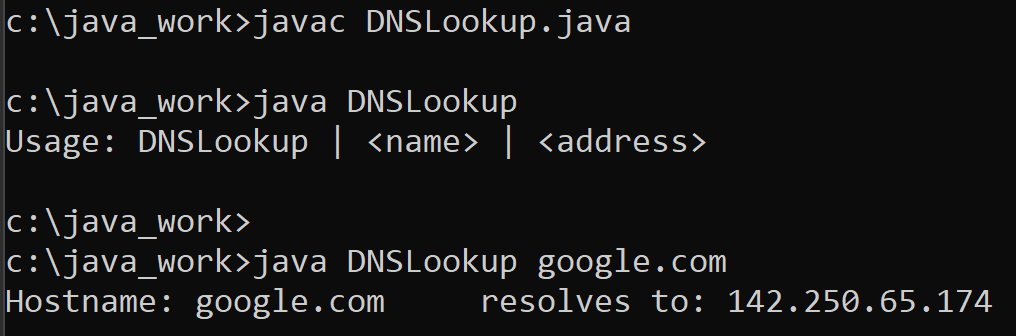
Result:



# 17) DNSLookup Class.



Result:



# Work from: [Microsoft PowerPoint - 725\_08\_Lecture\_02\_OS\_DNS\_shsh\_\_\_\_\_\_.pptx (tfbor.com)](http://tfbor.com/02_725/08_InetAddress/725_08_Lecture_02_OS_DNS_.pdf)

# 18) What are the specific domain length naming restrictions?

Answer)

* There is a 255-character limit (including the dots) per FQDN.
* There is a 63 character limit per domain label.
* Names should only contain alphas, numerics, and the dash.

# 19) What is the difference between the fully qualified name of a domain (FQDN) and the relative domain name (RDN)?

Answer)

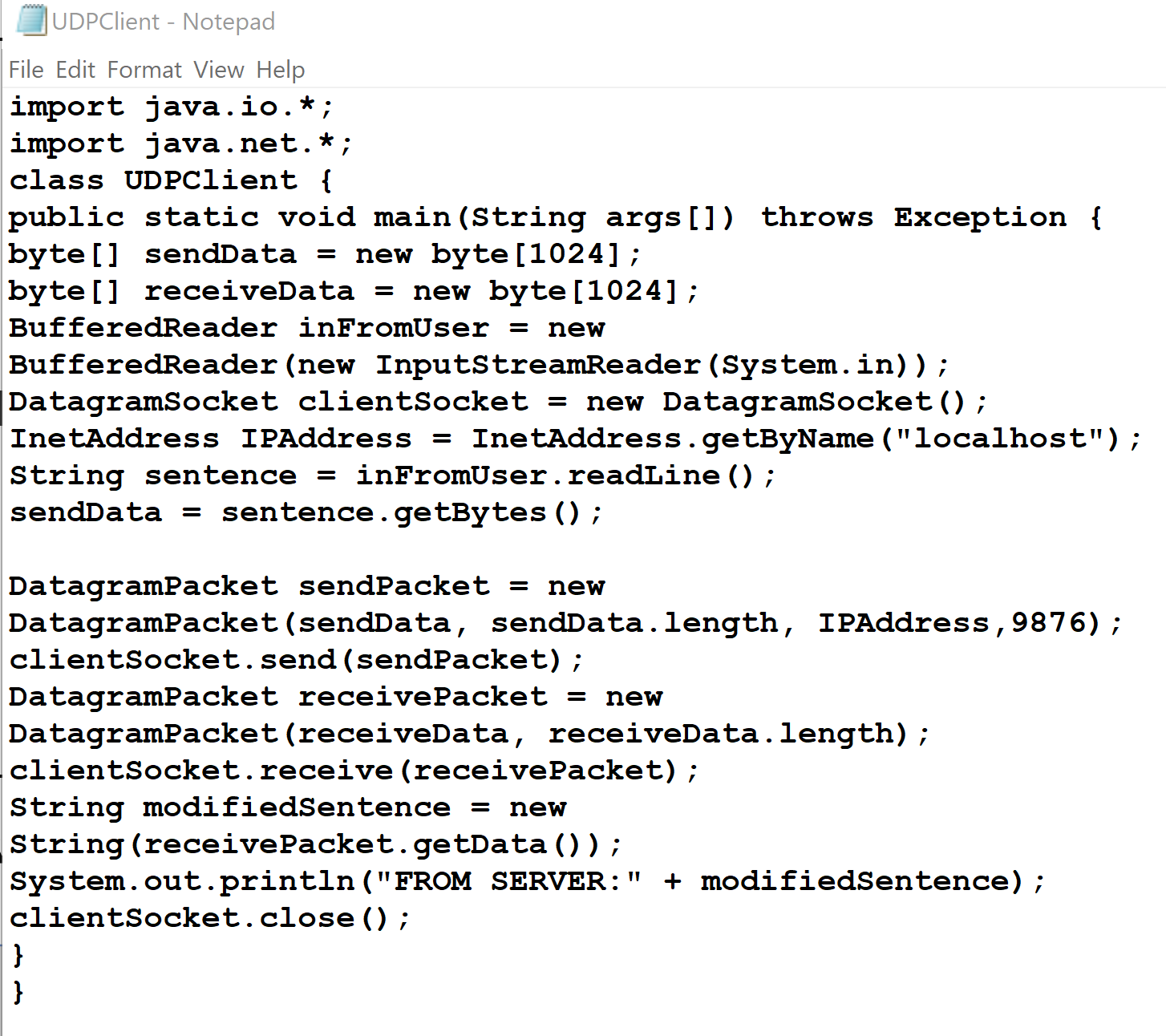
The fully qualified name of a domain is specified by appending all names from the leaf node up to the root of the name tree using a dot as the separator and including a trailing dot. Relative domain names do not end in a dot.

# 20) Name servers:

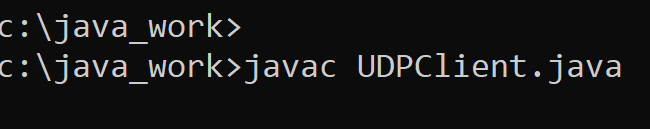
* Solve network reliability problems.
* Make applications distributed.
* **Enable faster programming and execution of distributed operations.**

Work from: [Microsoft PowerPoint - 725\_08\_Lecture\_04\_JavaUDP\_v1\_sh\_\_\_\_\_\_\_\_.pptx (tfbor.com)](http://tfbor.com/02_725/08_InetAddress/725_08_Lecture_04_JavaUDP_v1________.pdf)

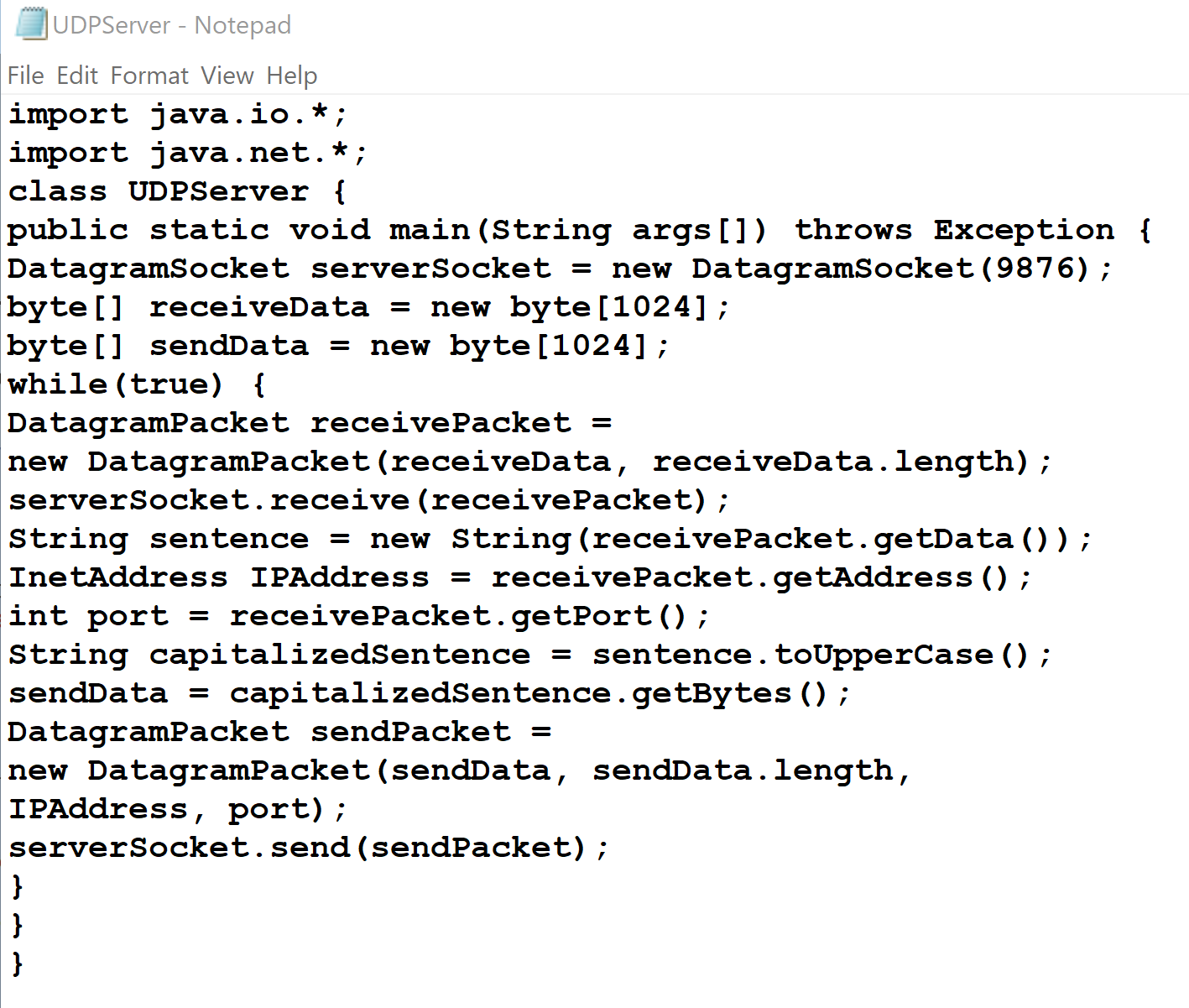
# 21) UDPClient.java Class.



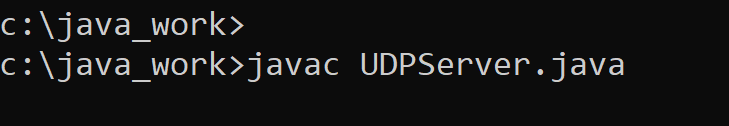
Result:



# 22) UDPServer.java Class.



Result:



# References

[1] [Index of /02\_725/08\_InetAddress (tfbor.com)](http://tfbor.com/02_725/08_InetAddress/)

[2] [Index of /02\_725/08\_c\_IO\_TCPip (tfbor.com)](http://tfbor.com/02_725/08_c_IO_TCPip/)

[3] [InetAddress (Java Platform SE 7 ) (oracle.com)](https://docs.oracle.com/javase/7/docs/api/java/net/InetAddress.html)