D.Y.PATIL COLLEGE OF ENGINEERING & TECHNOLOGY,

KASABA BAWADA, KOLHAPUR

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(2020-2021)

A

Mini Project

Report on

NETWORK DESIGN FOR NETSURF ORGANIZATION

Submitted by:

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146	Akash Bhosale

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Class: SY (CSE) **Div.: B** **Batch :S4 (B16)**

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KOLHAPUR

CERTIFICATE

This is to certify that the mini project group consisting the following members have satisfactorily completed the Mini Project work entitled **"Network Design For Netsurf Organization"** at SY (CSE) semester IV as prescribed in the syllabus of Shivaji University for the academic year 2020-2021.

Name	Exam seat no.
1. Nikhil Pawar	**143**
2.Pranoti Jadhav	**144**
3.Vaishnavi Saudagar	**145**
4.Akash Bhosale	**146**

Date:

Place: Kolhapur

Prof.Dhanashree Patil
(Project Guide)

Prof. B.D.Jitkar
(H.O.D)

External Examiner:

ACKNOWLEDGEMENT

This project work entitled “Network Design for Netsurf Organization” was a formidable task, but with collective effort of our group and active guidance made it possible for us to complete.

First of all, we would like to thank Prof.Dr.B.D.Jitkar (H.O.D), Department of computer science and engineering) delineating us with this project work.

We would also like to express our most humble and deepest gratitude to Prof.Dhanashree Patil (ma’am), for providing us with the right guidance at the time of need it was for his presence and active guidance that we were able to complete the project work.

We would like to thank all our friends for their help, ideas, criticisms and also their encouragements for preparation of this project work. Any further ideas and constructive criticisms on our work shall be highly welcomed.

Date:

Place: Kolhapur

Name **Sign**

1. Nikhil Pawar
2. Pranoti Jadhav
3. Vaishnavi Saudagar
4. Akash Bhosale

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INTRODUCTION :

This document contains the information behind the thought process and planning behind the creation of Network Design of NETSURF Enterprise.

The purpose of the project is to smoothen all the business communication and block the unhealthy sites based on the network policy defined by the enterprise.

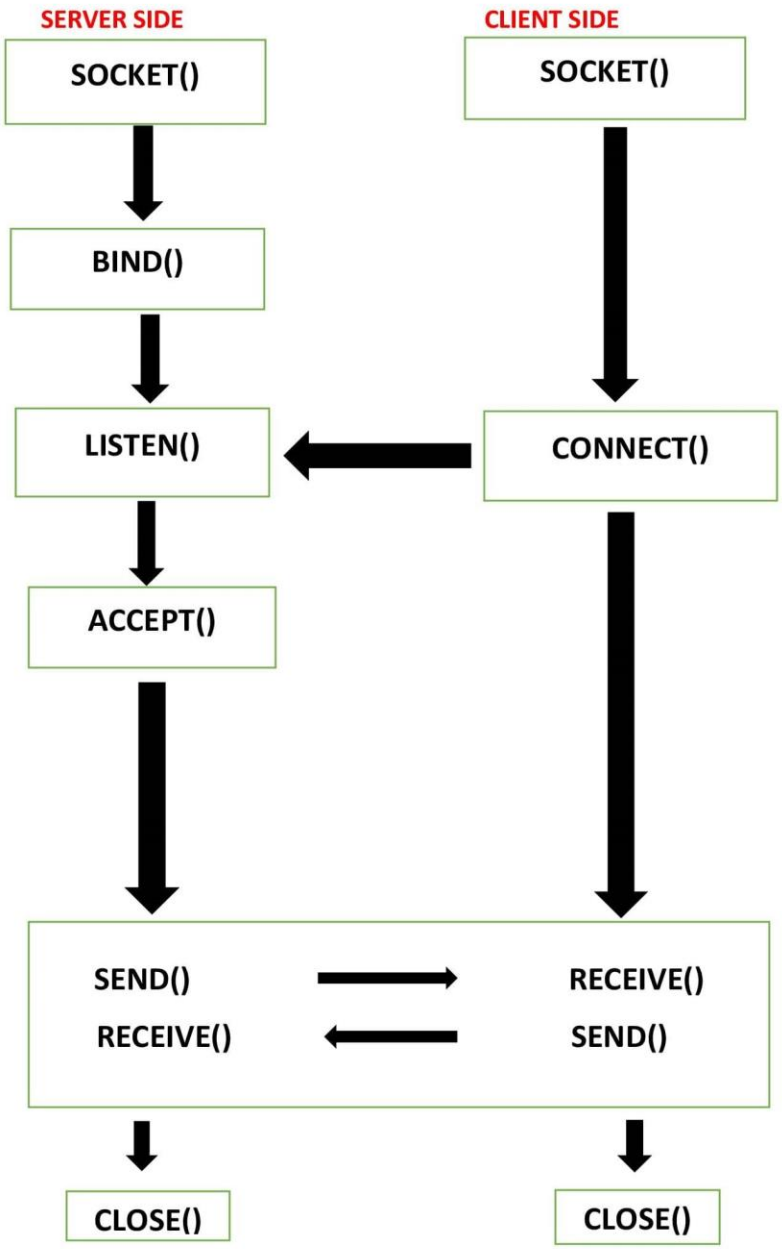
PROBLEM STATEMENT.:

To develop a network infrastructure (Wired or Wireless) that is able to facilitate the traffic and filters based on the network policies NETSURF campus for smooth functioning of all business processes.

Objective:

- To create a network infrastructure to send or receive files between the clients.
- To create their own firewall.
- To block the unhealthy sites based on the network policy defined by the enterprise.

Control Flow Diagram :



Commands (for firewall):

1.To check whether install in the system or not:

Command.; $ sudo apt –get install ufw

2.For checking the status:

Command.; $ sudo ufw status

3.To activate the firewall:

Command.; $ sudo ufw enable

4.To deactivate the firewall:

Command.; $ sudo ufw disable

Modules :-

1.socket():

Activate nodes of client as well as server.

2.bind():

Associates the IP address and port number.

3.listen():

It waits or remains in passive mode until the client sends the request.

4.connect():

Client uses connect() system call to establish connection with the server.

5.accept():

The server uses accept system call to accept the connection request from the client.

6.send():

Sends the file required from the server or sends the request from client to server for file request.

7.recieve():

Recieves the file or acknowledgement from server or client.

8.close():

It tells the system to terminate the use of socket.

Algorithm:

SERVER:

STEP 1: Start

STEP 2: Declare the variables for the socket

STEP 3: Specify the family, protocol, IP address and port number

STEP 4: Create a socket using socket() function

STEP 5: Bind the IP address and Port number

STEP 6: Listen and accept the client's request for the connection

STEP 7: Establish the connection with the client

STEP 8: Close the socket

STEP 9: Stop

CLIENT:

STEP 1: Start

STEP 2: Declare the variables for the socket

STEP 3: Specify the family, protocol, IP address and port number

STEP 4: Create a socket using socket() function

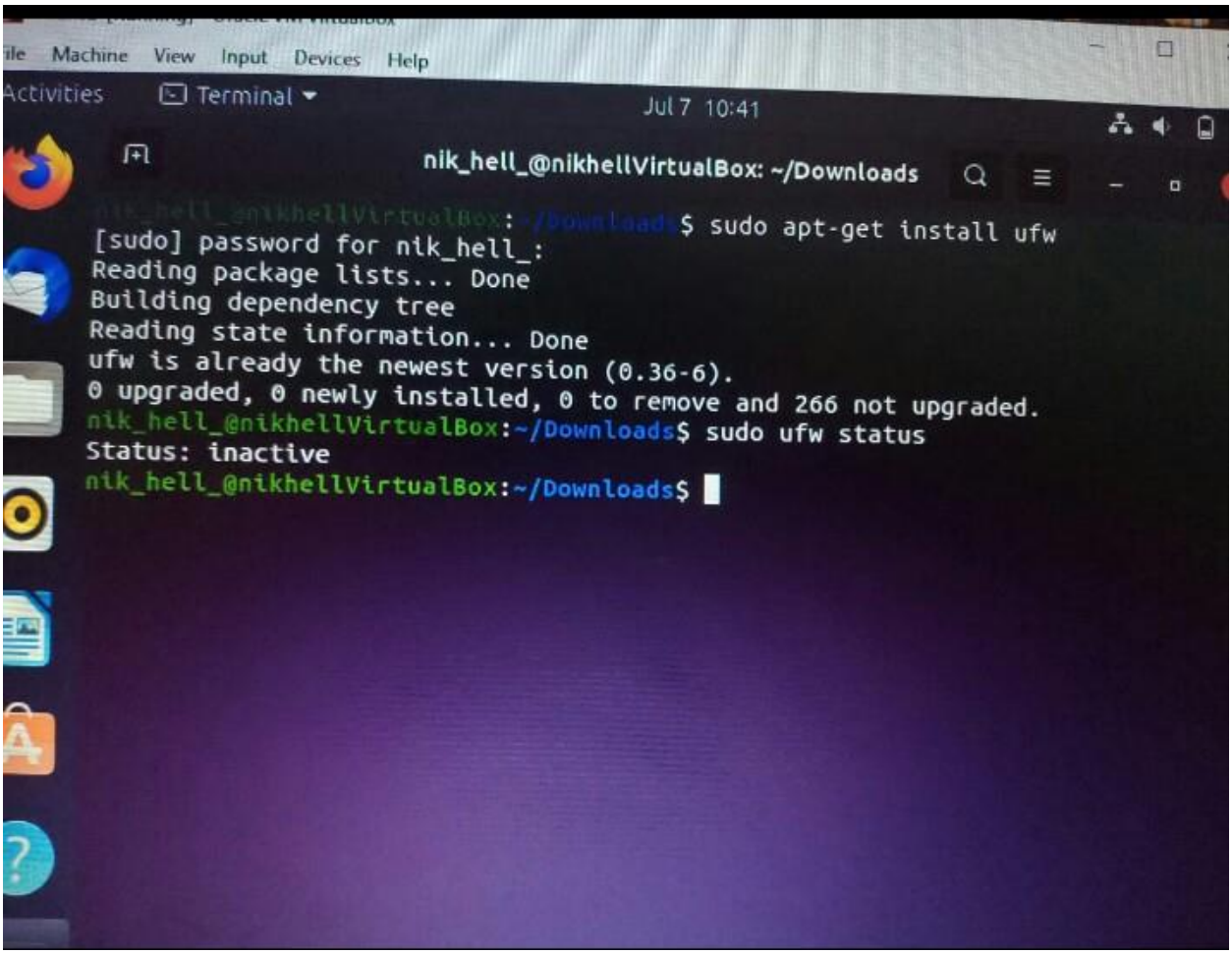
STEP 5: Call the connect() function

STEP 6: Close the socket

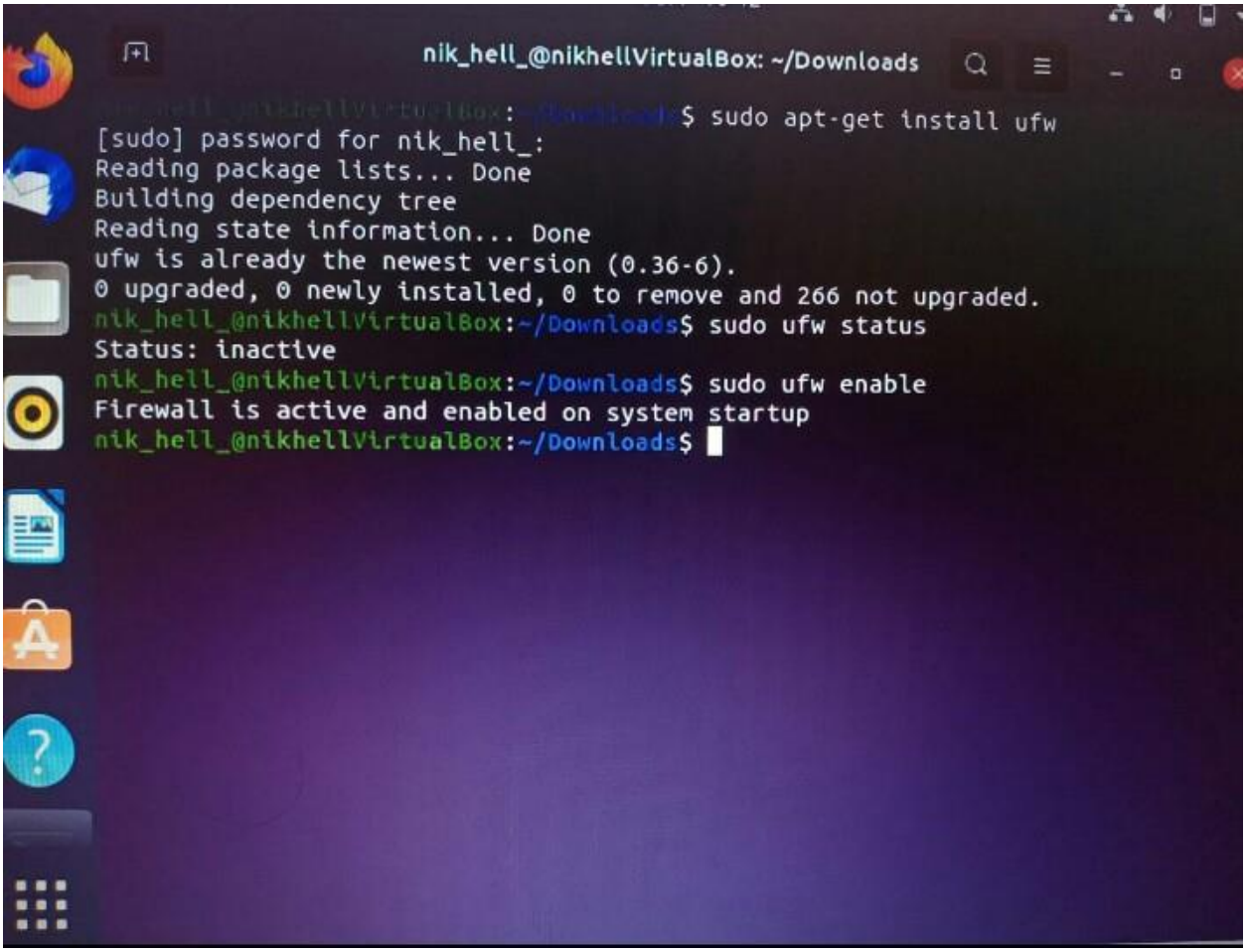
STEP 7: Stop

Input and Output:

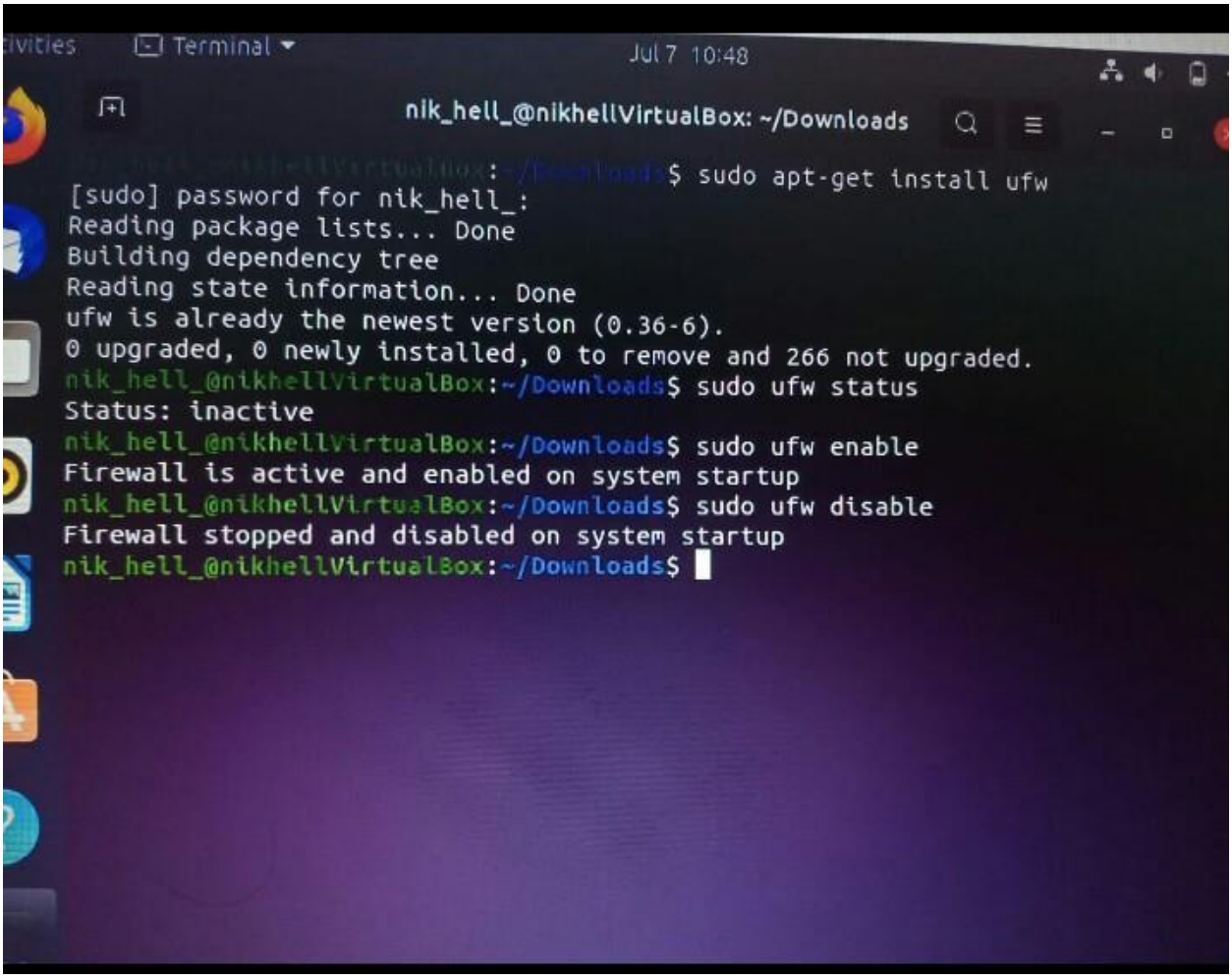
1.To check whether Firewall is installed in the system or not:-



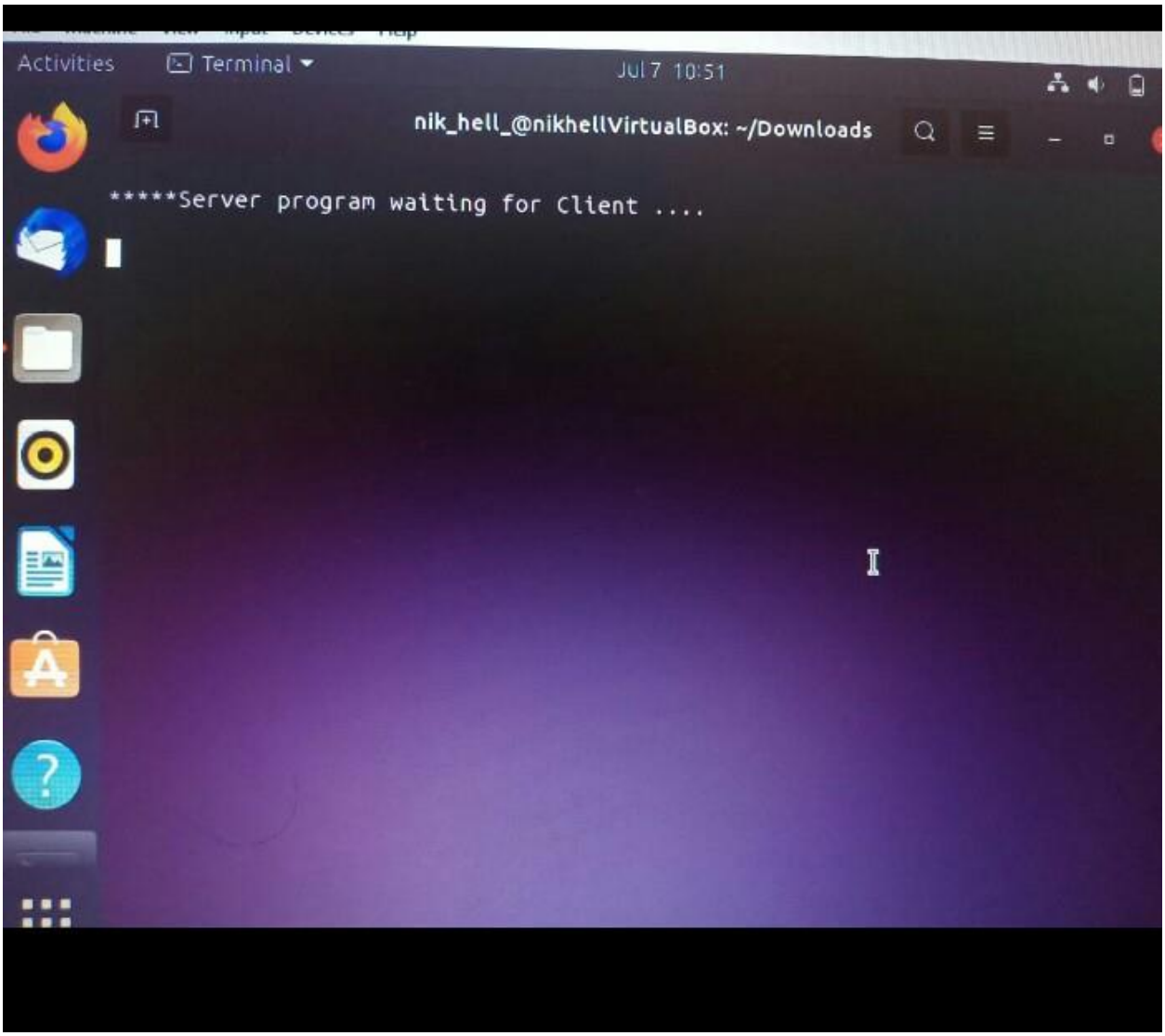
2.For checking installation status :-



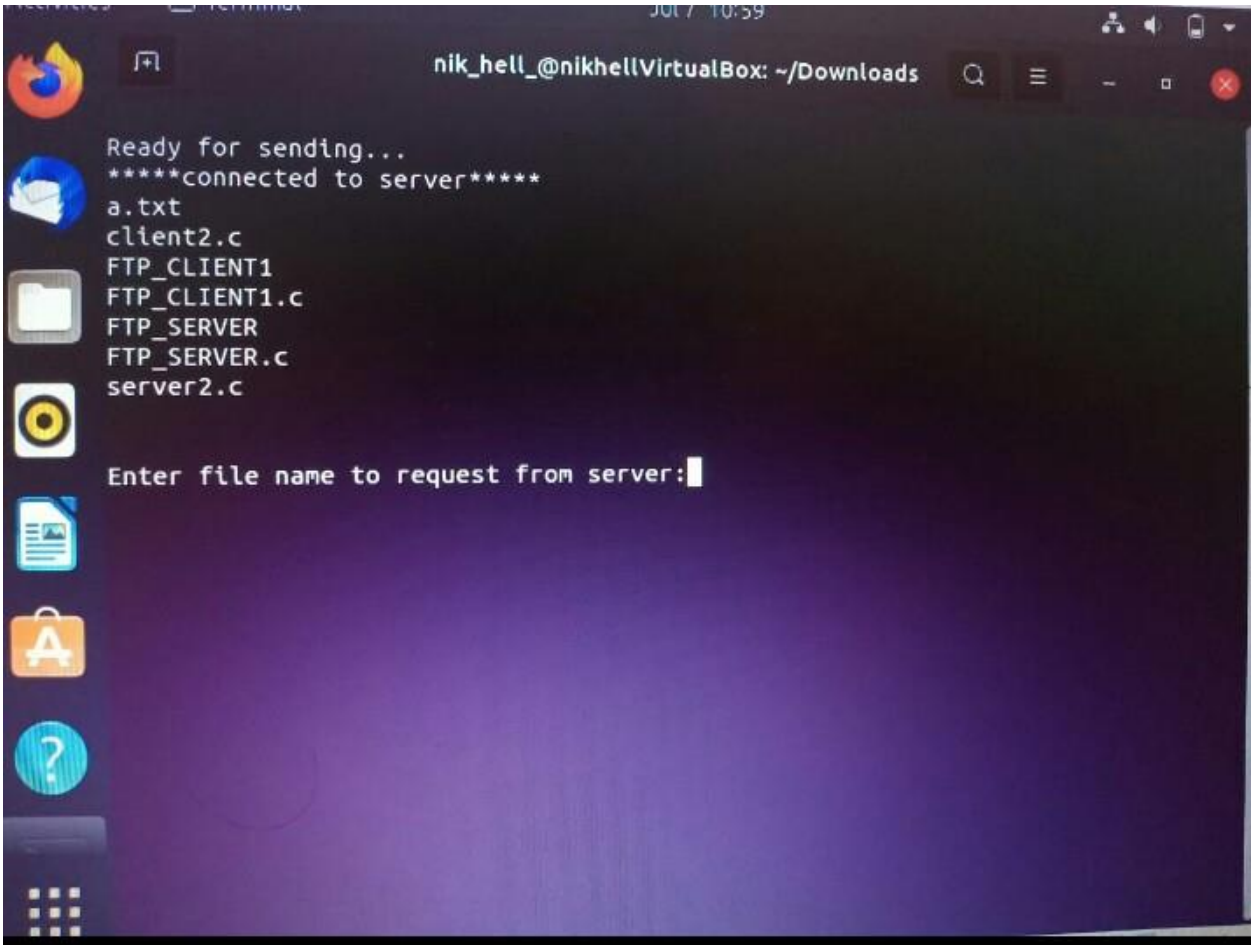
3.To activate Firewall:-



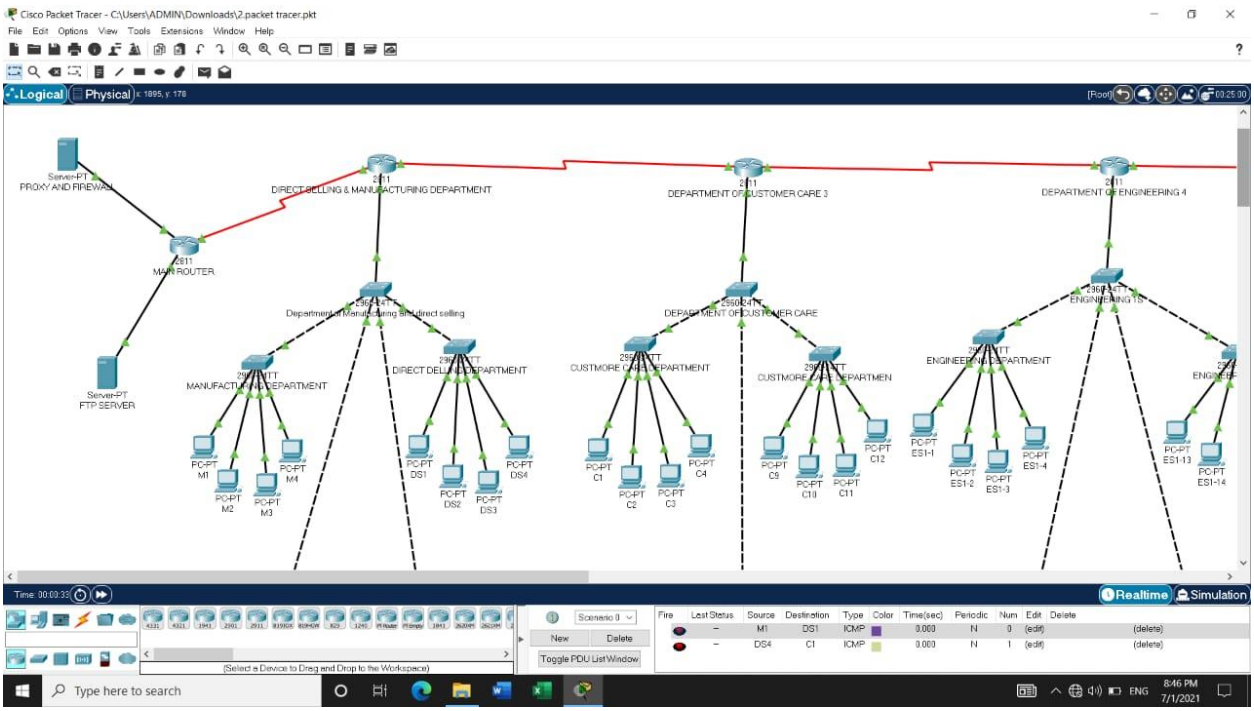
4.To deactivate Firewall:-



5.After nodes get activated:-



6.Packet tracer method


Cisco Packet Tracer - C:\Users\ADMIN\Downloads\2.packet tracer.pkt
File Edit Options View Tools Extensions Window Help
Logical
Physical
Server-PT
PROXY AND FIREWALL
2811
MAIN ROUTER
Server-PT
FTP SERVER
2811
DIRECT SELLING & MANUFACTURING DEPARTMENT
2811
DEPARTMENT OF CUSTOMER CARE 3
2811
DEPARTMENT OF ENGINEERING 4
2960-24TT
Department of Manufacturing and direct selling
2960-24TT
DEPARTMENT OF CUSTOMER CARE
2960-24TT
ENGINEERING 1 TO 6
2960-24TT
MANUFACTURING DEPARTMENT
2960-24TT
DIRECT DELLING DEPARTMENT
2960-24TT
CUSTMORE CARE 1 DEPARTMENT
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CUSTMORE CARE 2 DEPARTMEN
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ENGINEERING 1 DEPARTMENT
PC-PT M1
PC-PT M2
PC-PT M3
PC-PT M4
PC-PT DS1
PC-PT DS2
PC-PT DS3
PC-PT DS4
PC-PT C1
PC-PT C2
PC-PT C3
PC-PT C4
PC-PT C9
PC-PT C10
PC-PT C11
PC-PT C12
PC-PT ES1-1
PC-PT ES1-2
PC-PT ES1-3
PC-PT ES1-4
PC-PT ES1-13
PC-PT ES1-14
Realtime
Simulation
(Select a Device to Drag and Drop to the Workspace)
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
M1
DS1
ICMP
0.000
N
0
(edit)
(delete)
DS4
C1
ICMP
0.000
N
1
(edit)
(delete)
Type here to search
ENG
8:46 PM
7/1/2021

System Requirement.:

Software Requirement.:

- Firewall - FIREPOWER uwf
- Operating System – UBUNTU
- Programming language – C

Hardware Requirement.:

Sr. No.	Device Name
1.	FTP Server
3.	Router
4.	Switch
5.	Connecting cable

Conclusion:

In this project, the program provides secure communication while satisfying the security requirements of the company or the user, through different method

Reference:

1. tcp_ip-protocol-suite-4th-ed-b-forouzan-mcgraw-hill-2010
2. https://www.educba.com/ftp-commands/
3. https://www.javatpoint.com/computer-network-ftp