Networking project

1. **Perform ping and traceroute to google.com**
   ANS: In terminal linux virtual machine and windows machine the ping
      And tracerout Command is performed to google.com and relevant
      outputs are Presented below.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\291227> ping 1.1.1.1

Pinging 1.1.1.1 with 32 bytes of data:
Reply from 1.1.1.1: bytes=32 time=25ms TTL=57
Reply from 1.1.1.1: bytes=32 time=25ms TTL=57
Reply from 1.1.1.1: bytes=32 time=25ms TTL=57
Reply from 1.1.1.1: bytes=32 time=23ms TTL=57

Ping statistics for 1.1.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 23ms, Maximum = 25ms, Average = 24ms
PS C:\Users\291227> tracert 1.1.1.1

Tracing route to one.one.one.one [1.1.1.1]
over a maximum of 30 hops:

  1     *        *        *      Request timed out.
  2    69 ms   215 ms    60 ms  136.226.242.110
  3     *       24 ms     *      136.226.242.3
  4    60 ms     *       24 ms  125.20.121.45
  5    40 ms    45 ms    37 ms  182.79.205.103
  6    24 ms    24 ms    34 ms  182.79.161.171
  7    25 ms    25 ms    26 ms  162.158.52.35
  8    25 ms    23 ms    23 ms  one.one.one.one [1.1.1.1]

Trace complete.
PS C:\Users\291227>
```

2. **Design a network with firewall and open ssh, http and https port.**
Ans: Firewall to secure the internal network.
SSH – port 22
HTTP – port 80
HTTPS – port 443
RULES TO ALLOW SSH, HTTP, HTTPS WITH THE COMMANDS:
sudo ufw allow ssh
sudo ufw allow http

sudo ufw allow https.

Network

Firewall

Allow SSH, HTTP, HTTPS

Ports 22, 80, 443