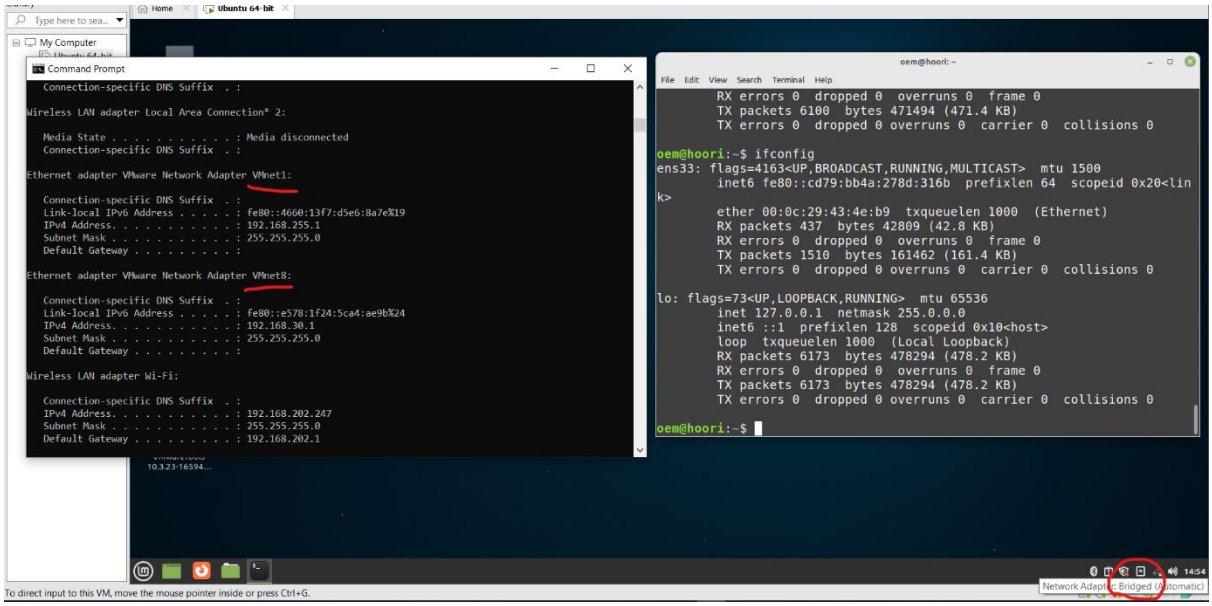
Hoori dahesh 9821413

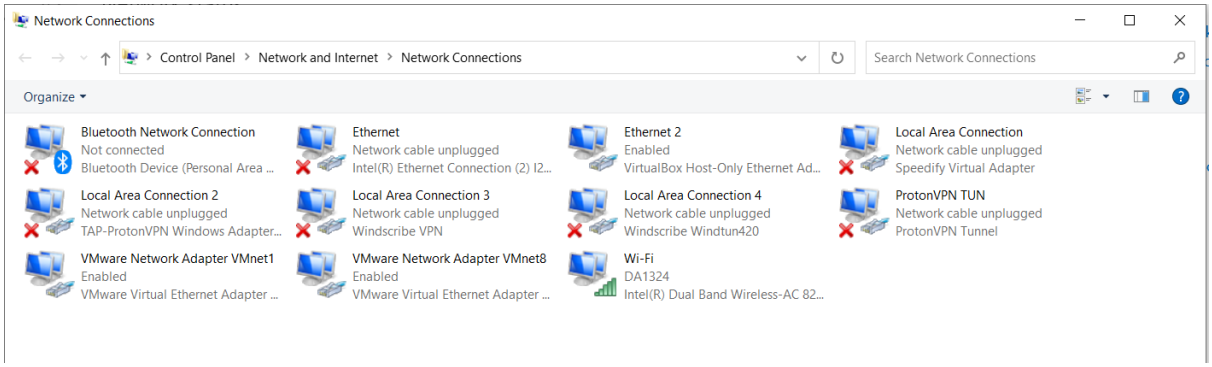
بخش اول

گام دوم:

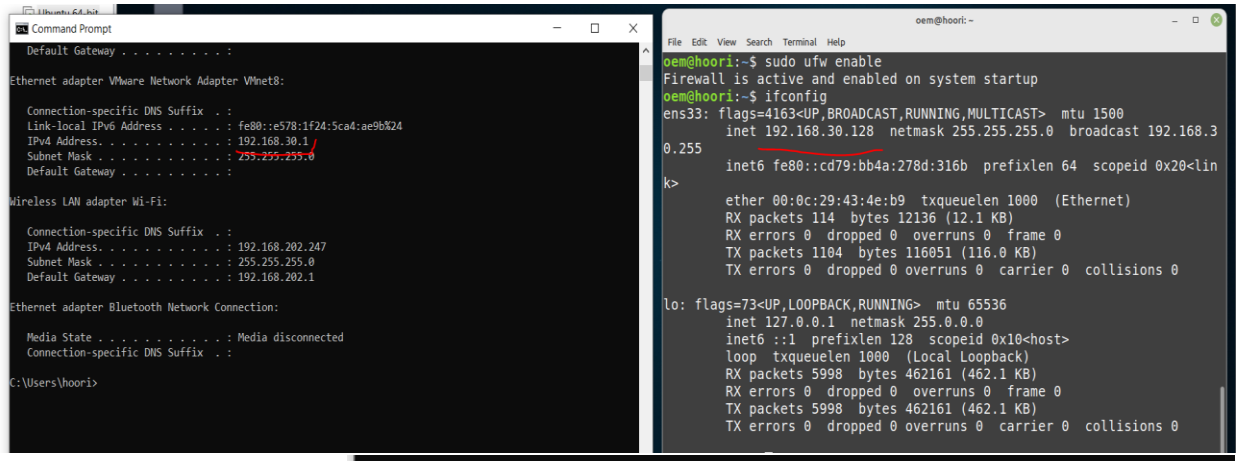


روی حالت bridge قرار گرفته ولی کارت شبکه bridge رو روی سیستم ندارم به همین خاطر نشانش نمیدهد

توی این شکل فقط کارت شبکه 1 و 8 را دارم



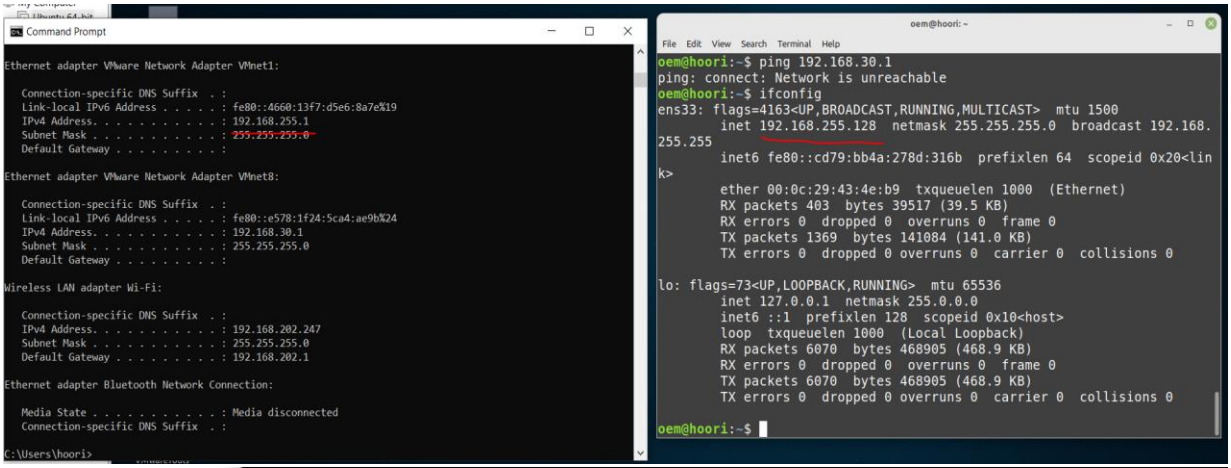
گام سوم:




```
C:\Users\hoori>ping 192.168.30.128

Pinging 192.168.30.128 with 32 bytes of data:
Reply from 192.168.30.128: bytes=32 time<1ms TTL=64
Reply from 192.168.30.128: bytes=32 time<1ms TTL=64
Reply from 192.168.30.128: bytes=32 time<1ms TTL=64
Reply from 192.168.30.128: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.30.128:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\hoori>
```

```
oem@hoori:~$ ping 192.168.30.1
PING 192.168.30.1 (192.168.30.1) 56(84) bytes of data.
64 bytes from 192.168.30.1: icmp_seq=1 ttl=128 time=0.472 ms
64 bytes from 192.168.30.1: icmp_seq=2 ttl=128 time=0.349 ms
64 bytes from 192.168.30.1: icmp_seq=3 ttl=128 time=0.426 ms
64 bytes from 192.168.30.1: icmp_seq=4 ttl=128 time=0.418 ms
64 bytes from 192.168.30.1: icmp_seq=5 ttl=128 time=0.362 ms
64 bytes from 192.168.30.1: icmp_seq=6 ttl=128 time=0.300 ms
64 bytes from 192.168.30.1: icmp_seq=7 ttl=128 time=0.308 ms
64 bytes from 192.168.30.1: icmp_seq=8 ttl=128 time=0.269 ms
64 bytes from 192.168.30.1: icmp_seq=9 ttl=128 time=0.285 ms
64 bytes from 192.168.30.1: icmp_seq=10 ttl=128 time=0.303 ms
64 bytes from 192.168.30.1: icmp_seq=11 ttl=128 time=0.299 ms
64 bytes from 192.168.30.1: icmp_seq=12 ttl=128 time=0.290 ms
64 bytes from 192.168.30.1: icmp_seq=13 ttl=128 time=0.260 ms
64 bytes from 192.168.30.1: icmp_seq=14 ttl=128 time=0.275 ms
64 bytes from 192.168.30.1: icmp_seq=15 ttl=128 time=0.308 ms
64 bytes from 192.168.30.1: icmp_seq=16 ttl=128 time=0.277 ms
64 bytes from 192.168.30.1: icmp_seq=17 ttl=128 time=0.267 ms
64 bytes from 192.168.30.1: icmp_seq=18 ttl=128 time=0.306 ms
^C
```

گام چهارم:




```
C:\Users\hoori>ping 192.168.255.128

Pinging 192.168.255.128 with 32 bytes of data:
Reply from 192.168.255.128: bytes=32 time<1ms TTL=64
Reply from 192.168.255.128: bytes=32 time<1ms TTL=64
Reply from 192.168.255.128: bytes=32 time<1ms TTL=64
Reply from 192.168.255.128: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.255.128:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\hoori>
```

```
oem@hoori:~$ ping 192.168.255.1
PING 192.168.255.1 (192.168.255.1) 56(84) bytes of data.
64 bytes from 192.168.255.1: icmp_seq=1 ttl=128 time=0.372 ms
64 bytes from 192.168.255.1: icmp_seq=2 ttl=128 time=0.372 ms
64 bytes from 192.168.255.1: icmp_seq=3 ttl=128 time=0.367 ms
64 bytes from 192.168.255.1: icmp_seq=4 ttl=128 time=0.381 ms
64 bytes from 192.168.255.1: icmp_seq=5 ttl=128 time=0.291 ms
64 bytes from 192.168.255.1: icmp_seq=6 ttl=128 time=0.406 ms
64 bytes from 192.168.255.1: icmp_seq=7 ttl=128 time=0.302 ms
64 bytes from 192.168.255.1: icmp_seq=8 ttl=128 time=0.284 ms
64 bytes from 192.168.255.1: icmp_seq=9 ttl=128 time=0.342 ms
^C
--- 192.168.255.1 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8193ms
rtt min/avg/max/mdev = 0.284/0.346/0.406/0.041 ms
oem@hoori:~$
```

گام پنجم:

در حالت bridge کارت شبکه سیستم مجازی به کارت شبکه فیزیکی سیستم اصلی متصل شده و چون دقیقا مانند یک ماشین مستقل عمل میکند از طریق اتصال به کارت شبکه فیزیکی مستقل به اینترنت دسترسی پیدا میکند (اگر سیستم اصلی به اینترنت متصل باشد) و از DHCP ادرس ip می گیرد ولی شرط اینکه از طریق کارت شبکه فیزیکی بتواند ادرس بگیرد این است که ادرس شبکه مجازی و سیستم اصلی در یک رنج باشد تا ارتباط اولیه به درستی صورت گیرد.

در حالت NAT ادرس شبکه مجازی و شبکه سیستم اصلی در یک رنج نیست زیرا ادرس شبکه مجازی در محدوده ای است که در قسمت virtual network editor به vmnet8 اختصاص داده شده است (این رنج ادرس به صورت دستی قابل تغییر است) اما با وجود متفاوت بودن رنج ادرس ها چون ترجمه ادرس صورت می گیرد از دو رنج مختلف شبکه مجازی باز هم از طریق سیستم اصلی می تواند به اینترنت متصل شود.

در حالت Host only ارتباط با دنیای بیرون از شبکه مجازی قطع است زیرا شبکه مجازی ایزوله است و ادرس خود را از همان رنج ادرسی میگیرد که به vmnet1 در تنظیمات virtual network editor این محدوده مشخص شده است.

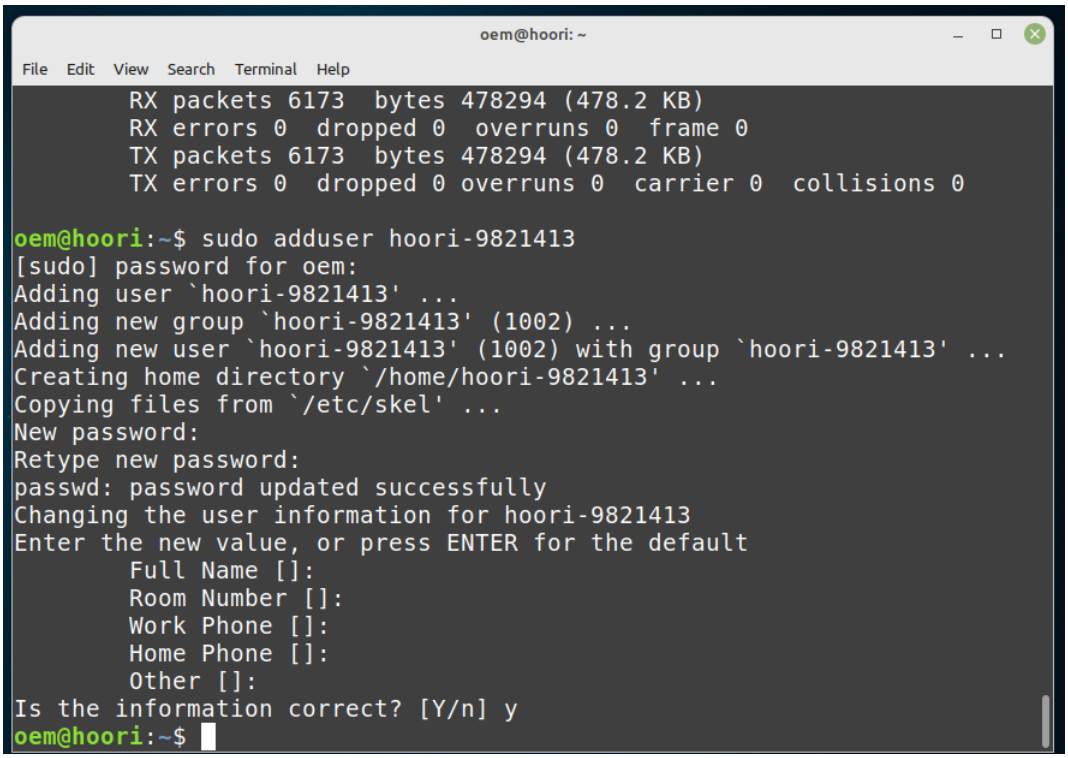
گام ششم: (امتیازی)

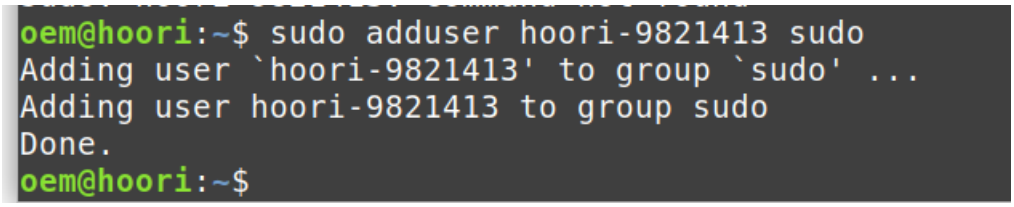
```
File  Edit  View  Search  Terminal  Help
oem@hoori:~$ sudo apt install openssh-server
[sudo] password for oem:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  ncurses-term openssh-client openssh-sftp-server ssh-import-id
Suggested packages:
  keychain libpam-ssh monkeysphere ssh-askpass molly-guard
The following NEW packages will be installed:
  ncurses-term openssh-server openssh-sftp-server ssh-import-id
The following packages will be upgraded:
  openssh-client
Processing triggers for ufw (0.36-6ubuntu1) ..
oem@hoori:~$ sudo systemctl start ssh
oem@hoori:~$
```

```
C:\Users\hoori>ssh oem@192.168.30.128
The authenticity of host '192.168.30.128 (192.168.30.128)' can't be established.
ECDSA key fingerprint is SHA256:e7nccBGJy3kxkz0z1jE054kOu2lri3Ruq+LTc683cbs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.30.128' (ECDSA) to the list of known hosts.
oem@192.168.30.128's password:
oem@hoori:~$
```

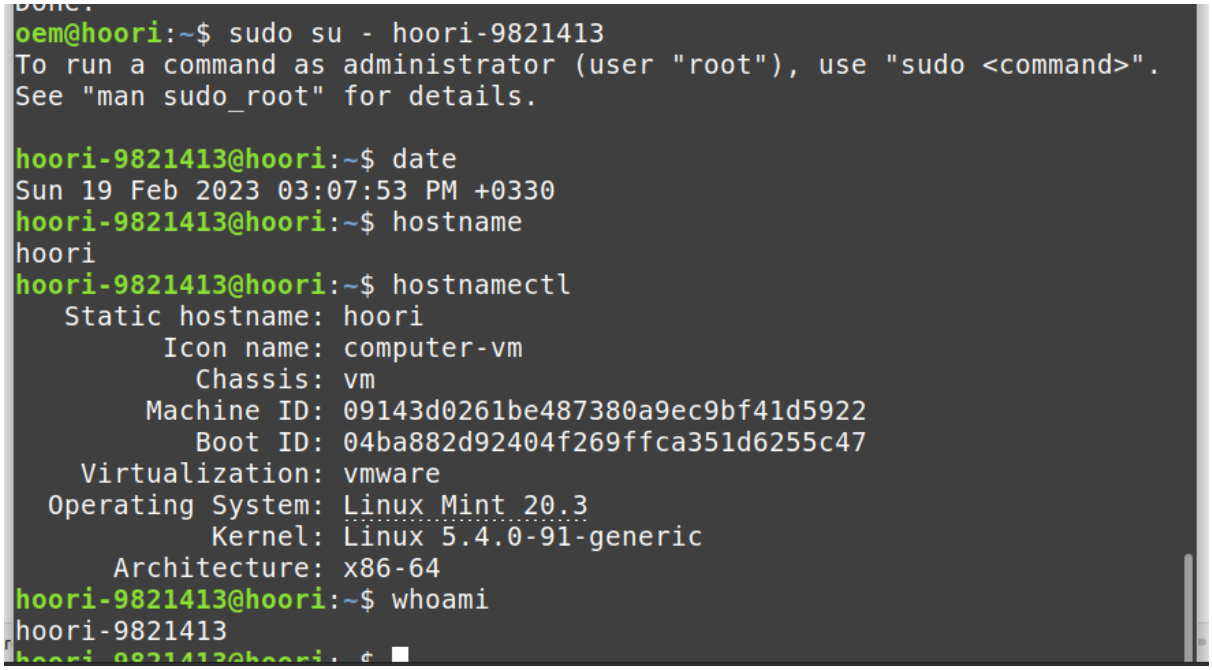
بخش دوم

گام اول:



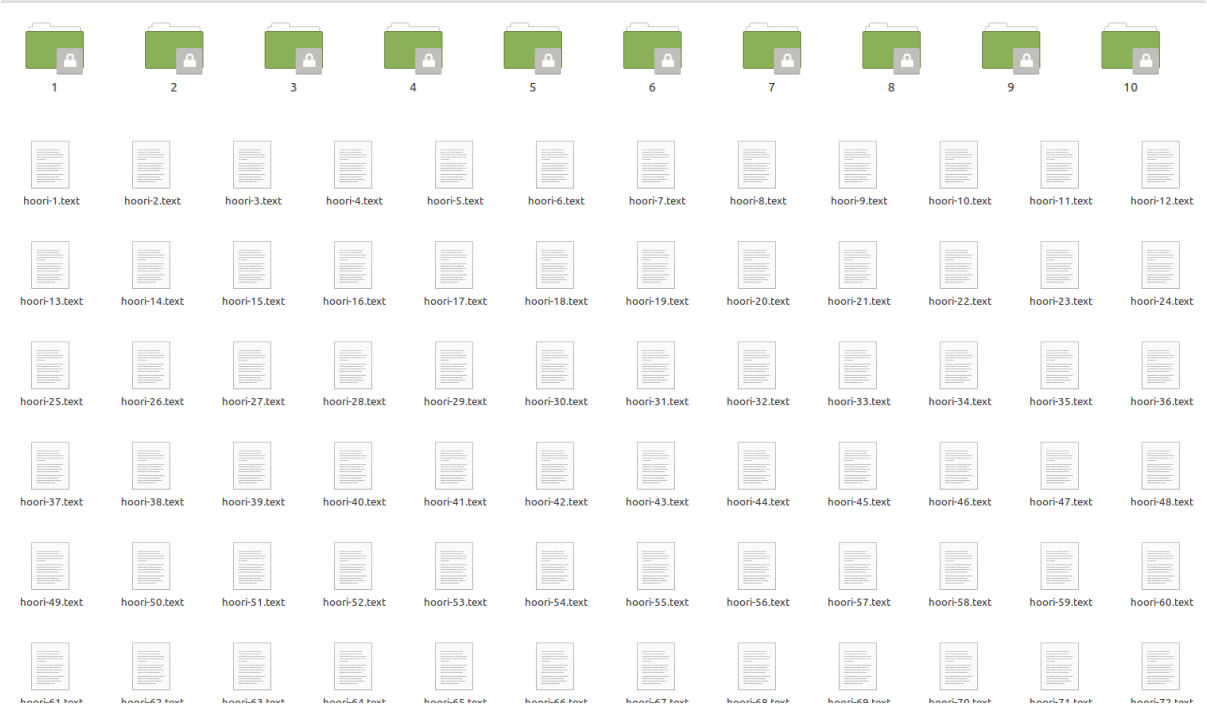


گام دوم:



گام سوم:

```
oem@hoori:~$ cd Desktop/
oem@hoori:~/Desktop$ mkdir az2
oem@hoori:~/Desktop$ cd az2
oem@hoori:~/Desktop/az2$ sudo mkdir {1..10}
[sudo] password for oem:
oem@hoori:~/Desktop/az2$ for i in {1..10}; do for j in {1..100}; do sudo touch $i/hoori-$j.text; done done
oem@hoori:~/Desktop/az2$
```



گام چهارم: (امتیازی)

```
File  Edit  View  Search  Terminal  Help
oem@hoori:~$ cd Desktop/
oem@hoori:~/Desktop$ cd az2
oem@hoori:~/Desktop/az2$ touch Step4.sh
oem@hoori:~/Desktop/az2$ vim Step4.sh
```

```
#!/bin/bash


#for i in {1..10}
for ((i=1;i<11;i++))
do
        if ((i%2==0));then
                chmod 755 $i
        fi
        if ((i%2==1));then
                chmod 700 $i
        fi
        cd $i
        for ((j=1;j<=100;j++))
        do
                if ((j%2==1));then
                        chmod 750 hoori-$j.text
                fi
                if ((j%2==0));then
                        chmod 705 hoori-$j.text
                fi
        done
        cd /home/oem/Desktop/az2
done
```

```
oem@hoori:~/Desktop/az2$ ls -l
total 44
drwx------ 2 root root 4096 Feb 19 20:38 1
drwxr-xr-x 2 root root 4096 Feb 19 20:38 10
drwxr-xr-x 2 root root 4096 Feb 19 20:38 2
drwx------ 2 root root 4096 Feb 19 20:38 3
drwxr-xr-x 2 root root 4096 Feb 19 20:38 4
drwx------ 2 root root 4096 Feb 19 20:38 5
drwxr-xr-x 2 root root 4096 Feb 19 20:38 6
drwx------ 2 root root 4096 Feb 19 20:38 7
drwxr-xr-x 2 root root 4096 Feb 19 20:38 8
drwx------ 2 root root 4096 Feb 19 20:38 9
-rwxrwxrwx 1 oem  oem   313 Feb 20 20:08 Step4.sh
```

گام پنجم:

```
oem@hoori:~$ sudo ifconfig ens33 192.168.58.2
oem@hoori:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.58.2  netmask 255.255.255.0  broadcast 192.168.58.255
        inet6 fe80::cd79:bb4a:278d:316b  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:43:4e:b9  txqueuelen 1000  (Ethernet)
        RX packets 13997  bytes 14612386 (14.6 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 5375  bytes 396872 (396.8 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 472  bytes 43618 (43.6 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 472  bytes 43618 (43.6 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

گام ششم:

```
oem@hoori:~$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
oem@hoori:~$
```

```
oem@hoori:~$ sudo route add default gw 192.168.30.130
oem@hoori:~$ route -n
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
0.0.0.0         192.168.30.130  0.0.0.0         UG    0      0        0 ens33
0.0.0.0         192.168.30.2    0.0.0.0         UG    20100  0        0 ens33
169.254.0.0     0.0.0.0         255.255.0.0     U     1000   0        0 ens33
192.168.30.0    0.0.0.0         255.255.255.0   U     100    0        0 ens33
oem@hoori:~$
```

```
oem@hoori:~$ sudo route add -net 192.168.51.207 netmask 255.255.255.255 reject
oem@hoori:~$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
192.168.51.207  -               255.255.255.255 !H    0      -        0 -
oem@hoori:~$
```