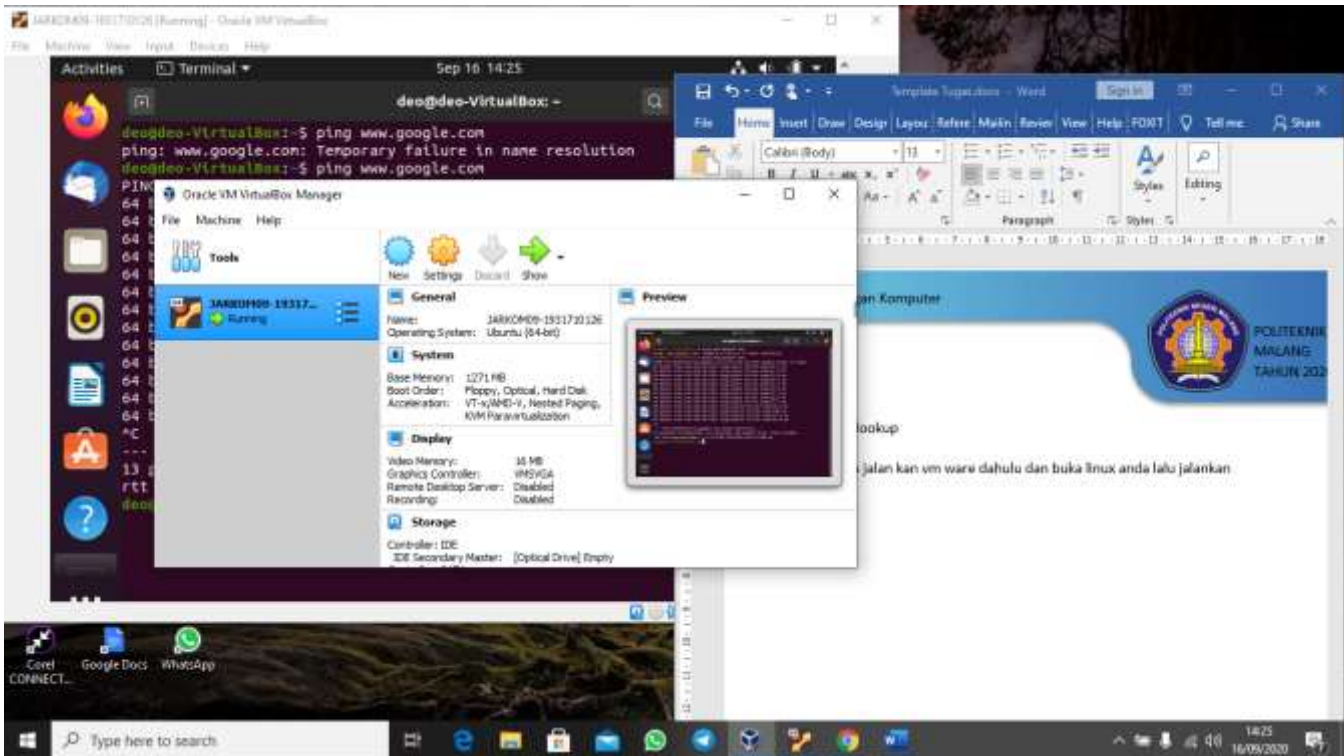
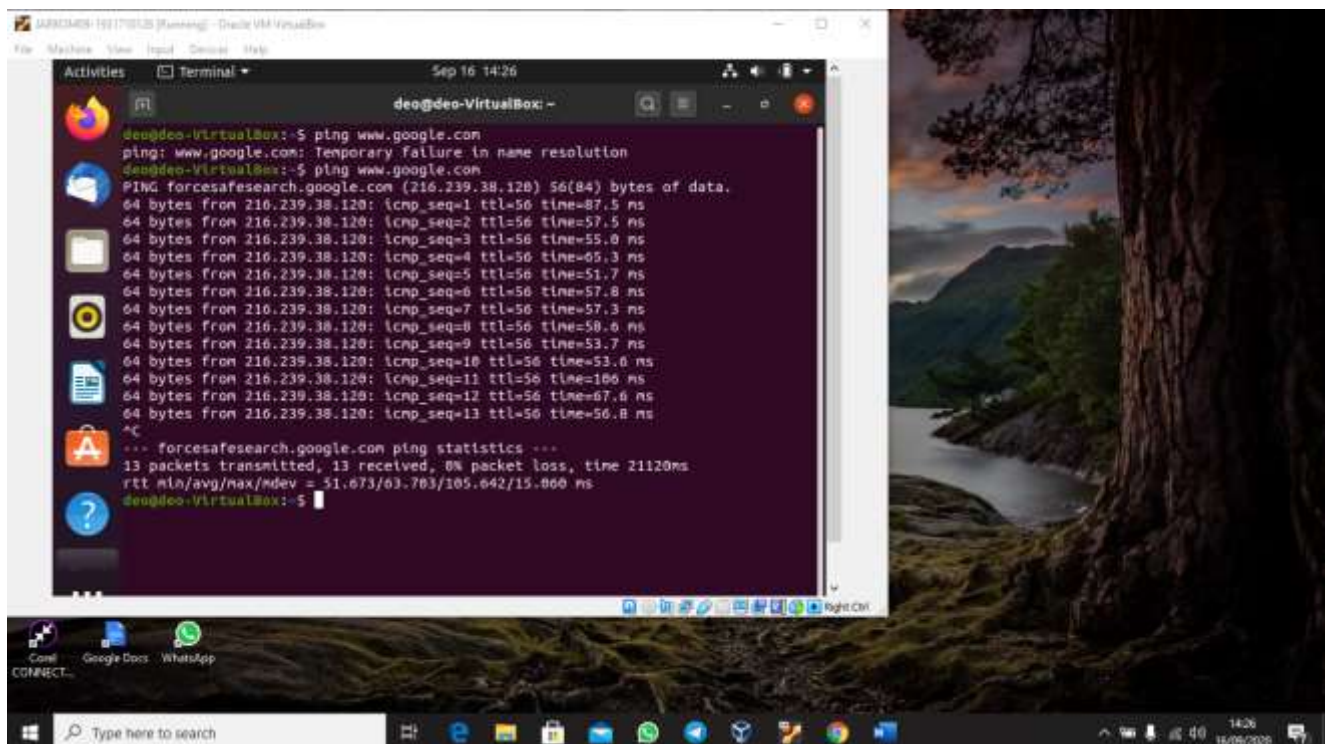


1. Digs and nslookup

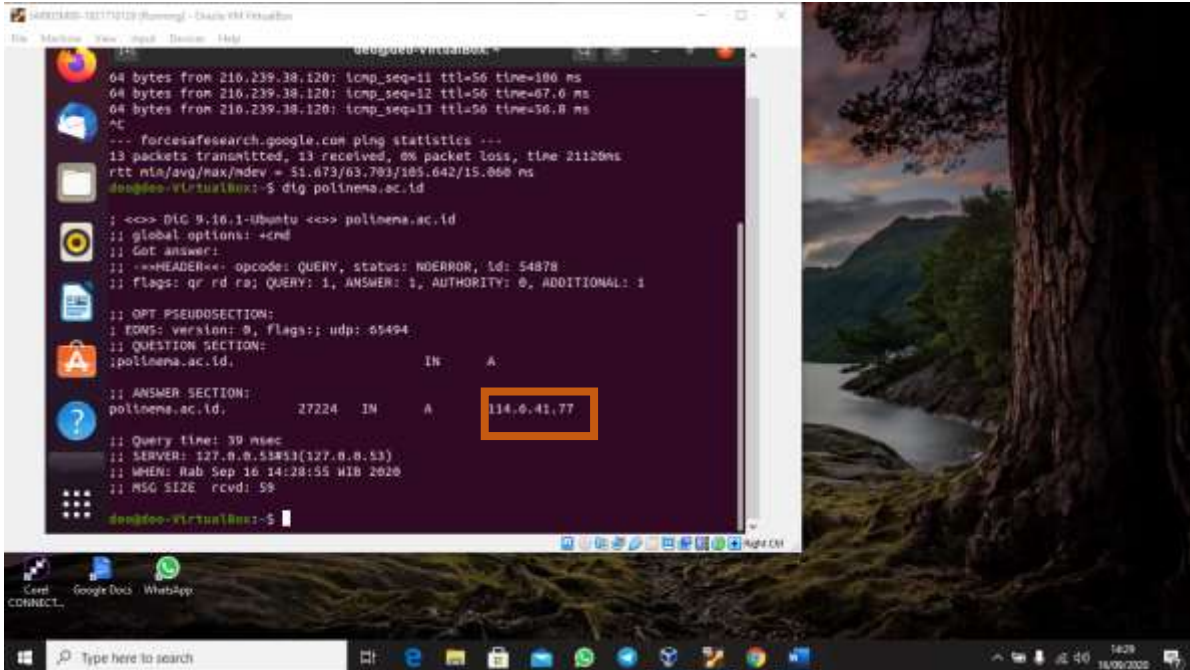
1. Pertama jalan kan vm ware dahulu dan buka linux anda lalu jalankan



2. Lalu buka terminal anda dan Ketik Ping www.google.com



3. Lalu ketikkan dig polinema.ac.id setelah itu kita sudah mendapatkan alamat domain nya



```
deo@de0-VirtualBox:~$ dig polinema.ac.id

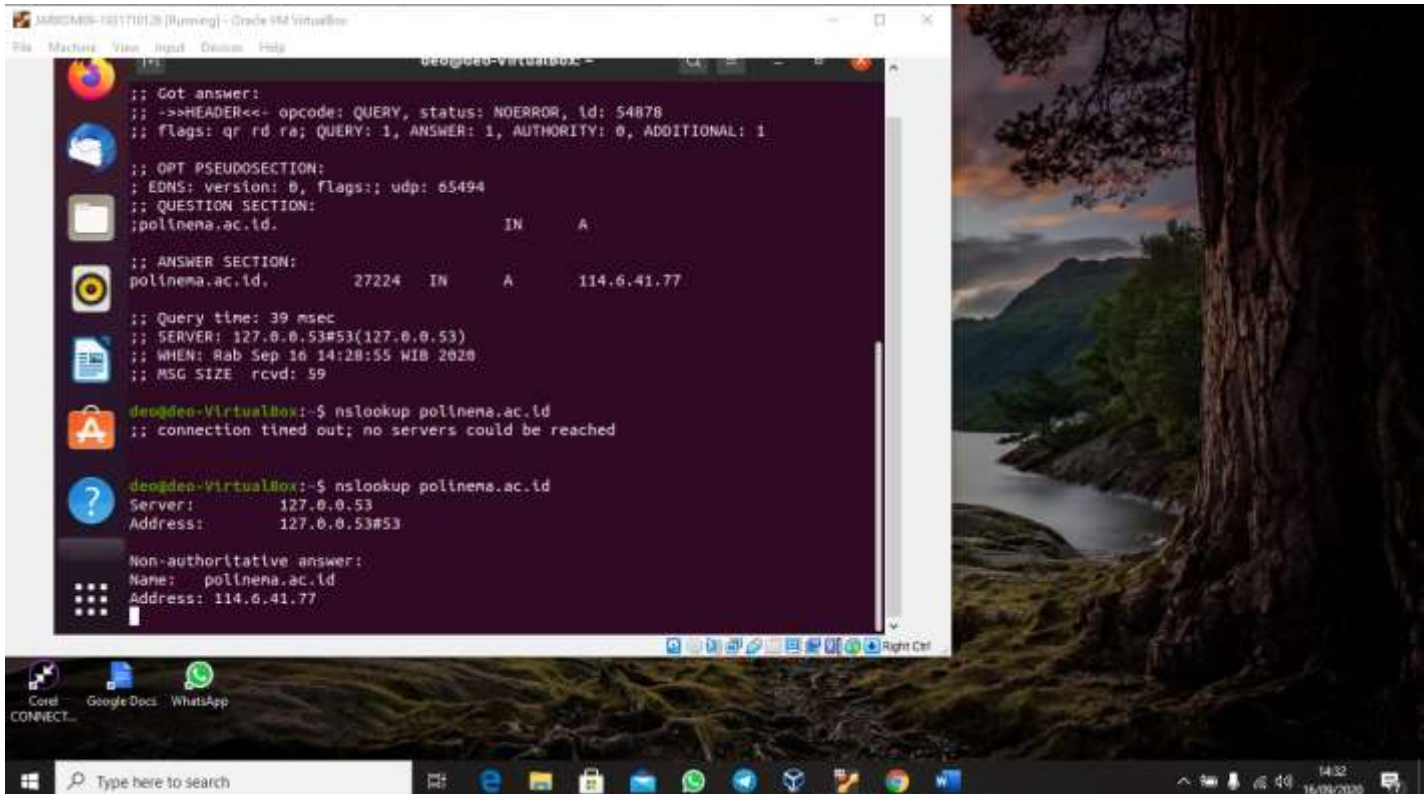
;; Got answer:
;;->HEADER<-- opcode: QUERY, status: NOERROR, id: 54878
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;polinema.ac.id.                IN      A
;; ANSWER SECTION:
polinema.ac.id.                27224   IN      A      114.6.41.77

;; Query time: 39 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:28:55 WIB 2020
;; MSG SIZE rcvd: 59

deo@de0-VirtualBox:~$
```

4. Kita bisa mengecek menggunakan nslookup juga



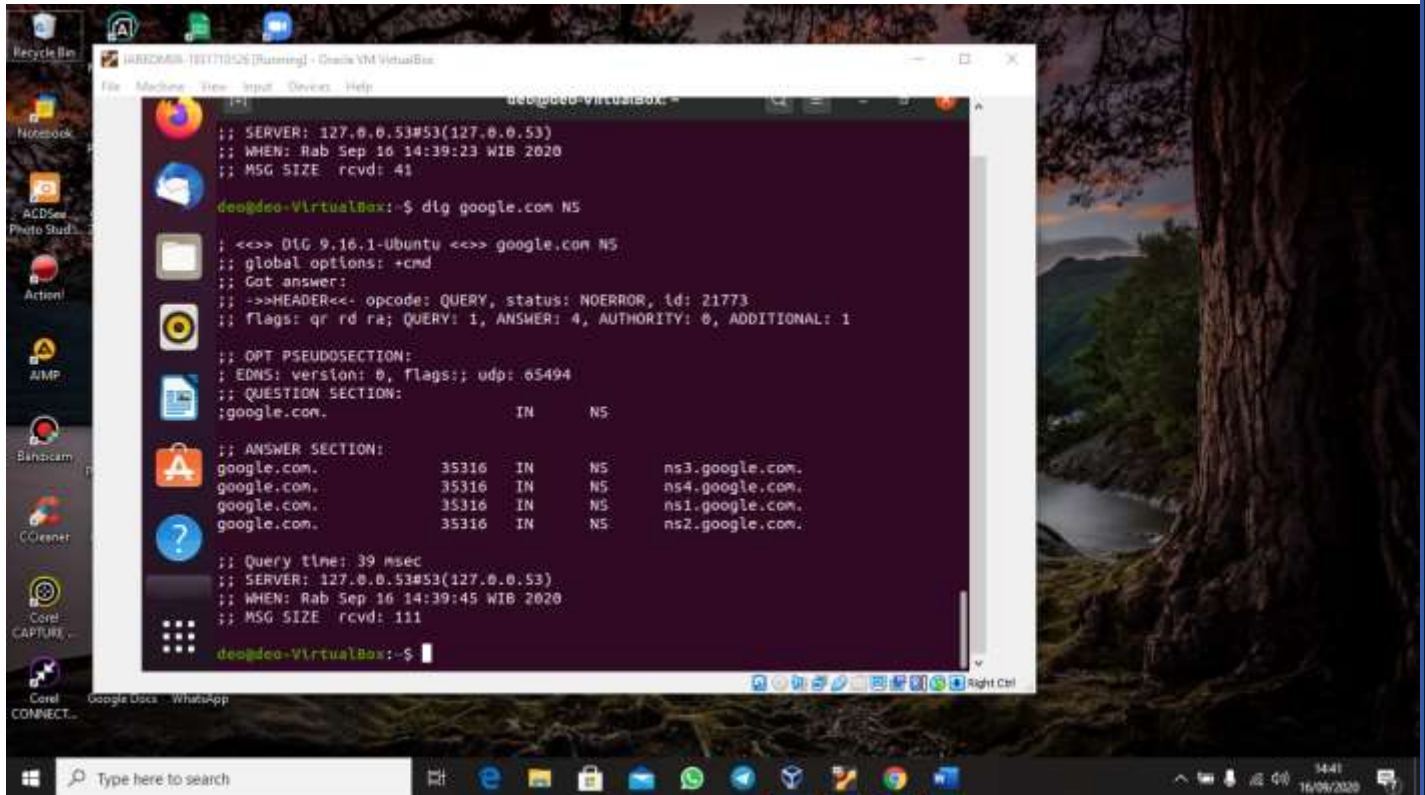
```
deo@de0-VirtualBox:~$ nslookup polinema.ac.id
;; connection timed out; no servers could be reached

deo@de0-VirtualBox:~$ nslookup polinema.ac.id
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
Name:   polinema.ac.id
Address: 114.6.41.77

deo@de0-VirtualBox:~$
```


5. Ketik dig google.com NS disini kita mendapatkan informasi dari google



```

;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:39:23 WIB 2020
;; MSG SIZE rcvd: 41

deo@deo-VirtualBox:~$ dig google.com NS

<<>> DIG 9.16.1-Ubuntu <<>> google.com NS
;; global options: +cmd
;; Got answer:
;; -->HEADER<< opcode: QUERY, status: NOERROR, id: 21773
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

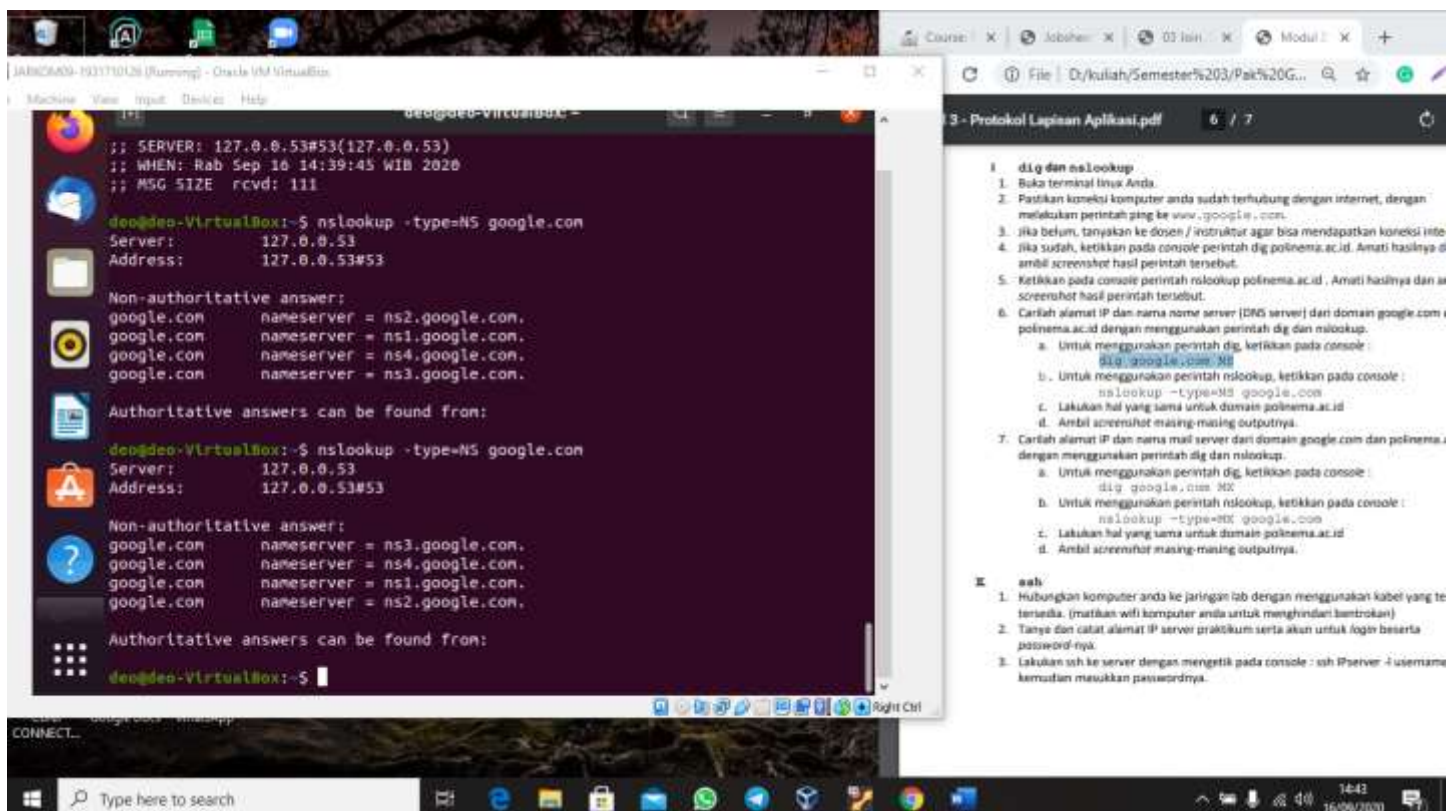
;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;google.com.                IN      NS

;; ANSWER SECTION:
google.com.                 35316   IN      NS      ns3.google.com.
google.com.                 35316   IN      NS      ns4.google.com.
google.com.                 35316   IN      NS      ns1.google.com.
google.com.                 35316   IN      NS      ns2.google.com.

;; Query time: 39 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:39:45 WIB 2020
;; MSG SIZE rcvd: 111
deo@deo-VirtualBox:~$

```

6. Bisa dengan cara lain menggunakan nslookup juga



```

;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:39:45 WIB 2020
;; MSG SIZE rcvd: 111

deo@deo-VirtualBox:~$ nslookup -type=NS google.com
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
google.com   nameserver = ns2.google.com.
google.com   nameserver = ns1.google.com.
google.com   nameserver = ns4.google.com.
google.com   nameserver = ns3.google.com.

Authoritative answers can be found from:

deo@deo-VirtualBox:~$ nslookup -type=NS google.com
Server:      127.0.0.53
Address:     127.0.0.53#53

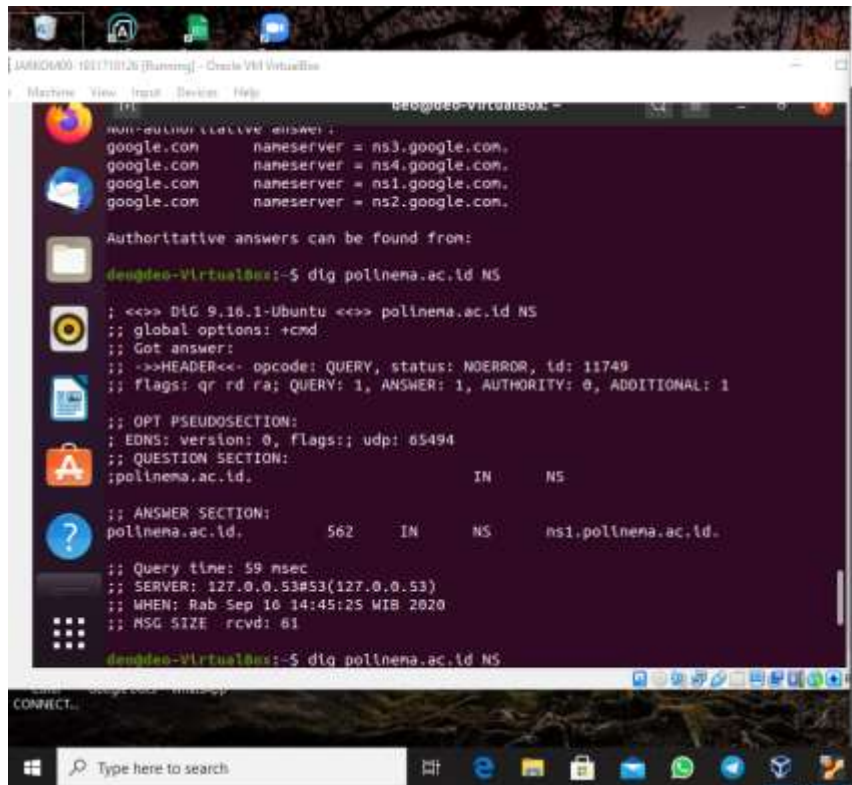
Non-authoritative answer:
google.com   nameserver = ns3.google.com.
google.com   nameserver = ns4.google.com.
google.com   nameserver = ns1.google.com.
google.com   nameserver = ns2.google.com.

Authoritative answers can be found from:

deo@deo-VirtualBox:~$

```

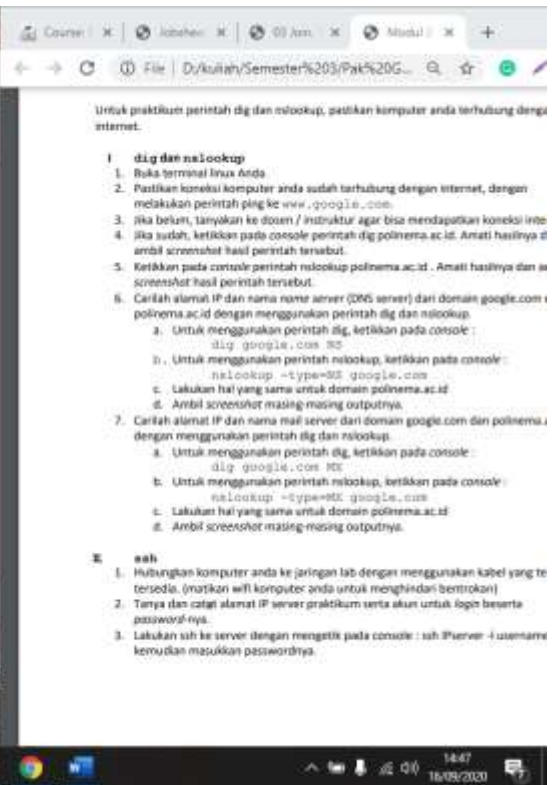
7. Coba menggunakan website polinema



```

deugdeo-VirtualBox:~$ dig polinema.ac.id NS
; <<>> DiG 9.16.1-Ubuntu <<>> polinema.ac.id NS
;; global options: +cmd
;; Got answer:
;;->HEADER<- opcode: QUERY, status: NOERROR, id: 11749
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;polinema.ac.id.                IN      NS
;; ANSWER SECTION:
polinema.ac.id.                562     IN      NS      ns1.polinema.ac.id.
;; Query time: 59 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:45:25 WIB 2020
;; MSG SIZE rcvd: 81
deugdeo-VirtualBox:~$ dig polinema.ac.id NS

```



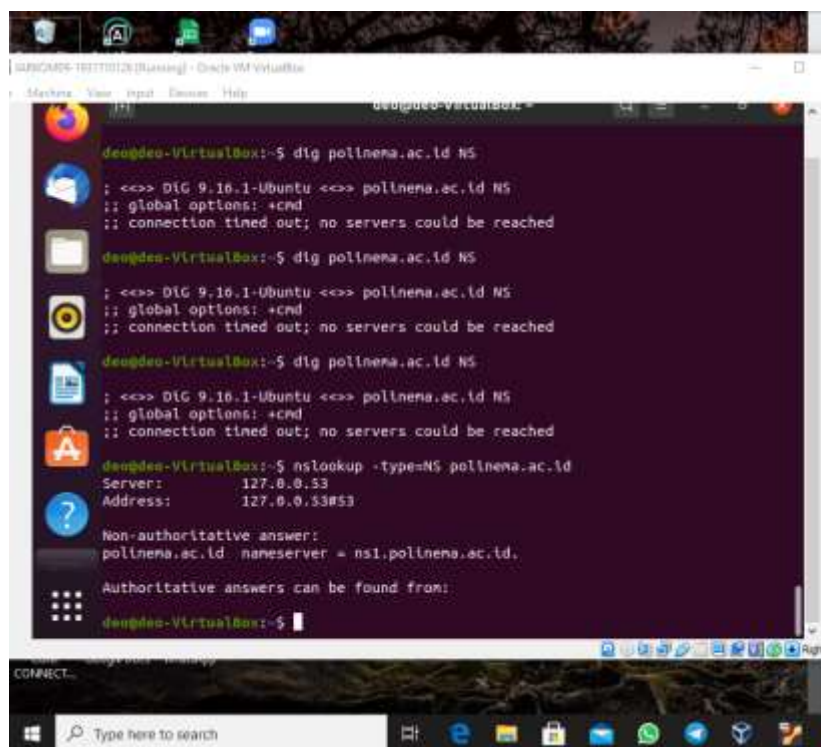
Untuk praktikum perintah dig dan nslookup, pastikan komputer anda terhubung dengan internet.

1. dig dan nslookup
2. Buka terminal linux Anda.
3. Pastikan koneksi komputer anda sudah terhubung dengan internet, dengan melakukan perintah ping ke `www.google.com`.
4. Jika belum, tanyakan ke dosen / instruktur agar bisa mendapatkan koneksi internet.
5. Jika sudah, ketikkan pada console perintah dig polinema.ac.id. Amati hasilnya dan ambil screenshot hasil perintah tersebut.
6. Ketikkan pada console perintah nslookup polinema.ac.id. Amati hasilnya dan ambil screenshot hasil perintah tersebut.
7. Carilah alamat IP dan nama mail server (DNS server) dari domain google.com dan polinema.ac.id dengan menggunakan perintah dig dan nslookup.
 - a. Untuk menggunakan perintah dig, ketikkan pada console: `dig google.com NS`
 - b. Untuk menggunakan perintah nslookup, ketikkan pada console: `nslookup -type=NS google.com`
 - c. Lakukan hal yang sama untuk domain polinema.ac.id
 - d. Ambil screenshot masing-masing outputnya.

8. ssh

1. Hubungkan komputer anda ke jaringan lab dengan menggunakan kabel yang tersedia. (matikan wifi komputer anda untuk menghindari bentrokkan)
2. Tanya dan catat alamat IP server praktikum serta akun untuk login beserta password-nya.
3. Lakukan ssh ke server dengan mengetik pada console: `ssh ifuser -i username kemudian masukkan passwordnya.`

8. Kita menggunakan nslookup dengan menggunakan website polinema




```

deugdeo-VirtualBox:~$ dig polinema.ac.id NS
; <<>> DiG 9.16.1-Ubuntu <<>> polinema.ac.id NS
;; global options: +cmd
;; connection timed out; no servers could be reached
deugdeo-VirtualBox:~$ dig polinema.ac.id NS
; <<>> DiG 9.16.1-Ubuntu <<>> polinema.ac.id NS
;; global options: +cmd
;; connection timed out; no servers could be reached
deugdeo-VirtualBox:~$ dig polinema.ac.id NS
; <<>> DiG 9.16.1-Ubuntu <<>> polinema.ac.id NS
;; global options: +cmd
;; connection timed out; no servers could be reached
deugdeo-VirtualBox:~$ nslookup -type=NS polinema.ac.id
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
polinema.ac.id nameserver = ns1.polinema.ac.id.

Authoritative answers can be found from:
deugdeo-VirtualBox:~$

```



Untuk praktikum perintah dig dan nslookup, pastikan komputer anda terhubung dengan internet.

1. dig dan nslookup
2. Buka terminal linux Anda.
3. Pastikan koneksi komputer anda sudah terhubung dengan internet, dengan melakukan perintah ping ke `www.google.com`.
4. Jika belum, tanyakan ke dosen / instruktur agar bisa mendapatkan koneksi internet.
5. Jika sudah, ketikkan pada console perintah dig polinema.ac.id. Amati hasilnya dan ambil screenshot hasil perintah tersebut.
6. Ketikkan pada console perintah nslookup polinema.ac.id. Amati hasilnya dan ambil screenshot hasil perintah tersebut.
7. Carilah alamat IP dan nama mail server (DNS server) dari domain google.com dan polinema.ac.id dengan menggunakan perintah dig dan nslookup.
 - a. Untuk menggunakan perintah dig, ketikkan pada console: `dig google.com NS`
 - b. Untuk menggunakan perintah nslookup, ketikkan pada console: `nslookup -type=NS google.com`
 - c. Lakukan hal yang sama untuk domain polinema.ac.id
 - d. Ambil screenshot masing-masing outputnya.

8. ssh

1. Hubungkan komputer anda ke jaringan lab dengan menggunakan kabel yang tersedia. (matikan wifi komputer anda untuk menghindari bentrokkan)
2. Tanya dan catat alamat IP server praktikum serta akun untuk login beserta password-nya.
3. Lakukan ssh ke server dengan mengetik pada console: `ssh ifuser -i username kemudian masukkan passwordnya.`



9.

```
Authoritative answers can be found from:
deugdeo-VirtualBox:~$ dig google.com MX

;; <<>> DIG 9.16.1-Ubuntu <<>> google.com MX
;; global options: +cmd
;; Got answer:
;;->HEADER<- opcode: QUERY, status: NOERROR, id: 51193
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 65494
;; QUESTION SECTION:
;google.com.
; IN
; MX

;; ANSWER SECTION:
google.com. 262 IN MX 10 aspx.l.google.com.
google.com. 262 IN MX 40 alt3.aspx.l.google.com.
google.com. 262 IN MX 30 alt2.aspx.l.google.com.
google.com. 262 IN MX 20 alt1.aspx.l.google.com.
google.com. 262 IN MX 50 alt4.aspx.l.google.com.

;; Query time: 36 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:50:42 WIB 2020
;; MSG SIZE rcvd: 147

deugdeo-VirtualBox:~$
```

10.

```
;; QUESTION SECTION:
;google.com.
; IN
; MX

;; ANSWER SECTION:
google.com. 262 IN MX 10 aspx.l.google.com.
google.com. 262 IN MX 40 alt3.aspx.l.google.com.
google.com. 262 IN MX 30 alt2.aspx.l.google.com.
google.com. 262 IN MX 20 alt1.aspx.l.google.com.
google.com. 262 IN MX 50 alt4.aspx.l.google.com.

;; Query time: 36 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:50:42 WIB 2020
;; MSG SIZE rcvd: 147

deugdeo-VirtualBox:~$ nslookup -type=MX google.com
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
google.com mail exchanger = 50 alt4.aspx.l.google.com.
google.com mail exchanger = 20 alt1.aspx.l.google.com.
google.com mail exchanger = 30 alt2.aspx.l.google.com.
google.com mail exchanger = 40 alt3.aspx.l.google.com.
google.com mail exchanger = 10 aspx.l.google.com.

Authoritative answers can be found from:
deugdeo-VirtualBox:~$
```



11.

```
Authoritative answers can be found from:
de@deu-VirtualBox:~$ dig polinema.ac.id MX
;; <<>> DIG 9.16.1-Ubuntu <<>> polinema.ac.id MX
;; global options: +cmd
;; Got answer:
;;->HEADER<=> opcode: QUERY, status: NOERROR, id: 63282
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags: udp: 65494
;; QUESTION SECTION:
;polinema.ac.id.
IN      MX

;; ANSWER SECTION:
polinema.ac.id.      38400    IN      MX      10 ALT3.ASPMX.L.GOOGLE.COM.
polinema.ac.id.      38400    IN      MX      10 ALT4.ASPMX.L.GOOGLE.COM.
polinema.ac.id.      38400    IN      MX      1 ASPMX.L.GOOGLE.COM.
polinema.ac.id.      38400    IN      MX      5 ALT1.ASPMX.L.GOOGLE.COM.
polinema.ac.id.      38400    IN      MX      5 ALT2.ASPMX.L.GOOGLE.COM.

;; Query time: 1136 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:53:11 WIB 2020
;; MSG SIZE rcvd: 161
de@deu-VirtualBox:~$
```

12.

```
polinema.ac.id.      38400    IN      MX      5 ALT2.ASPMX.L.GOOGLE.COM.
;; Query time: 1136 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Rab Sep 16 14:53:11 WIB 2020
;; MSG SIZE rcvd: 161
de@deu-VirtualBox:~$ nslookup -type=MX polinema.ac.id
;; connection timed out; no servers could be reached
de@deu-VirtualBox:~$ nslookup -type=MX polinema.ac.id
;; connection timed out; no servers could be reached
de@deu-VirtualBox:~$ nslookup -type=MX polinema.ac.id
Server:      127.0.0.53
Address:     127.0.0.53#53
Non-authoritative answer:
polinema.ac.id mail exchanger = 1 ASPMX.L.GOOGLE.COM.
polinema.ac.id mail exchanger = 5 ALT1.ASPMX.L.GOOGLE.COM.
polinema.ac.id mail exchanger = 5 ALT2.ASPMX.L.GOOGLE.COM.
polinema.ac.id mail exchanger = 10 ALT3.ASPMX.L.GOOGLE.COM.
polinema.ac.id mail exchanger = 10 ALT4.ASPMX.L.GOOGLE.COM.
Authoritative answers can be found from:
de@deu-VirtualBox:~$
```




SSH

1. Cek ping Internet dahulu

```
deo@deo-VirtualBox: ~  
$ ping google.com  
ping: google.com: Temporary failure in name resolution  
deo@deo-VirtualBox: ~$ ping google.com  
ping: google.com: Temporary failure in name resolution  
deo@deo-VirtualBox: ~$ ping www.google.com  
ping: www.google.com: Temporary failure in name resolution  
deo@deo-VirtualBox: ~$ ping www.google.com  
ping: www.google.com: Temporary failure in name resolution  
deo@deo-VirtualBox: ~$ ping google.com  
PING google.com (172.217.160.14) 56(84) bytes of data:  
64 bytes from 172.217.160.14: icmp_seq=1 ttl=56 time=73.6 ms  
64 bytes from 172.217.160.14: icmp_seq=2 ttl=56 time=61.7 ms  
64 bytes from 172.217.160.14: icmp_seq=3 ttl=56 time=56.3 ms  
64 bytes from 172.217.160.14: icmp_seq=4 ttl=56 time=54.1 ms  
64 bytes from 172.217.160.14: icmp_seq=5 ttl=56 time=58.8 ms  
64 bytes from 172.217.160.14: icmp_seq=6 ttl=56 time=60.8 ms  
64 bytes from 172.217.160.14: icmp_seq=7 ttl=56 time=88.9 ms  
64 bytes from 172.217.160.14: icmp_seq=8 ttl=56 time=58.1 ms  
^C  
--- google.com ping statistics ---  
8 packets transmitted, 8 received, 0% packet loss, time 16085ms  
rtt min/avg/max/mdev = 54.126/64.021/88.863/10.875 ms  
deo@deo-VirtualBox: ~$
```

2. Cek ip vm dengan ip a

```
deo@deo-VirtualBox: ~  
$ ip a  
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000  
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00  
    inet 127.0.0.1/8 scope host lo  
        valid_lft forever preferred_lft forever  
    inet6 ::1/128 scope host  
        valid_lft forever preferred_lft forever  
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000  
    link/ether 08:00:27:dd:e9:89 brd ff:ff:ff:ff:ff:ff  
    inet 192.168.43.119/24 brd 192.168.43.255 scope global noprefixroute enp0s3  
        valid_lft forever preferred_lft forever  
    inet6 fe80::a08:27ff:fedd:e989/64 scope link  
        valid_lft forever preferred_lft forever  
deo@deo-VirtualBox: ~$
```

Command Prompt

```

Connection-specific DNS Suffix . : 
Link-local IPv6 Address . . . . . : fe80::4c80:bfa0:5fbd:f3%
IPv4 Address. . . . . : 192.168.56.1
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 

Wireless LAN adapter Local Area Connection* 9:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 

Wireless LAN adapter Local Area Connection* 10:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : 
Link-local IPv6 Address . . . . . : fe80::a156:b378:b376:bb6%4
IPv4 Address. . . . . : 192.168.43.253
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.43.1

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 

```

The screenshot shows a Windows desktop environment. In the foreground, a Command Prompt window is open, displaying the following output:

```

Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.43.1

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix  : 

C:\Users\User>192.168.43.119
'192.168.43.119' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\User>192.168.43.119
'192.168.43.119' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\User>ping 192.168.43.119

Pinging 192.168.43.119 with 32 bytes of data:
Reply from 192.168.43.119: bytes=32 time=1ms TTL=64
Reply from 192.168.43.119: bytes=32 time=1ms TTL=64
Reply from 192.168.43.119: bytes=32 time=1ms TTL=64
Reply from 192.168.43.119: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.43.119:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\User>
  
```

In the background, a web browser window is open, displaying a page with a dark background and white text. The page includes a large question mark icon and a list of network statistics:

```

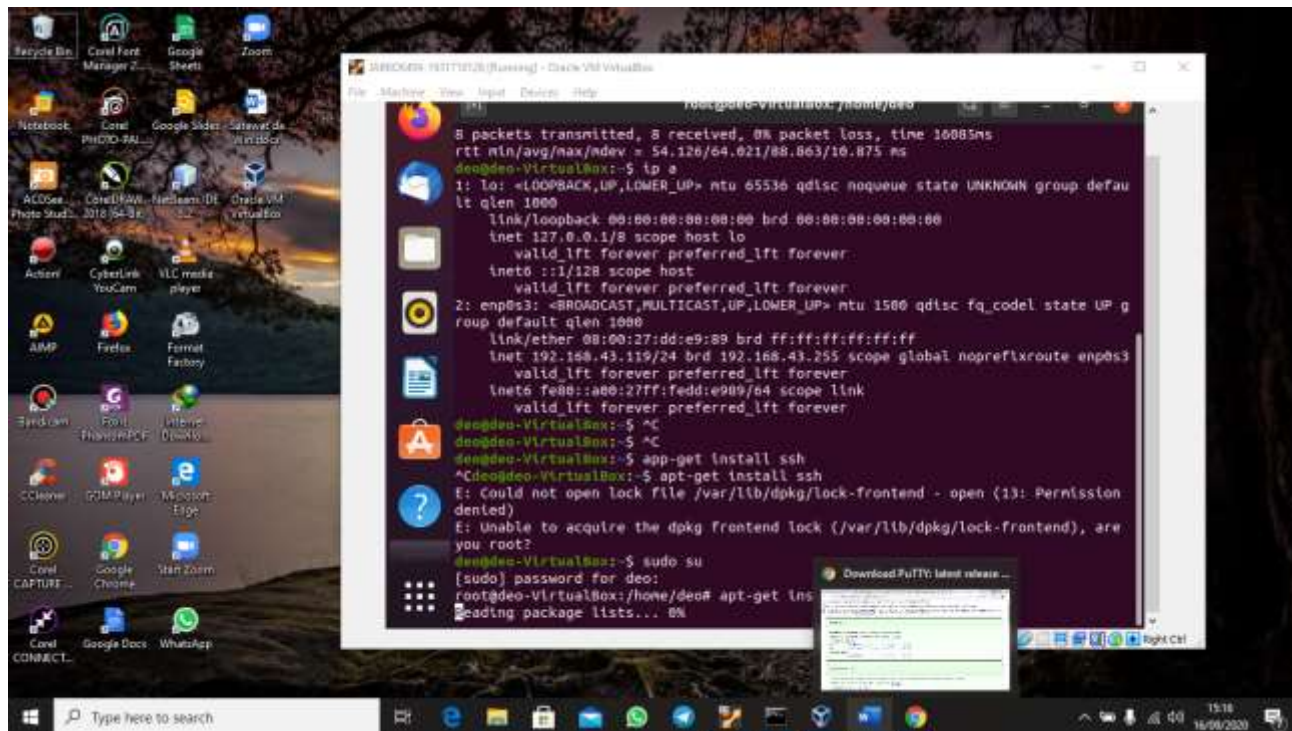
61.7 ms
56.3 ms
54.1 ms
58.8 ms
60.8 ms
88.9 ms
58.1 ms

ne 16085ns

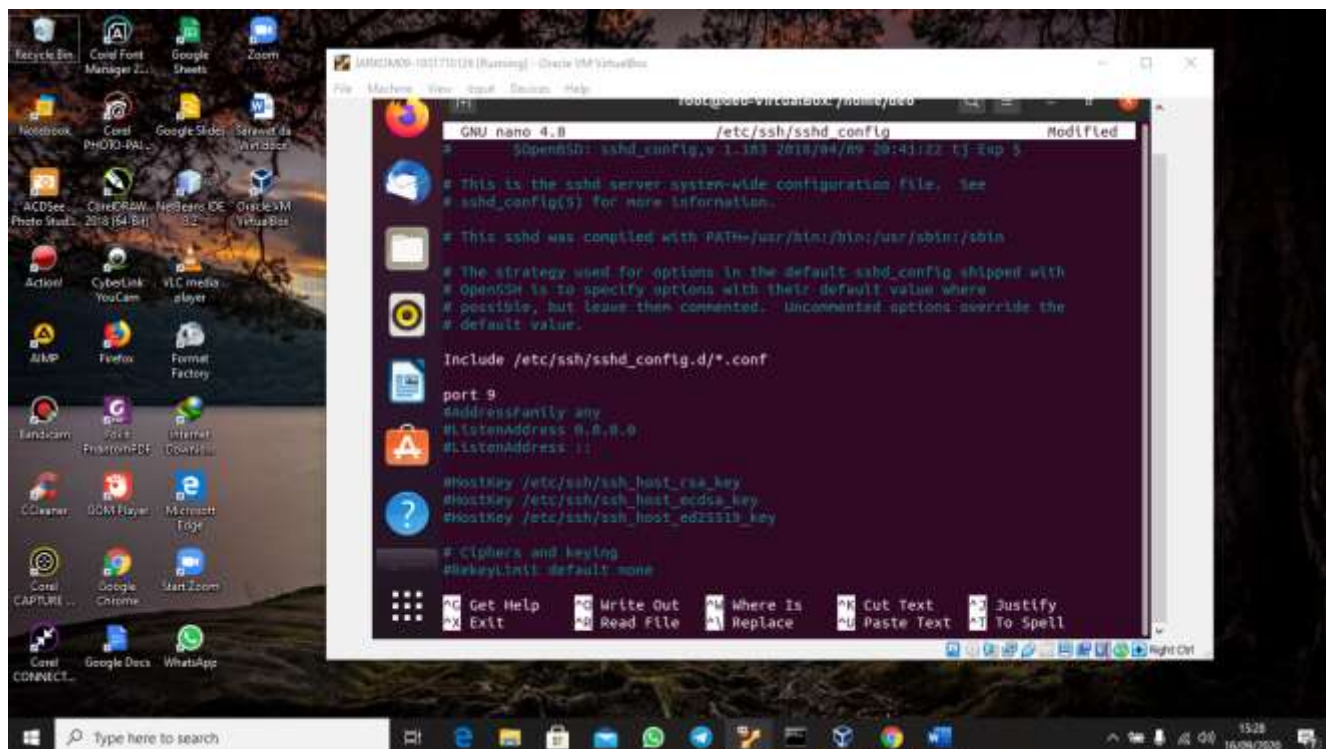
state UNKNOWN group defau

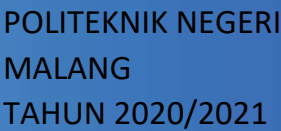
0:00
  
```


5.

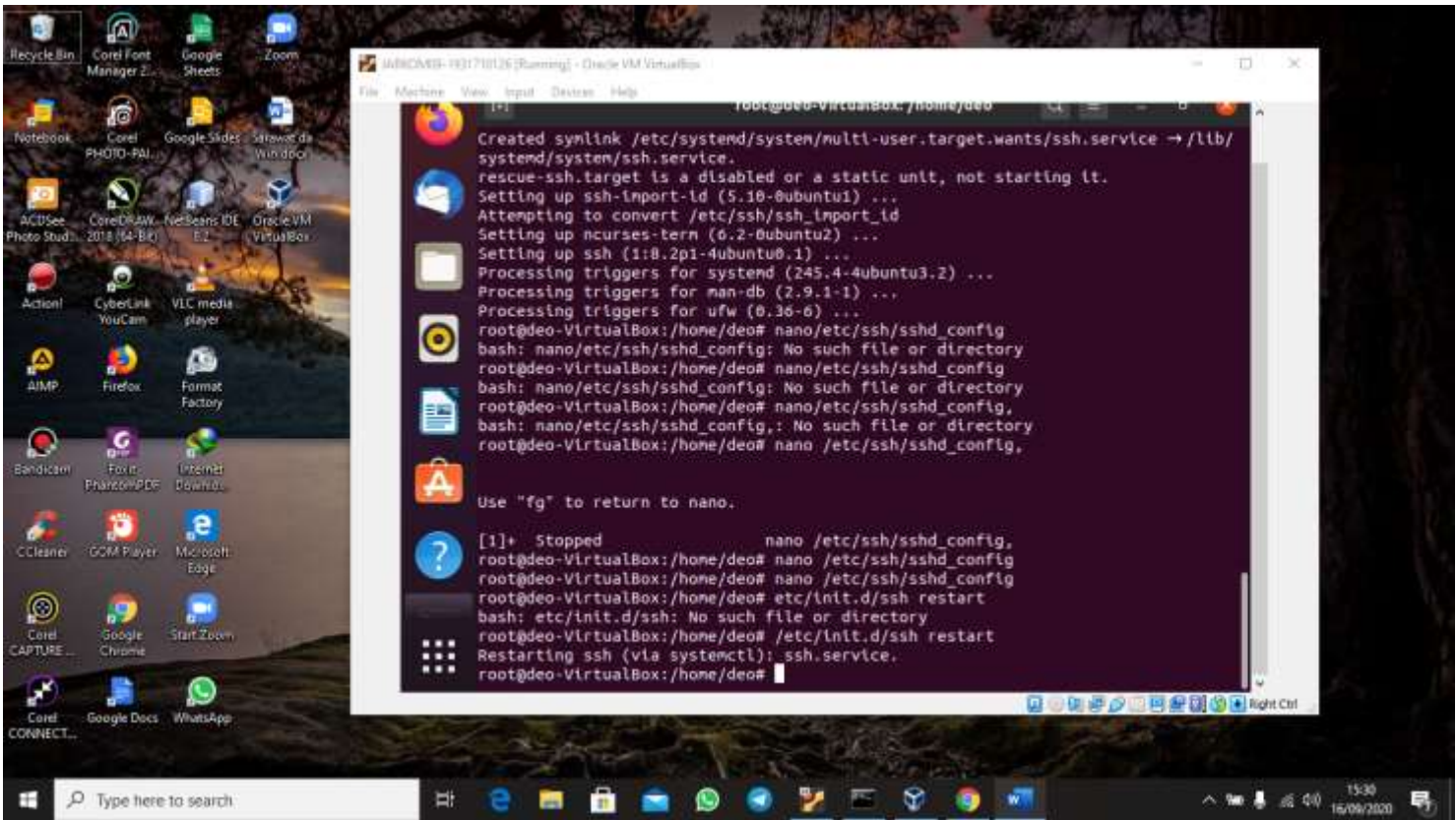


6.

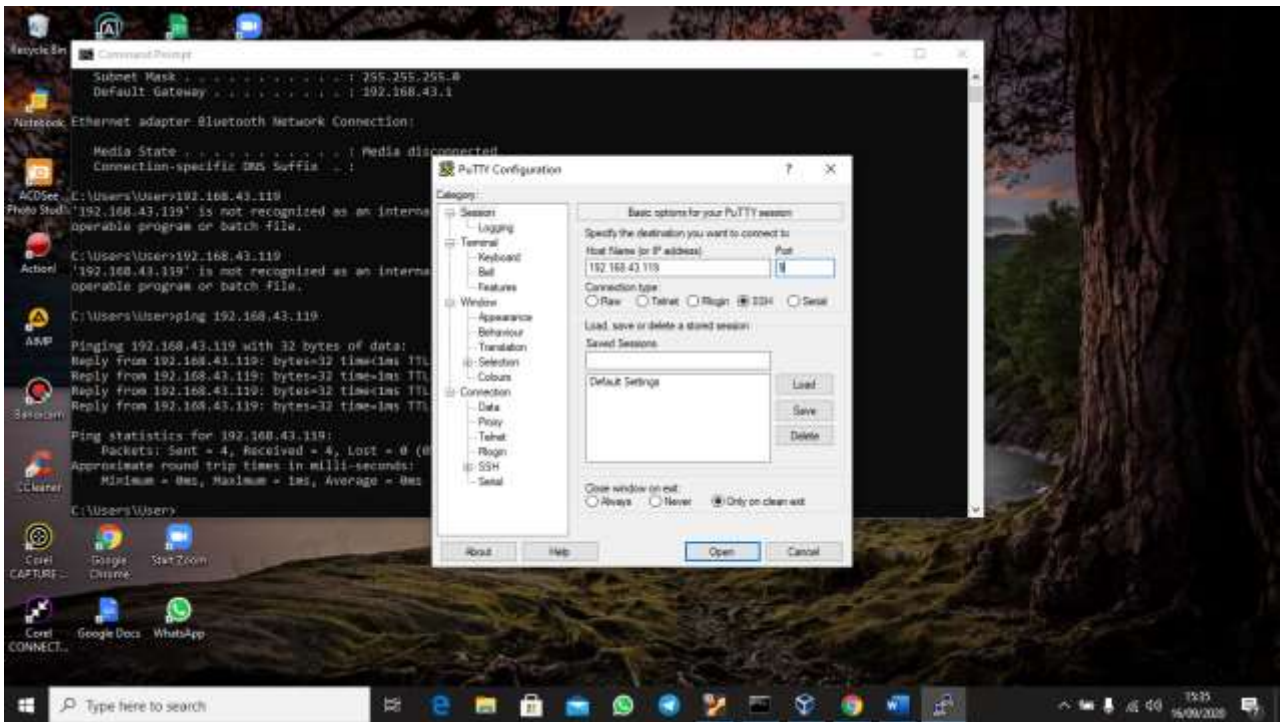


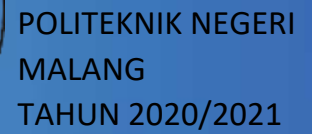


7.

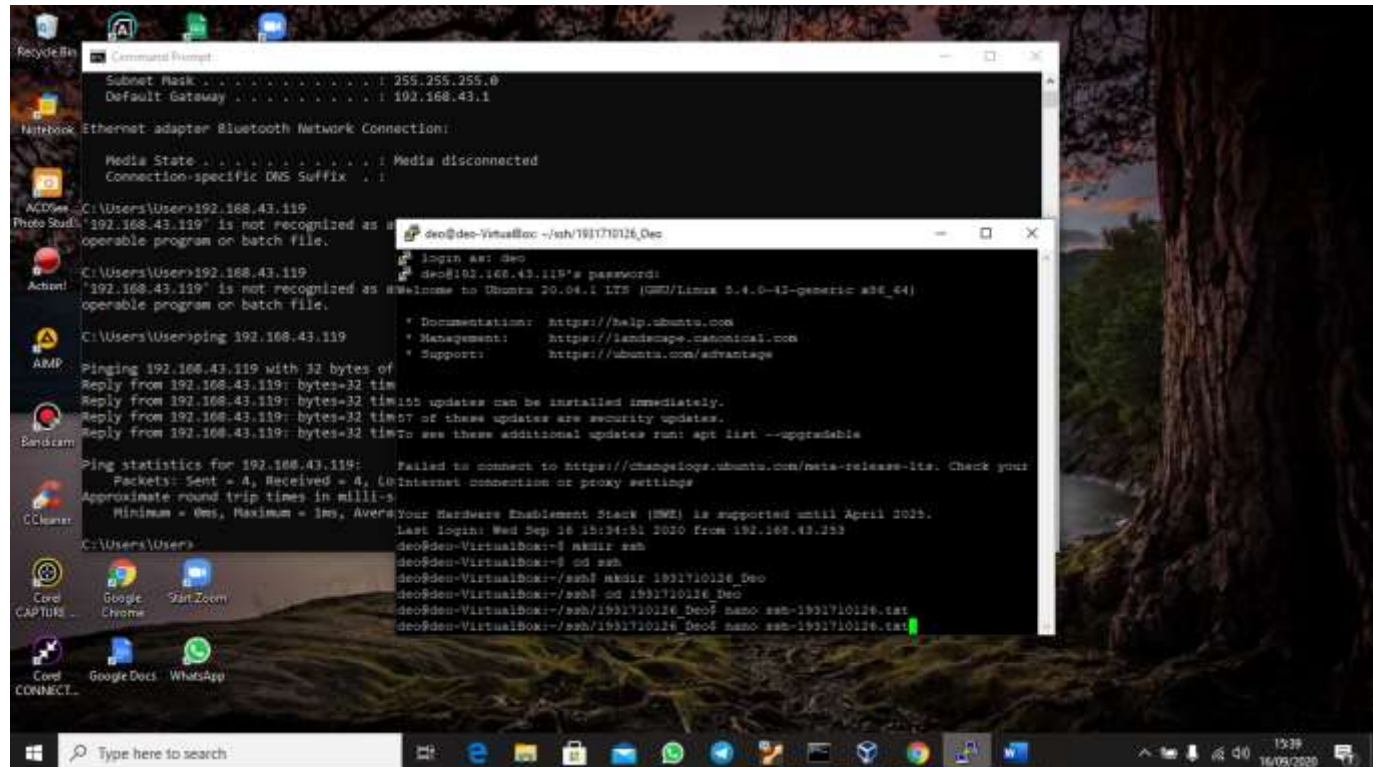


8.

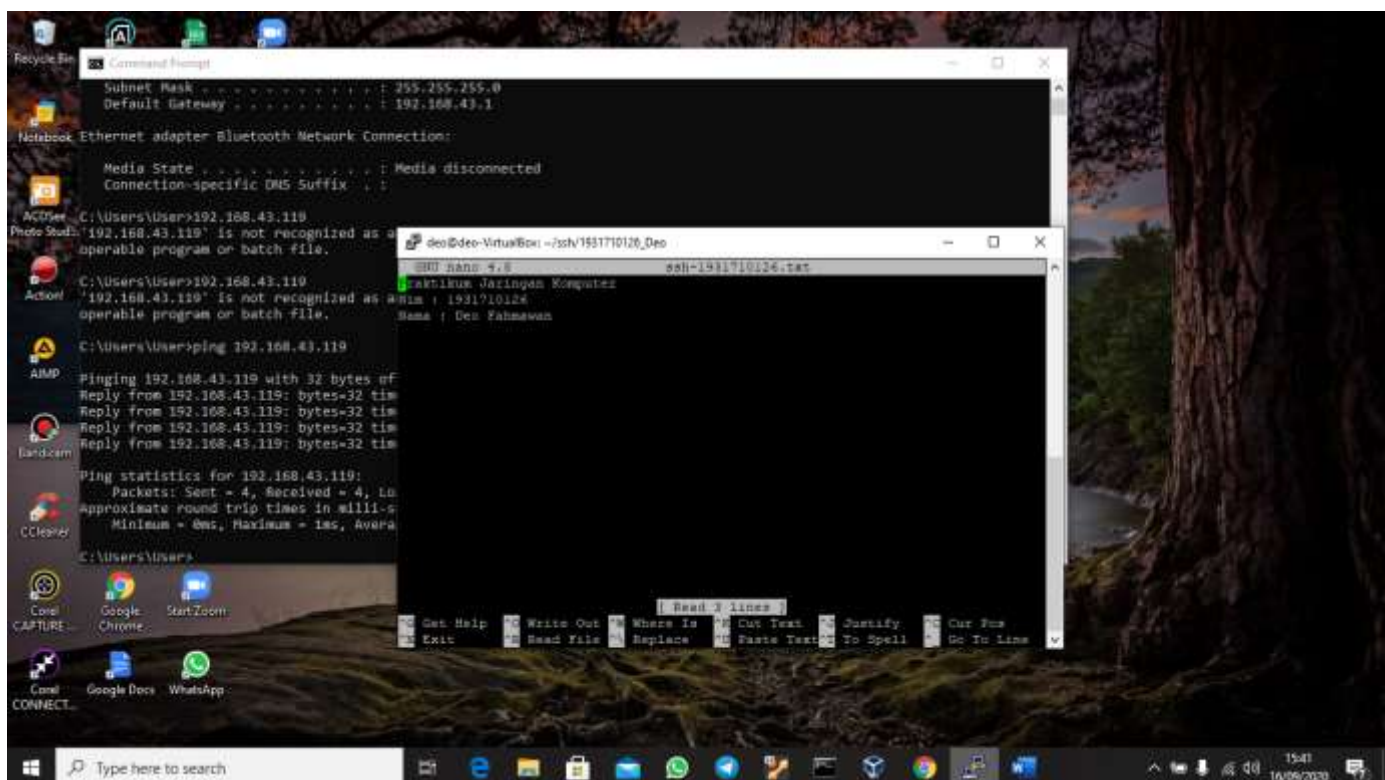


[illegible]

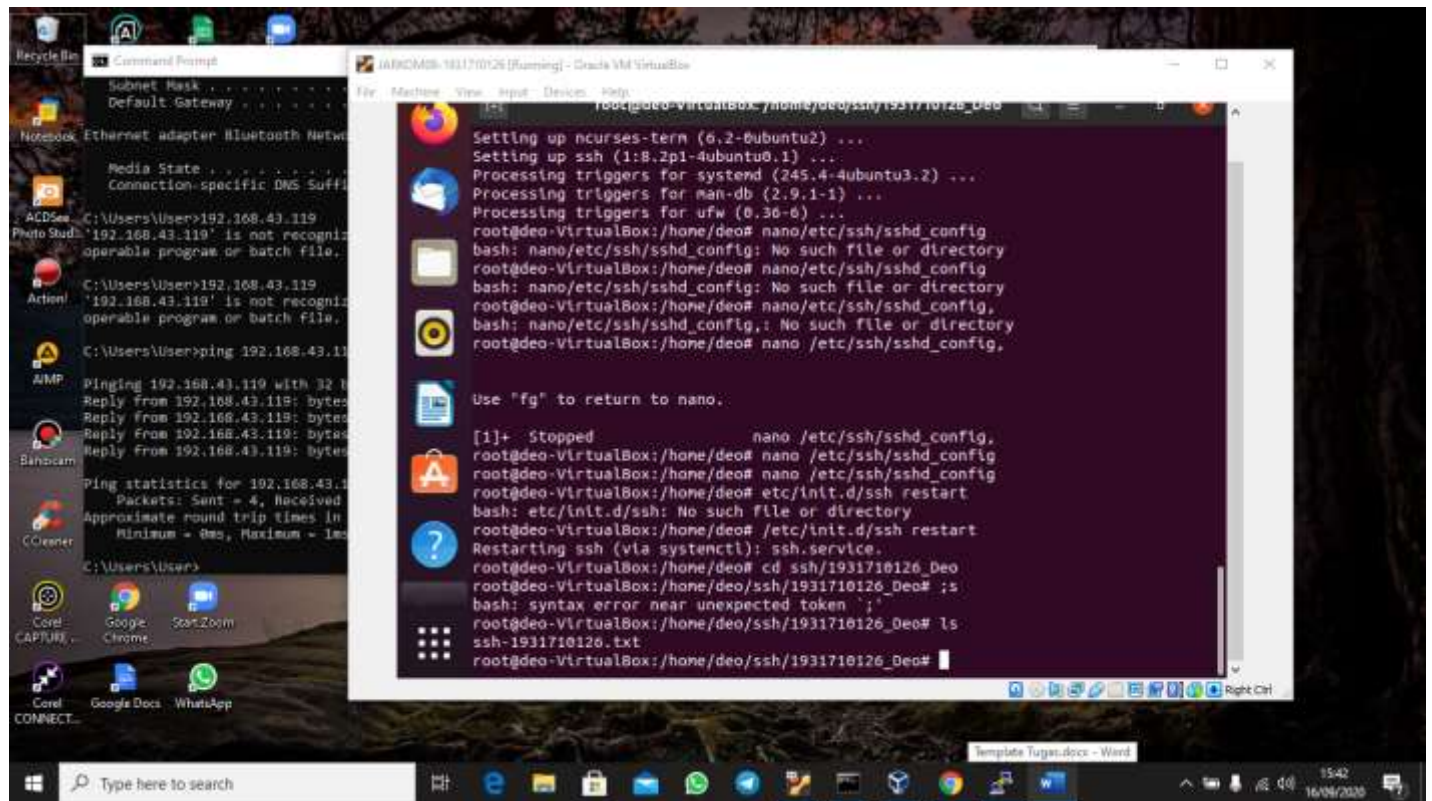
11.



12.

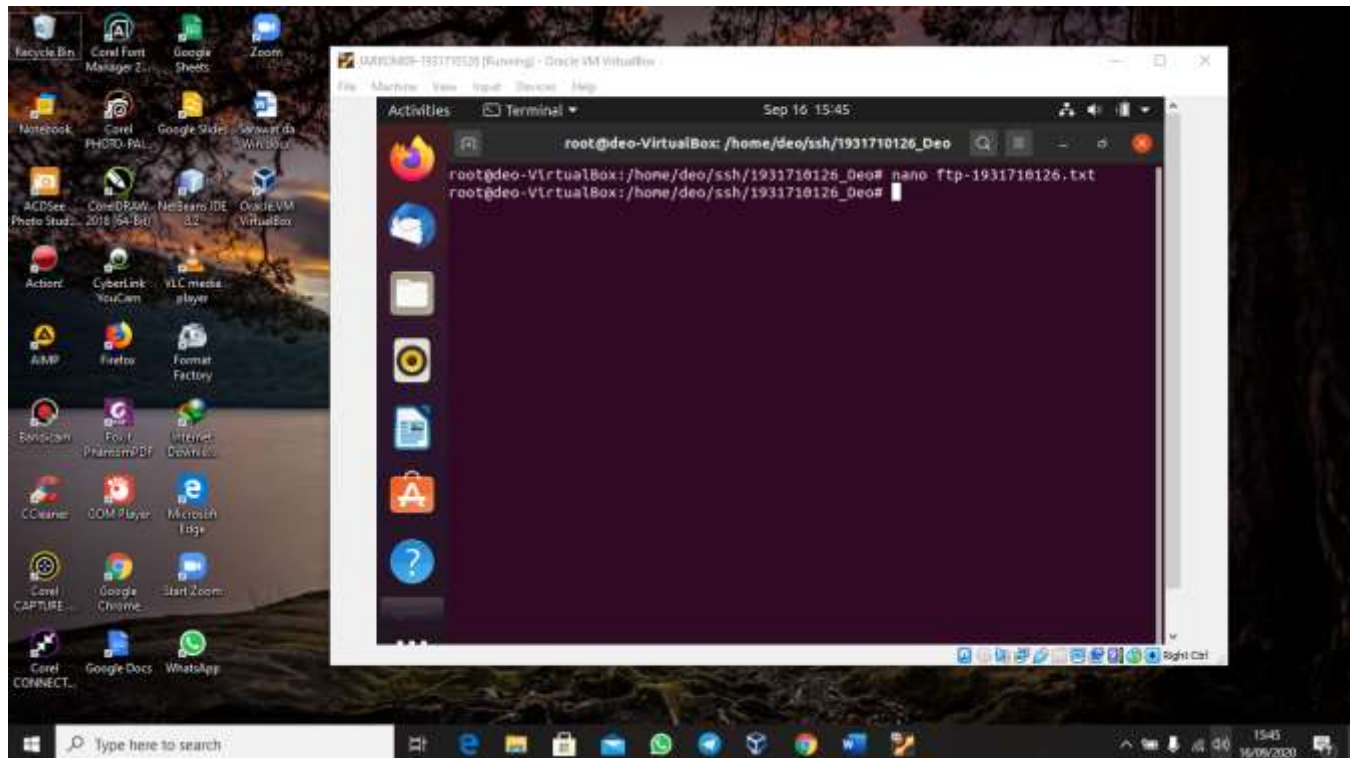


13.

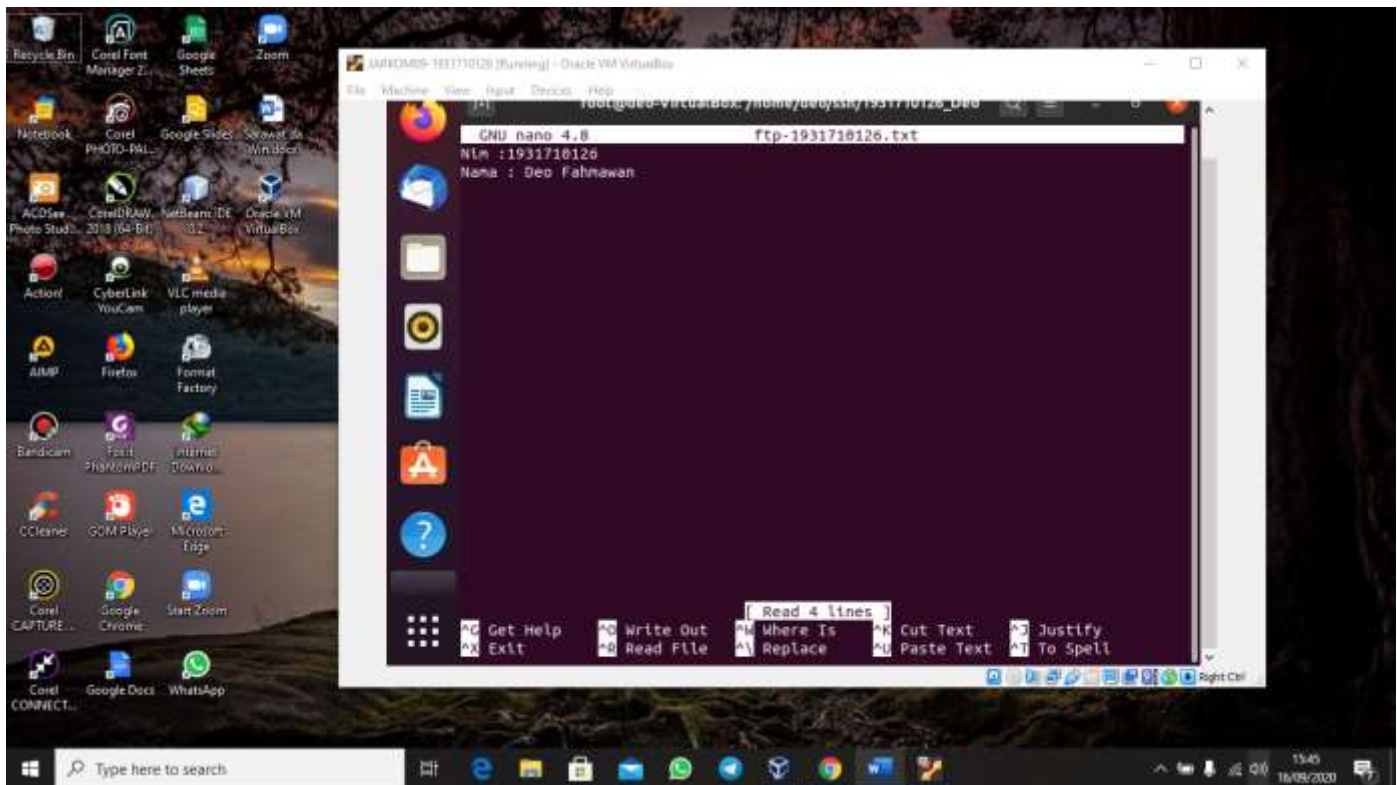


C. Praktikum FTP

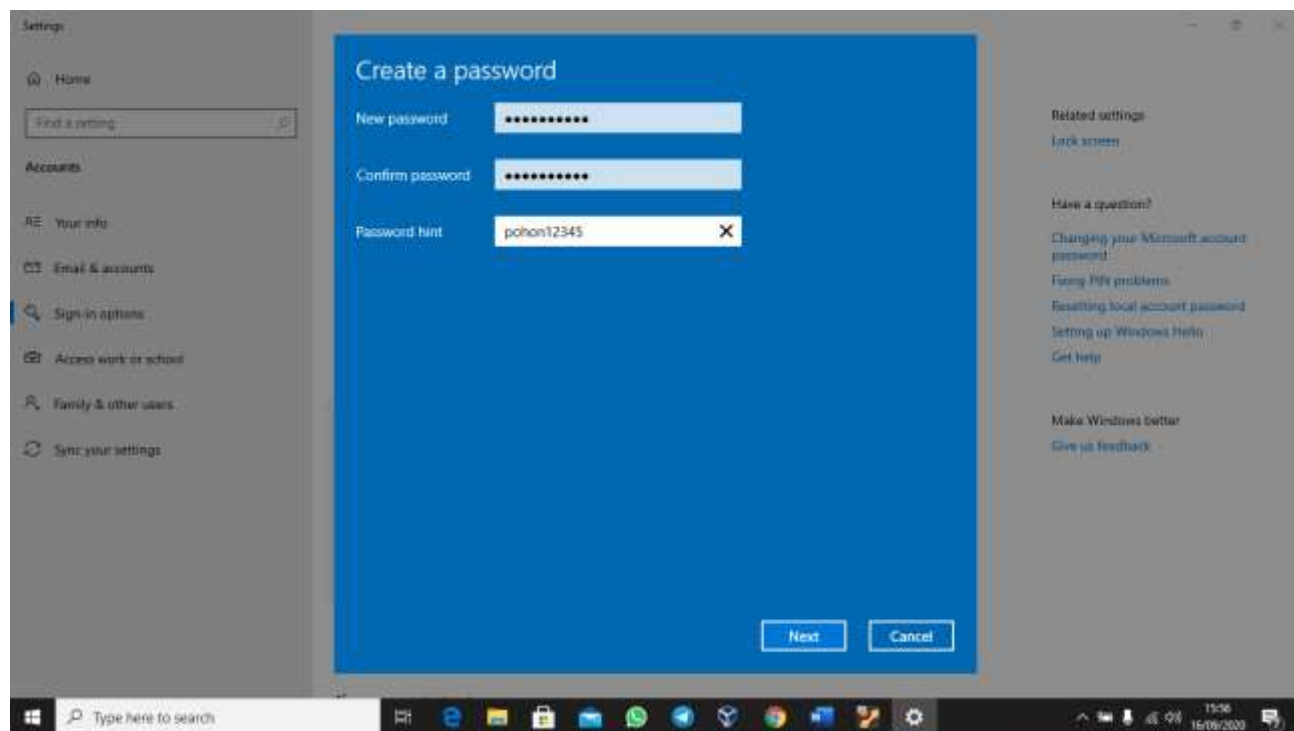
1.



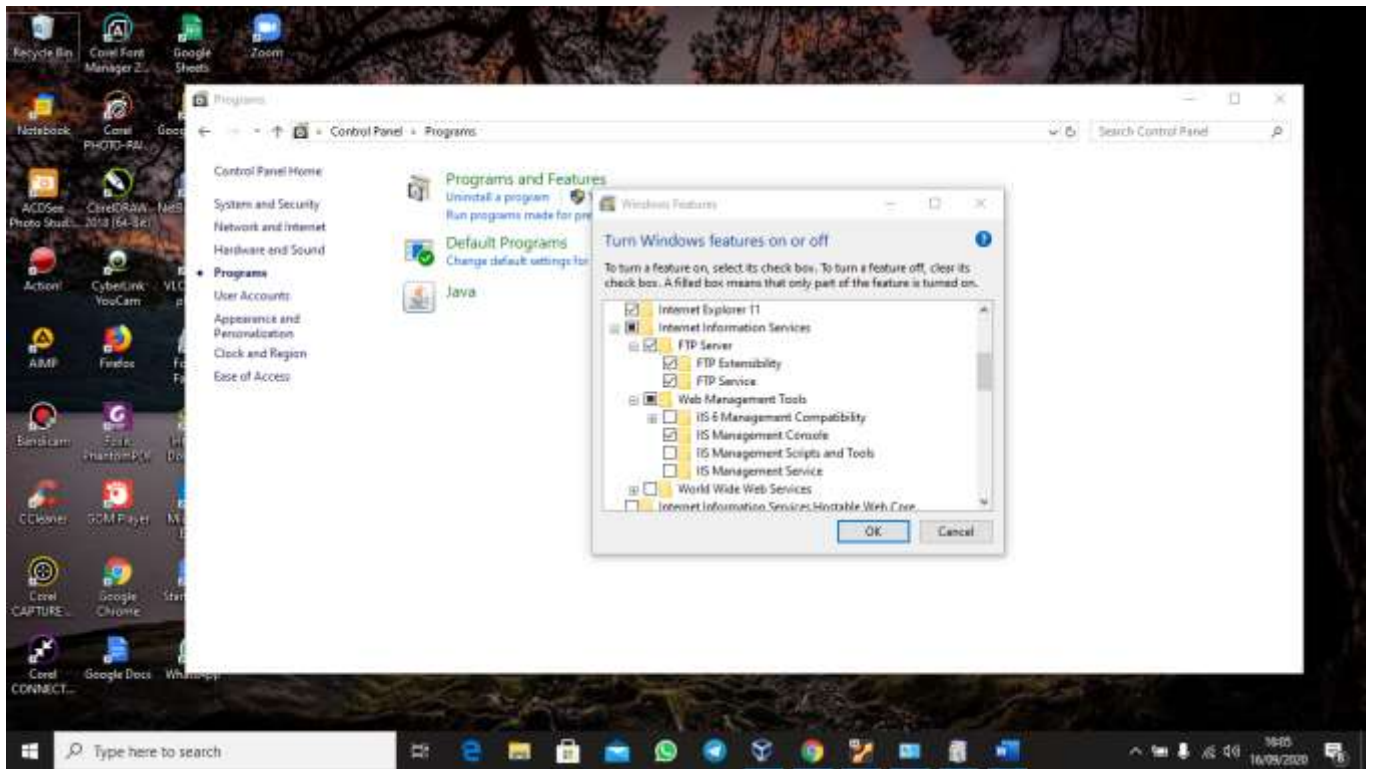
2.



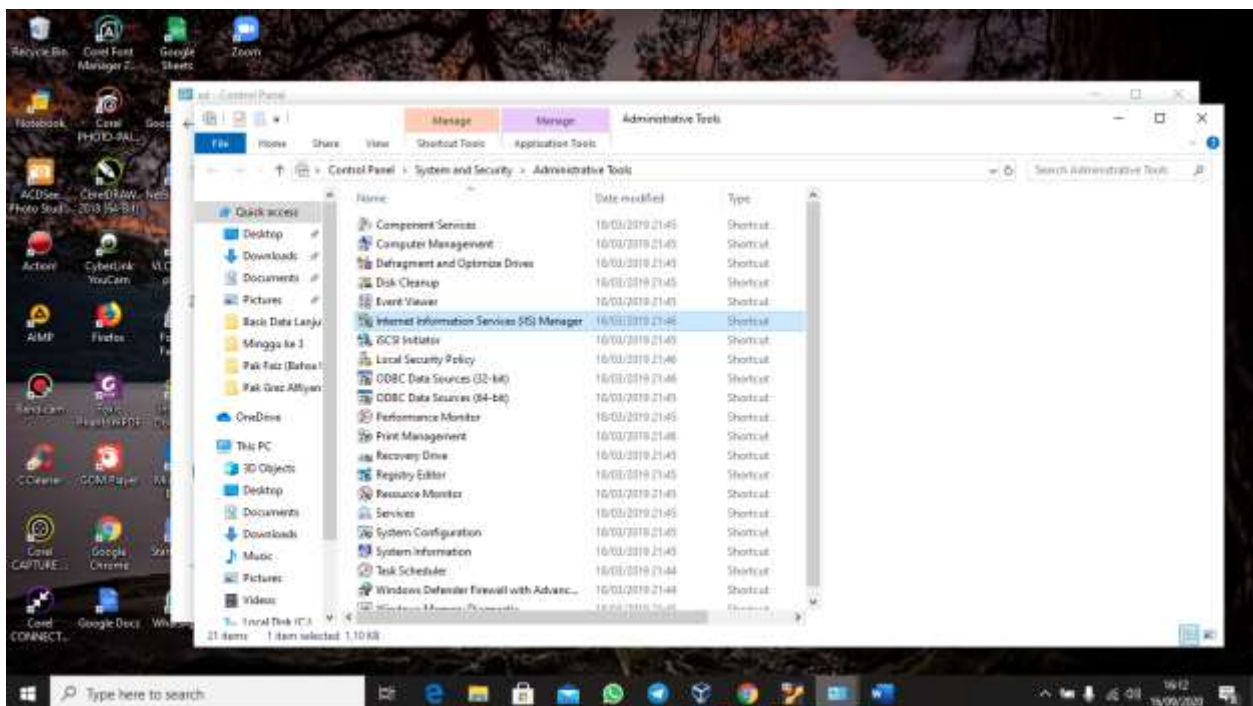
3.



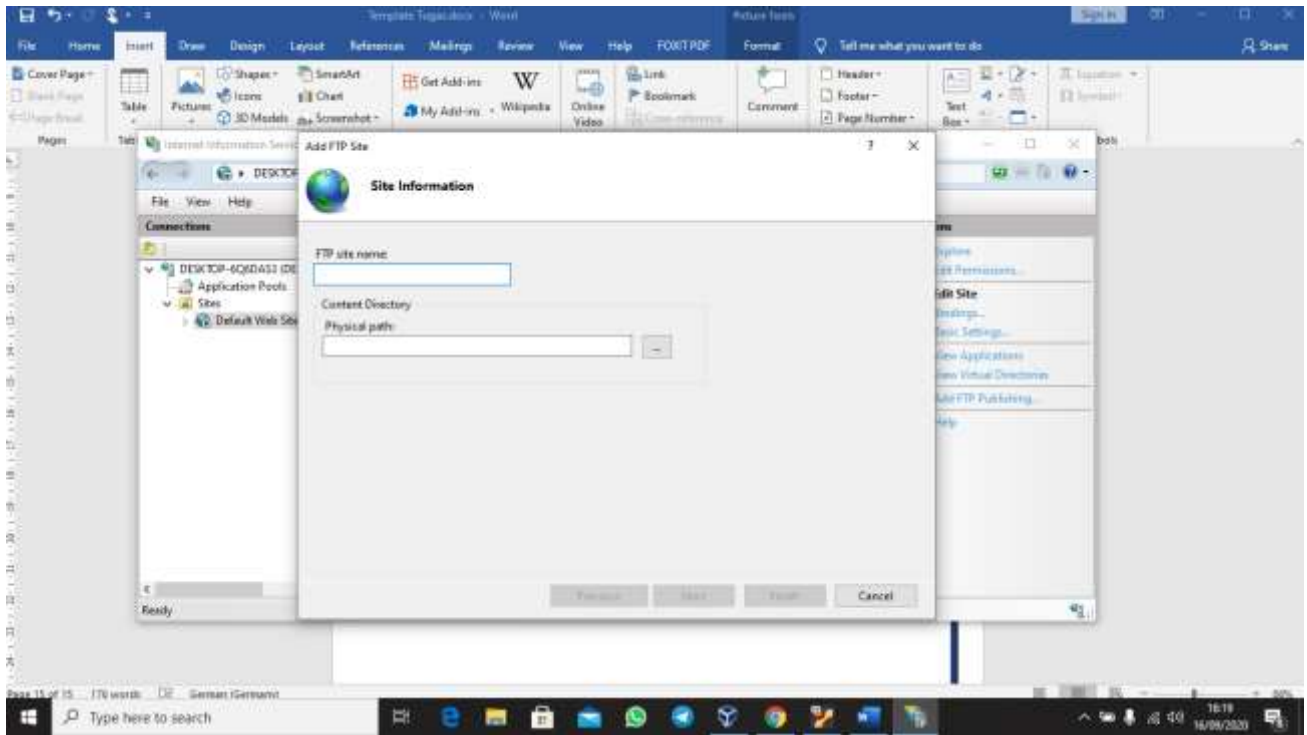
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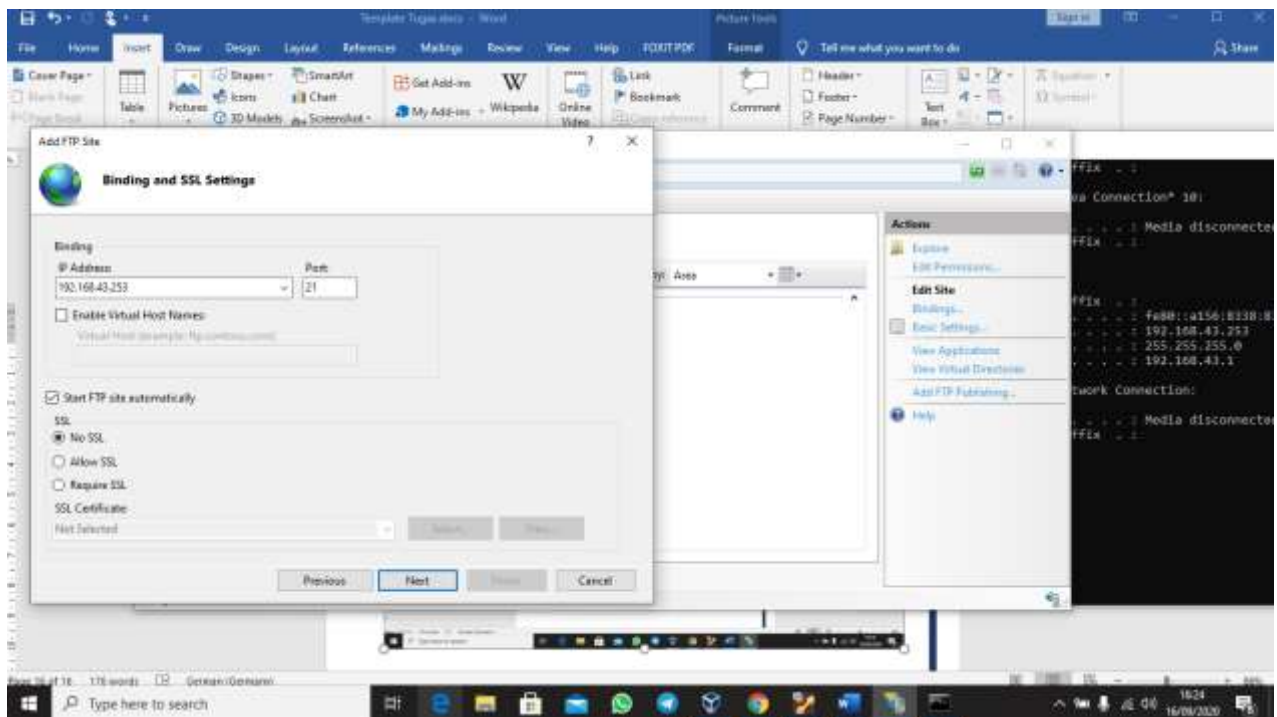
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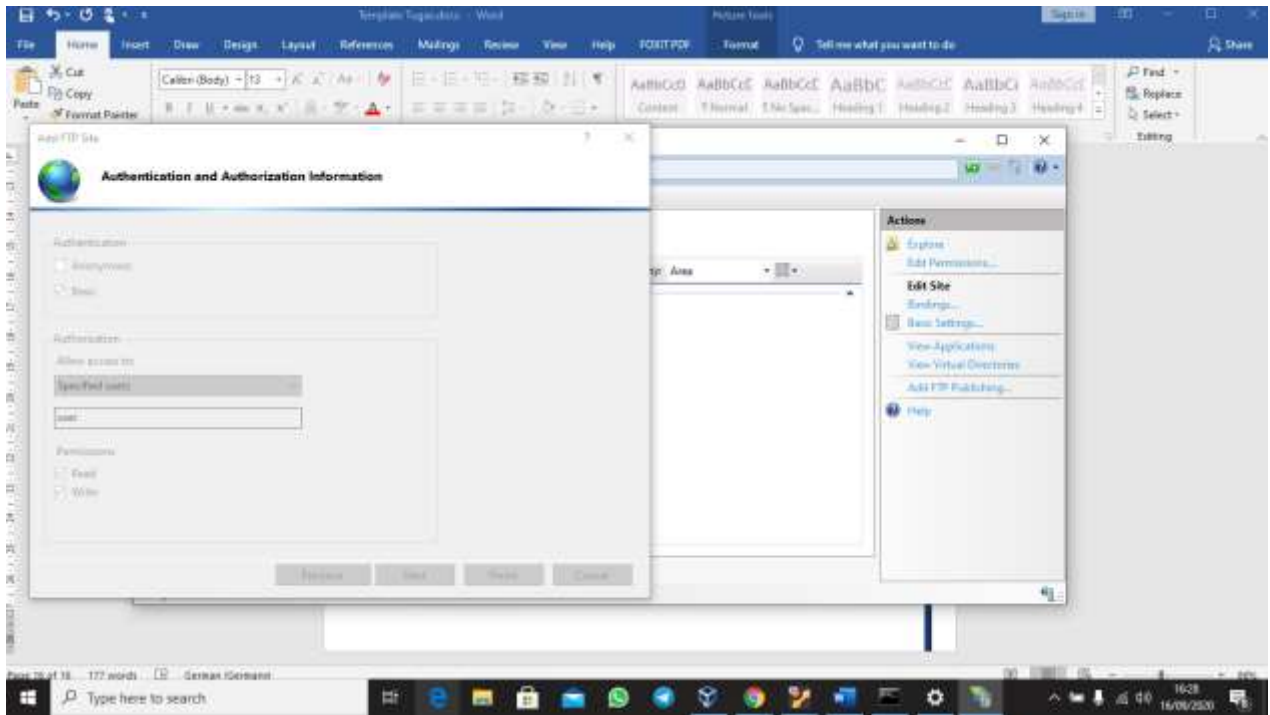
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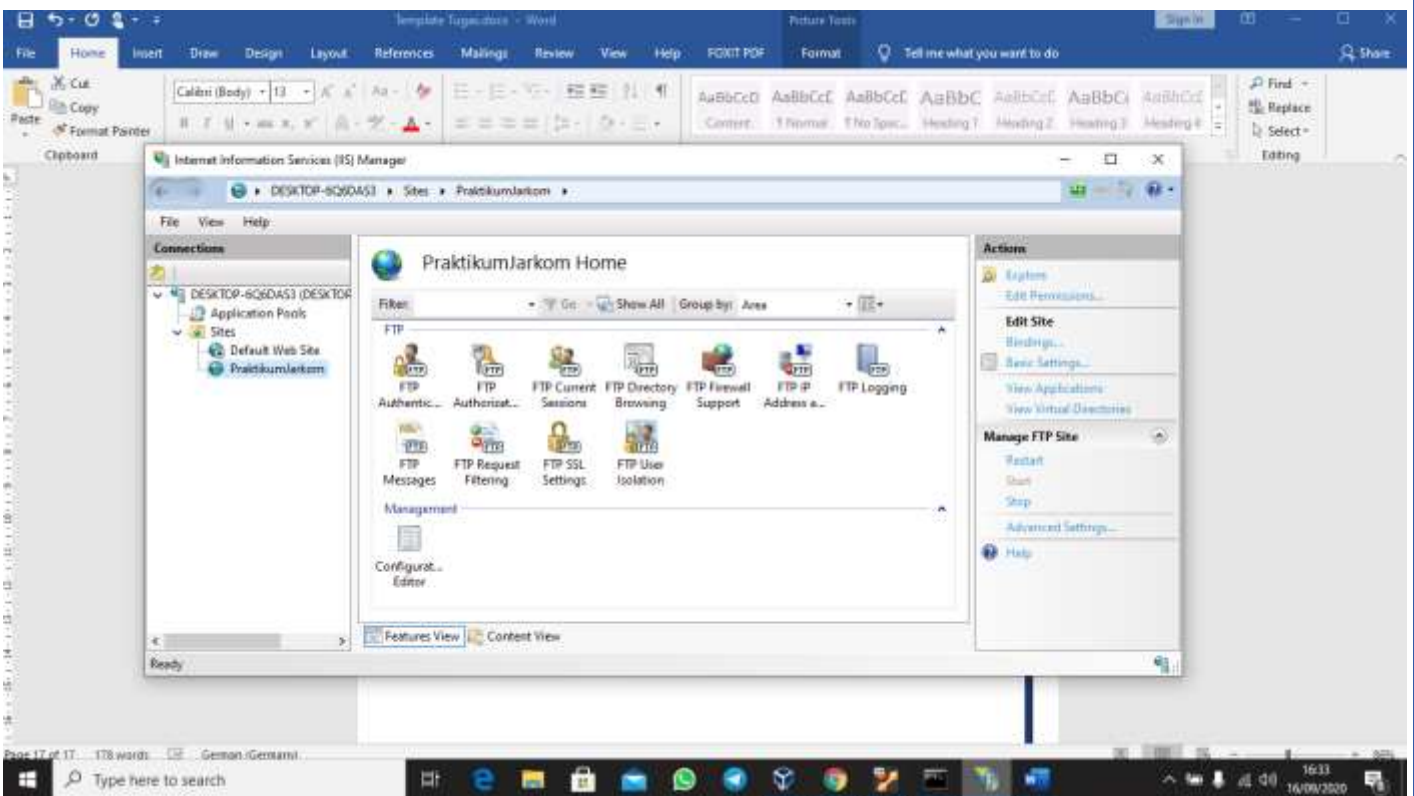
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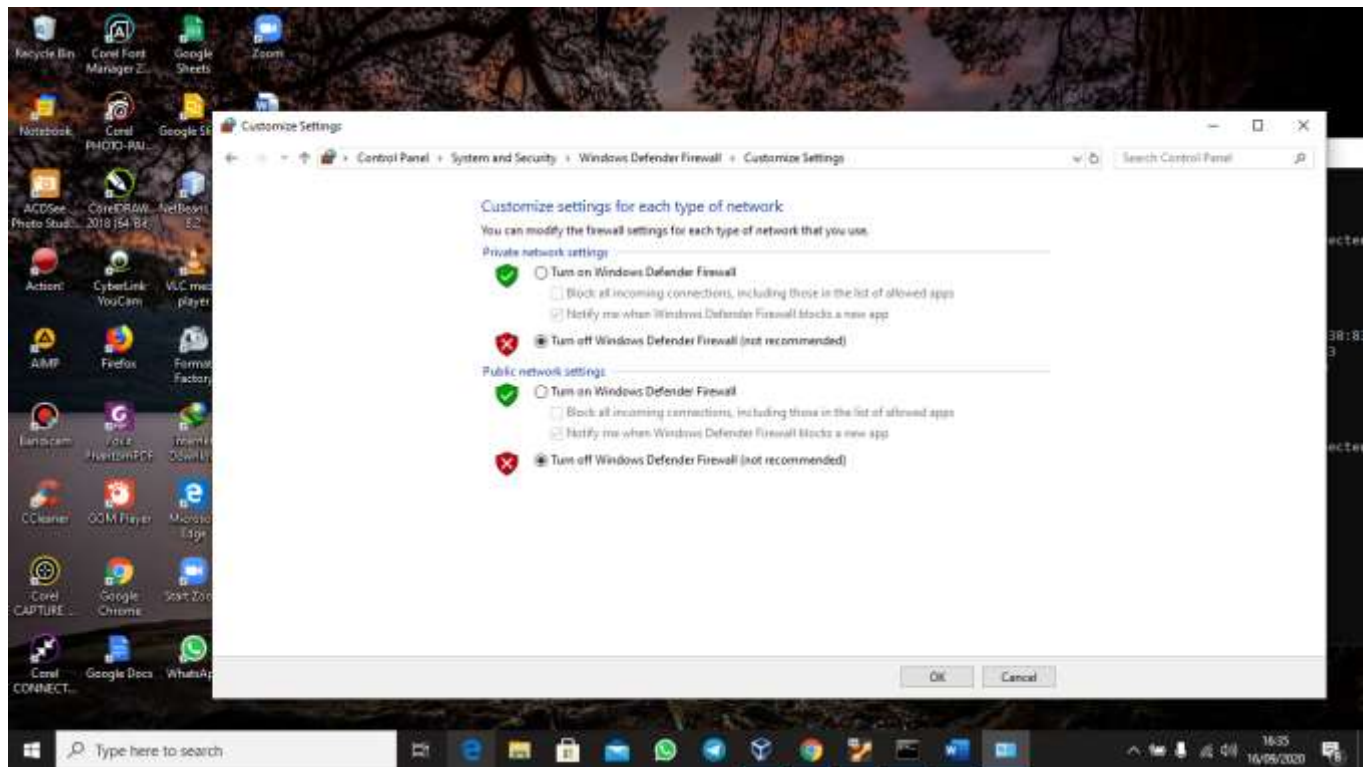
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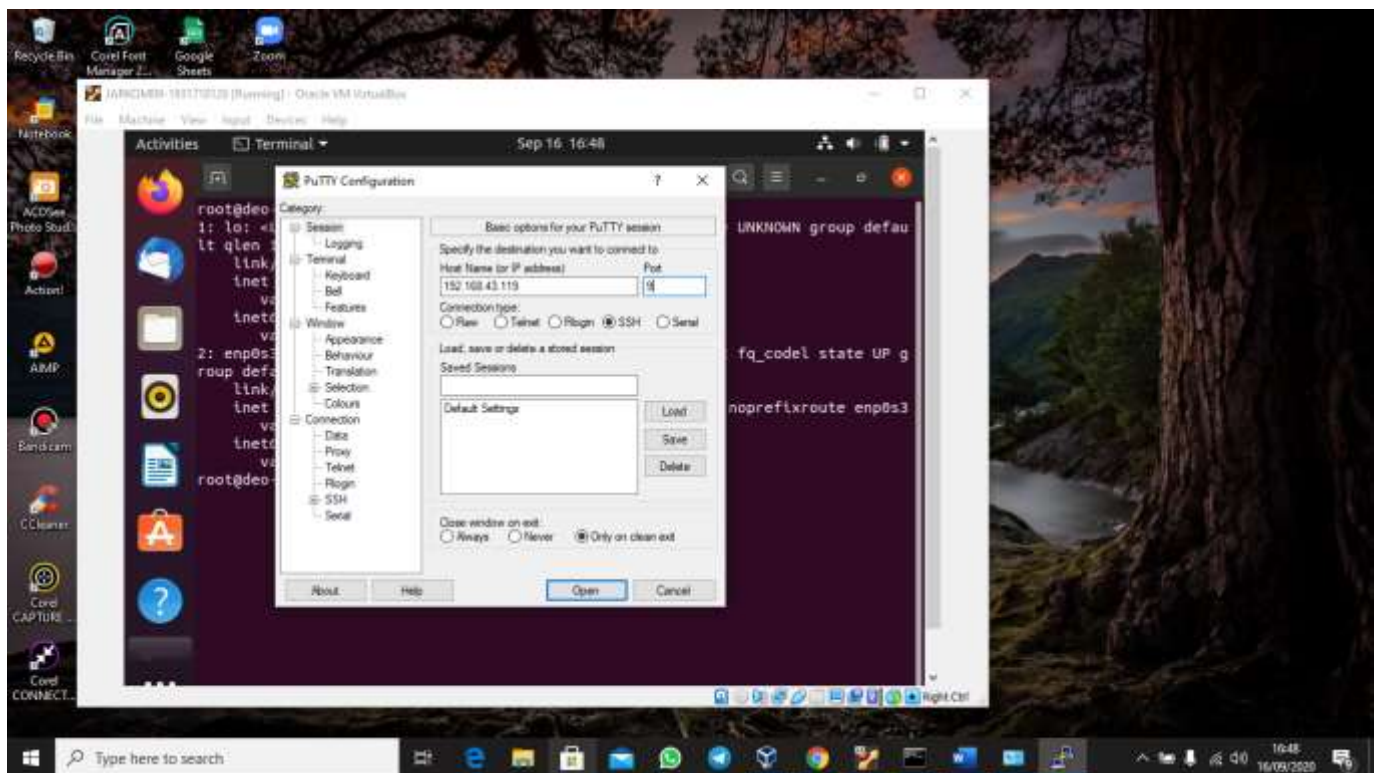
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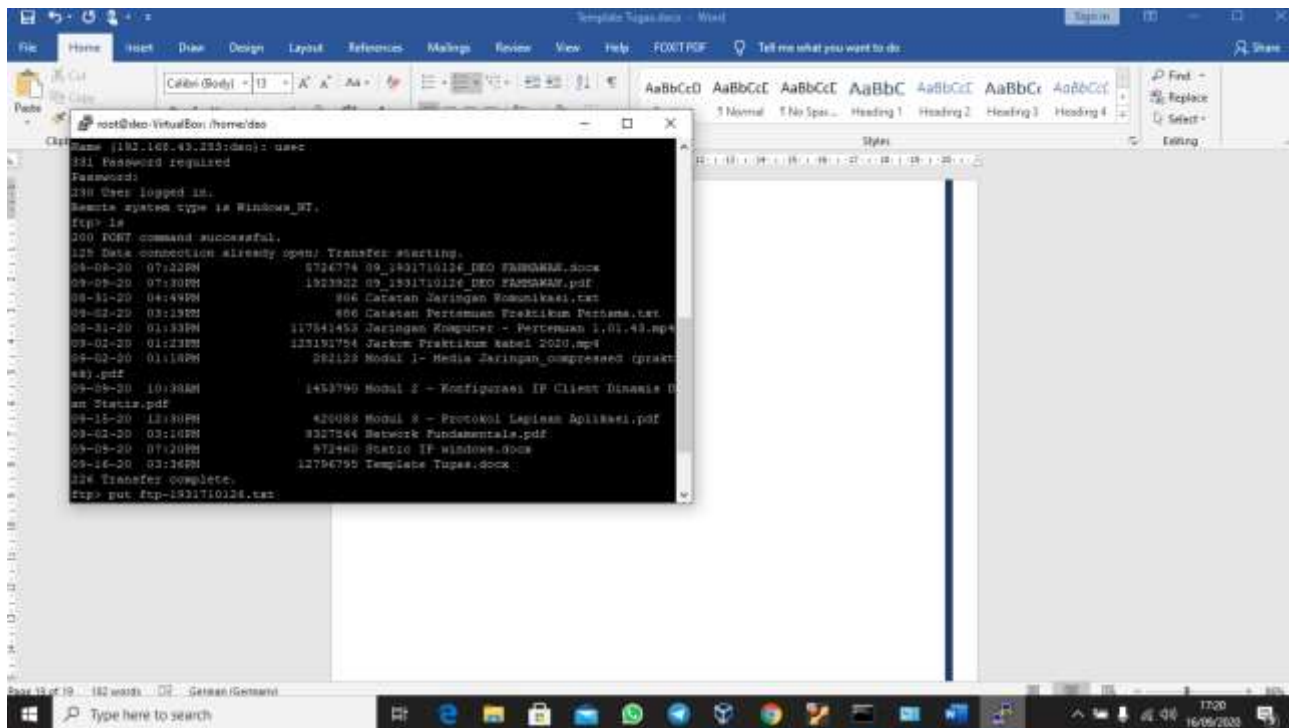
10.



11.



12.



13. File Tela Berhasil Ditransfer

