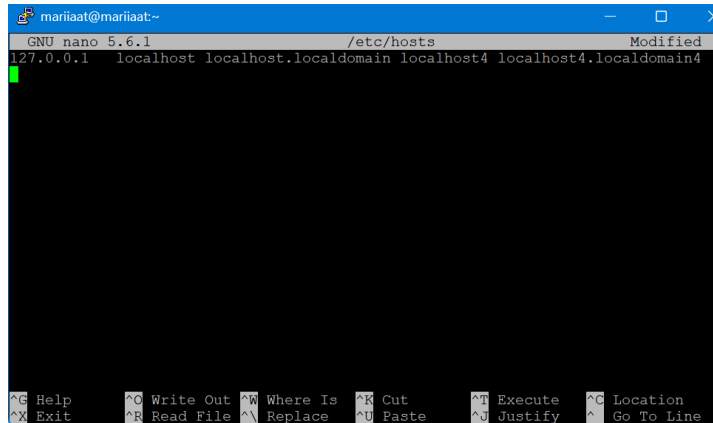


## Assignment 7

1. At first, I used `sudo nano /etc/hosts` to clean the file.

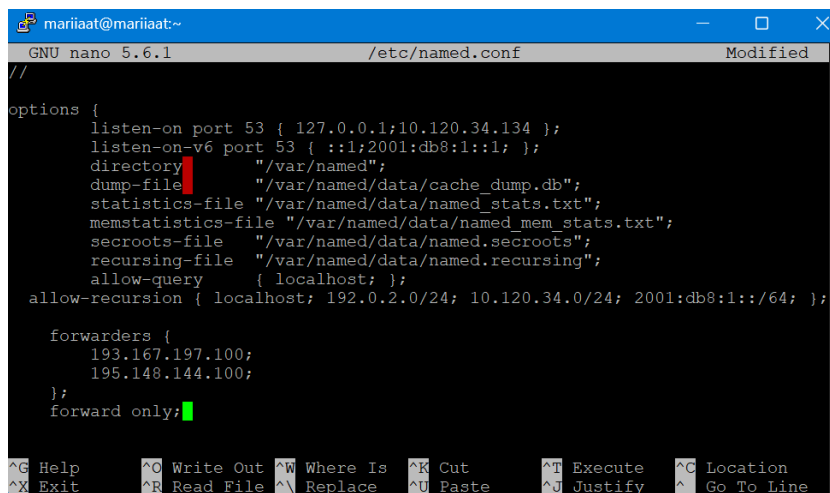


A terminal window titled 'mariiaat@mariiaat:~' showing the `/etc/hosts` file in the nano editor. The file content is as follows:

```
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
```

The nano editor interface includes a status bar at the bottom with various keyboard shortcuts like `^G Help`, `^O Write Out`, `^W Where Is`, `^K Cut`, `^T Execute`, `^C Location`, `^X Exit`, `^R Read File`, `^N Replace`, `^U Paste`, `^J Justify`, and `^_ Go To Line`.

2. Used `sudo yum install -y bind bind-utils` to install BIND and utilities.
3. Edited the file as in example

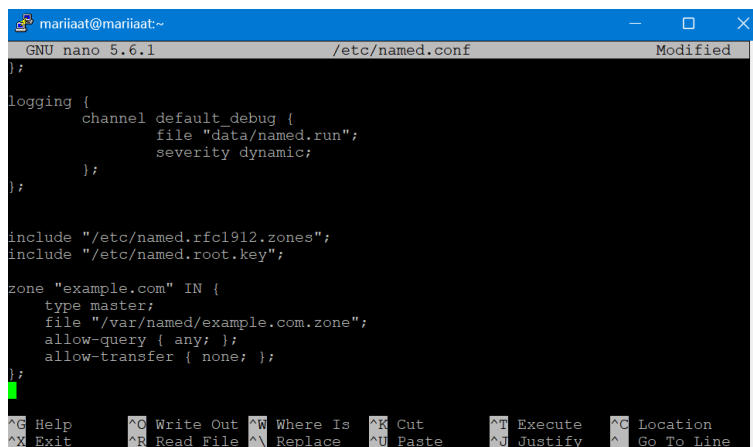


A terminal window titled 'mariiaat@mariiaat:~' showing the `/etc/named.conf` file in the nano editor. The file content is as follows:

```
//  
options {  
    listen-on port 53 { 127.0.0.1; 10.120.34.134 };  
    listen-on-v6 port 53 { ::1; 2001:db8:1::1; };  
    directory "/var/named";  
    dump-file "/var/named/data/cache_dump.db";  
    statistics-file "/var/named/data/named_stats.txt";  
    memstatistics-file "/var/named/data/named_mem_stats.txt";  
    secroots-file "/var/named/data/named.secroots";  
    recursing-file "/var/named/data/named.recursing";  
    allow-query { localhost; };  
    allow-recursion { localhost; 192.0.2.0/24; 10.120.34.0/24; 2001:db8:1::/64; };  
  
    forwarders {  
        193.167.197.100;  
        195.148.144.100;  
    };  
    forward only;
```

The nano editor interface includes a status bar at the bottom with various keyboard shortcuts like `^G Help`, `^O Write Out`, `^W Where Is`, `^K Cut`, `^T Execute`, `^C Location`, `^X Exit`, `^R Read File`, `^N Replace`, `^U Paste`, `^J Justify`, and `^_ Go To Line`.

4. Configured zone



A terminal window titled 'mariiaat@mariiaat:~' showing the `/etc/named.conf` file in the nano editor. The file content is as follows:

```
};  
  
logging {  
    channel default_debug {  
        file "data/named.run";  
        severity dynamic;  
    };  
};  
  
include "/etc/named.rfc1912.zones";  
include "/etc/named.root.key";  
  
zone "example.com" IN {  
    type master;  
    file "/var/named/example.com.zone";  
    allow-query { any; };  
    allow-transfer { none; };  
};
```

The nano editor interface includes a status bar at the bottom with various keyboard shortcuts like `^G Help`, `^O Write Out`, `^W Where Is`, `^K Cut`, `^T Execute`, `^C Location`, `^X Exit`, `^R Read File`, `^N Replace`, `^U Paste`, `^J Justify`, and `^_ Go To Line`.

```
mariiaat@mariiaat:~
GNU nano 5.6.1 /var/named/example.com.zone Modified
$TTL 86400
@      IN      SOA      ns1.example.com. mashaatamanova05.gmail.com. (
        2025120101 ; Serial (YYYYMMDDnn)
        3600      ; Refresh
        1800      ; Retry
        604800    ; Expire
        86400     ; Minimum TTL

ns1     IN      NS       ns1.example.com.
ns1     IN      A        10.120.34.134
www     IN      A        10.120.34.134

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

```
[mariiaat@mariiaat ~]$ sudo named-checkzone example.com /var/named/example.com.zone
zone example.com/IN: loaded serial 2025120101
OK
[mariiaat@mariiaat ~]$
```

5. Turned off dns servers, opened and edited `sudo nano /etc/resolv.conf`

```
mariiaat@mariiaat:~
GNU nano 5.6.1 /etc/resolv.conf
# Generated by NetworkManager
search mariia.lab
nameserver 10.120.34.134
```

Used `sudo chattr +i /etc/resolv.conf` to prevent overwriting

6. Tested with dig :

```
[mariiaat@mariiaat ~]$ dig @10.120.34.110 www.example.com

; <<>> DiG 9.16.23-RH <<>> @10.120.34.110 www.example.com
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45814
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 1232
; COOKIE: 15df601747cf4b5401000000692dd3599cf7c81575cb3bc3 (good)
;; QUESTION SECTION:
;www.example.com.                IN      A

;; ANSWER SECTION:
www.example.com.                300     IN      CNAME   www.example.com-v4.edgesuite.net.
www.example.com-v4.edgesuite.net. 21600   IN      CNAME   al422.dscr.akamai.net.
al422.dscr.akamai.net.          20      IN      A       80.239.138.112
al422.dscr.akamai.net.          20      IN      A       80.239.138.98

;; Query time: 321 msec
;; SERVER: 10.120.34.110#53(10.120.34.110)
;; WHEN: Mon Dec 01 19:41:45 EET 2025
;; MSG SIZE rcvd: 185

[mariiaat@mariiaat ~]$
```

Tested localhost resolution:

```
[mariiaat@mariiaat ~]$ dig @127.0.0.1 www.example.com

; <<>> DiG 9.16.23-RH <<>> @127.0.0.1 www.example.com
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 50208
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: 1178bd6f96523cf001000000692dd4cba03eca34cdbc171f (good)
;; QUESTION SECTION:
;www.example.com.                IN      A

;; ANSWER SECTION:
www.example.com.                86400   IN      A      10.120.34.134

;; Query time: 1 msec
;; SERVER: 127.0.0.1#53(127.0.0.1)
;; WHEN: Mon Dec 01 19:47:55 EET 2025
;; MSG SIZE rcvd: 88

[mariiaat@mariiaat ~]$
```

Tested external domain to confirm forwarders are working correctly:

```
[mariiaat@mariiaat ~]$ dig @10.120.34.110 www.google.com

; <<>> DiG 9.16.23-RH <<>> @10.120.34.110 www.google.com
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 37126
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: f13aa1ee1a3800d801000000692dd531e758a34a94ddeb49 (good)
;; QUESTION SECTION:
;www.google.com.                IN      A

;; ANSWER SECTION:
www.google.com.                300     IN      A      142.251.39.228

;; Query time: 48 msec
;; SERVER: 10.120.34.110#53(10.120.34.110)
;; WHEN: Mon Dec 01 19:49:37 EET 2025
;; MSG SIZE rcvd: 87

[mariiaat@mariiaat ~]$
```