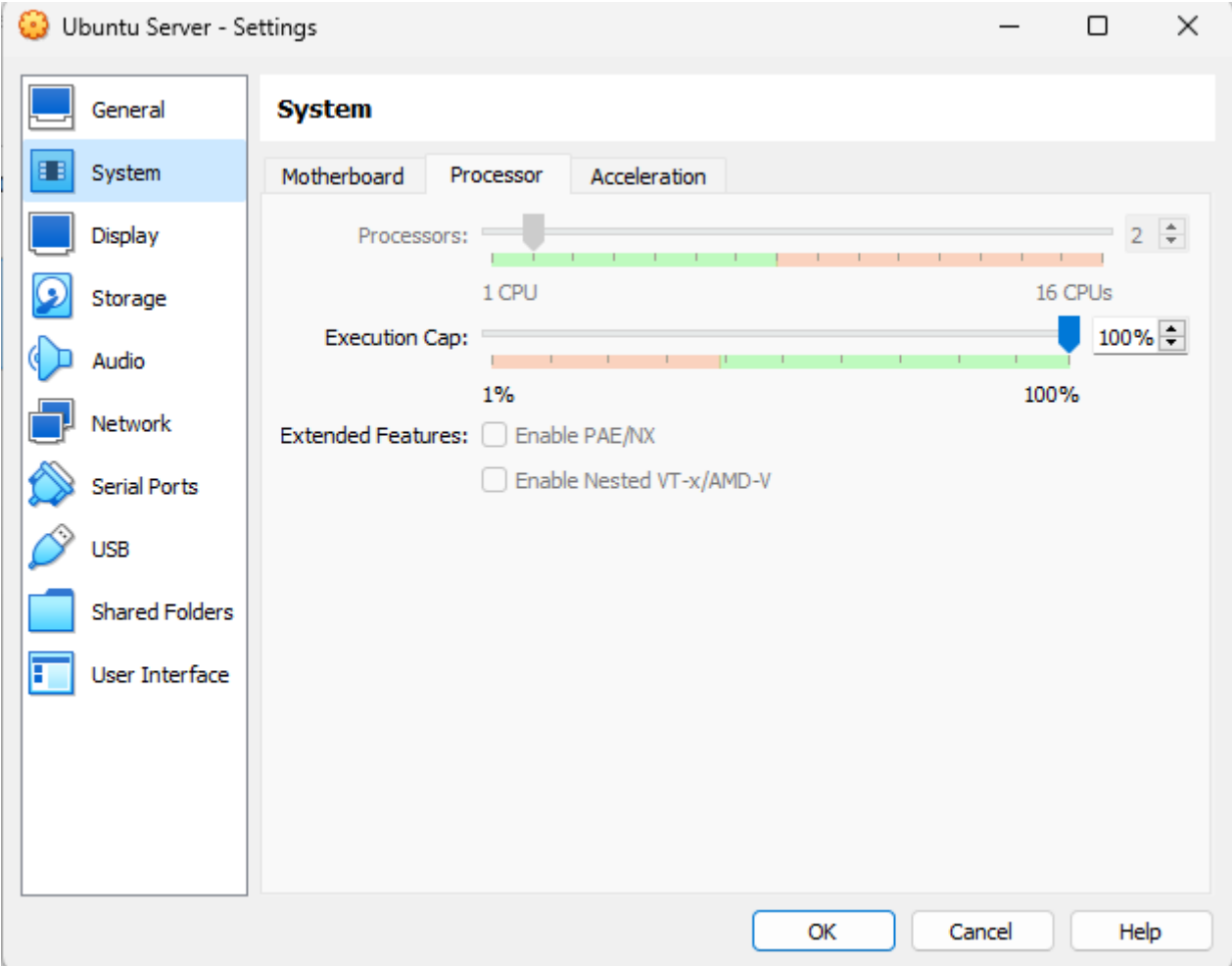
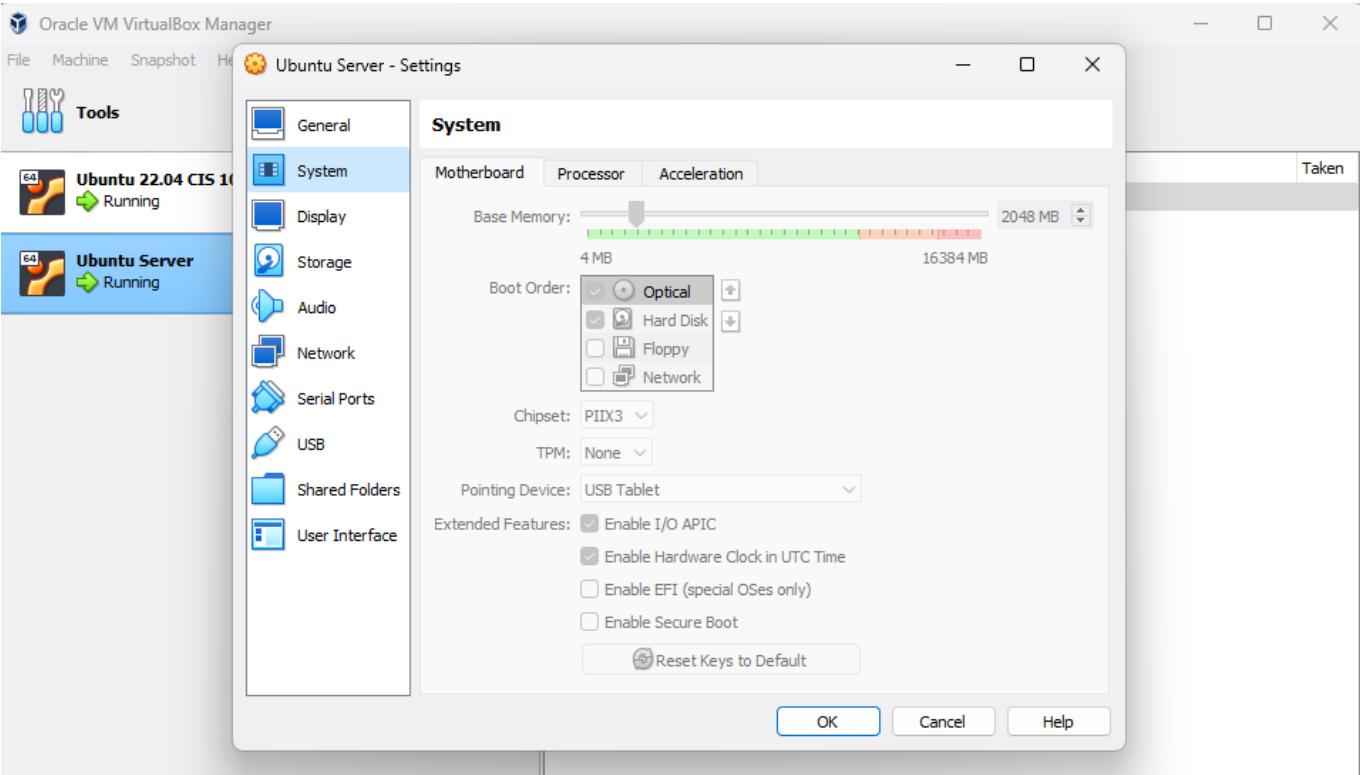
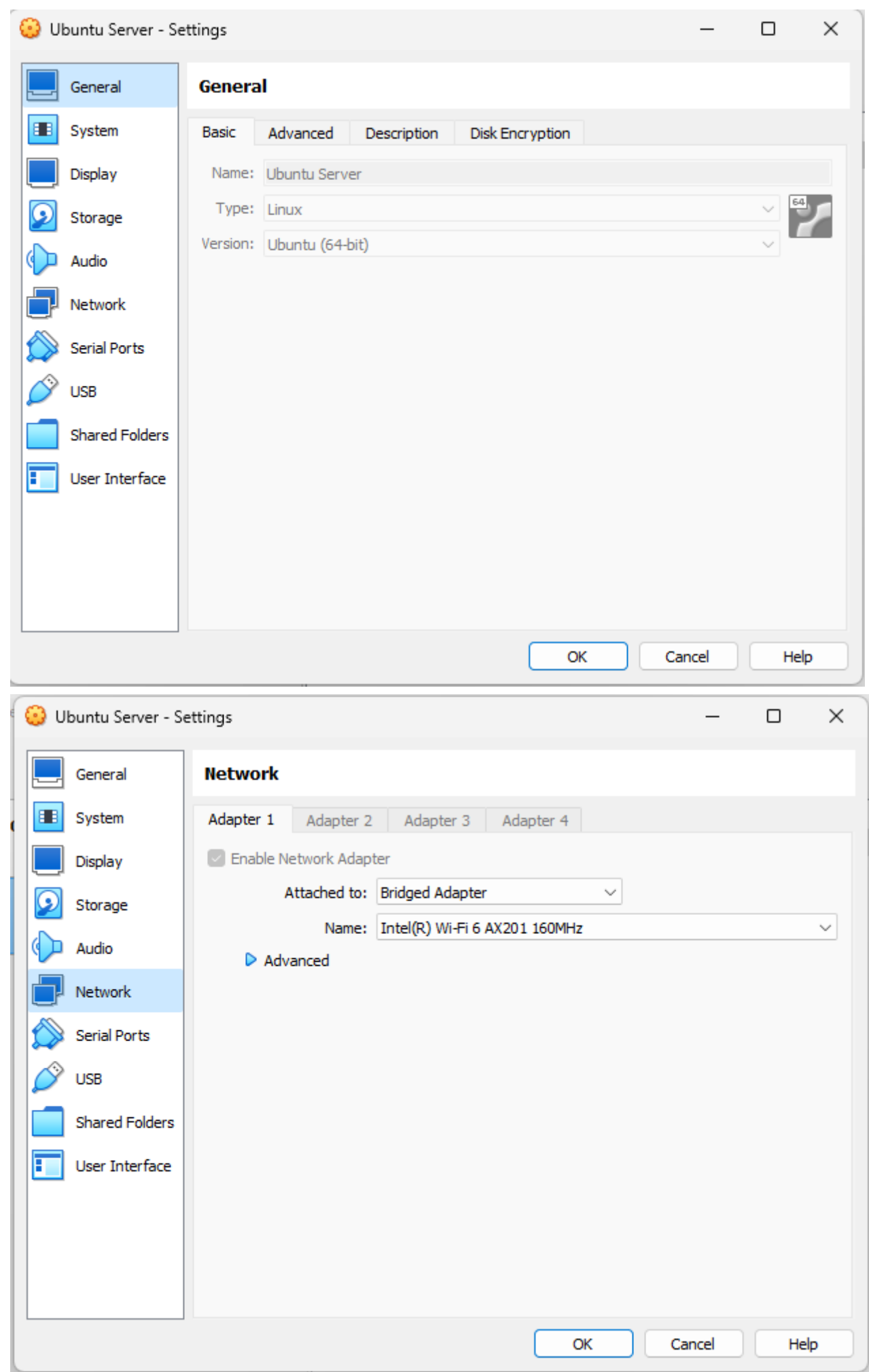


name: Tambi Samkough semester: Fall 23 class: cis106

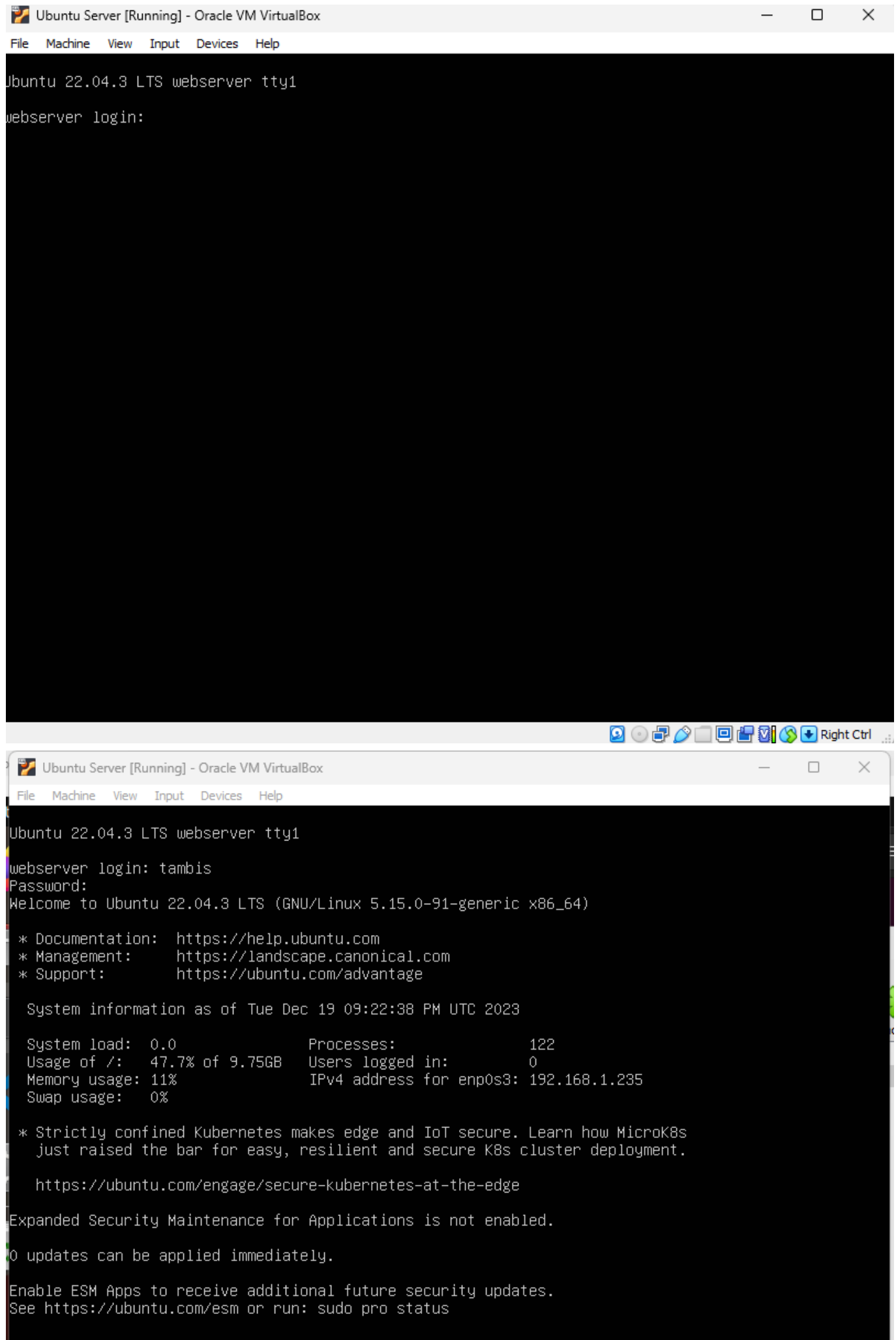
Questions

Question 1





Question 2



```
Ubuntu Server [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Ubuntu 22.04.3 LTS webserver tty1
webserver login:

Ubuntu 22.04.3 LTS webserver tty1
webserver login: tambis
Password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Tue Dec 19 09:22:38 PM UTC 2023

System load:  0.0               Processes:            122
Usage of /:   47.7% of 9.75GB   Users logged in:     0
Memory usage: 11%              IPv4 address for enp0s3: 192.168.1.235
Swap usage:   0%

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
  just raised the bar for easy, resilient and secure K8s cluster deployment.

  https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
```

```
Last login: Tue Dec 19 20:52:19 UTC 2023 from 192.168.1.65 on pts/0
tambis@webserver:~$ _
```

### Question 3

```
tambis@webserver:~$ hostname -I
192.168.1.235
tambis@webserver:~$
```

### Question 4

```
tambis@webserver:~$ sudo ufw enable
[sudo] password for tambis:
Command may disrupt existing ssh connections. Proceed with operation (y|n)? y
Firewall is active and enabled on system startup
tambis@webserver:~$
```

### Question 5

```
tambis@webserver:~$ sudo ufw status
Status: active

To Action From
--
Apache ALLOW Anywhere
OpenSSH ALLOW Anywhere
Apache (v6) ALLOW Anywhere (v6)
OpenSSH (v6) ALLOW Anywhere (v6)

tambis@webserver:~$
```

### Question 6

```
tambis@webserver:~$ sudo ufw disable
Firewall stopped and disabled on system startup
tambis@webserver:~$
```

### Question 7

```
Firewall is active and enabled on system startup
tambis@webserver:~$ sudo ufw allow 'Apache'
Skipping adding existing rule
Skipping adding existing rule (v6)
tambis@webserver:~$
```

### Question 8

```
tambis@webserver:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.52-1ubuntu4.7).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
tambis@webserver:~$
```

### Question 9

```
tambis@webserver:~$ systemctl status apache2 --no-pager
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2023-12-19 21:22:09 UTC; 10min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 704 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 784 (apache2)
    Tasks: 55 (limit: 2220)
   Memory: 7.6M
      CPU: 32ms
   CGroup: /system.slice/apache2.service
           └─784 /usr/sbin/apache2 -k start
             └─785 /usr/sbin/apache2 -k start
               └─786 /usr/sbin/apache2 -k start

Dec 19 21:22:09 webserver systemd[1]: Starting The Apache HTTP Server...
Dec 19 21:22:09 webserver systemd[1]: Started The Apache HTTP Server.
tambis@webserver:~$
```

### Question 10

```
tambis@webserver:~$ sudo systemctl stop apache2
tambis@webserver:~$
```

### Question 11

```
tambis@webserver:~$ sudo systemctl restart apache2
tambis@webserver:~$
```

### Question 12

```
tambis@webserver:~$ sudo apache2ctl configtest
Syntax OK
```

### Question 13

```
tambis@webserver:~$ sudo apache2 -v
Server version: Apache/2.4.52 (Ubuntu)
Server built: 2023-10-26T13:44:44
```

### Question 14

- systemctl - Used to control and interact with Linux services via the systemd service manager
- journalctl - Used to query and view the logs that are generated by systemd
- apachectl - When troubleshooting, this command is used to check Apache's configuration

### Question 15

Apache log files are a very helpful resource for troubleshooting. Generally, any error that you receive in a browser or other HTTP client will have a corresponding entry in Apache's logs. Sometimes Apache will also output errors related to configuration, built-in modules, and other debugging information to its log files.

```
tambis@webserver:~$ sudo tail -n 2 /var/log/apache2/error.log
[Tue Dec 19 21:34:29.658606 2023] [mpm_event:notice] [pid 1833:tid 140395053025152] AH00489: Apache/2.4.52 (Ubuntu) configured -- resuming normal operations
[Tue Dec 19 21:34:29.658653 2023] [core:notice] [pid 1833:tid 140395053025152] AH00094: Command Line: '/usr/sbin/apache2'
tambis@webserver:~$
```