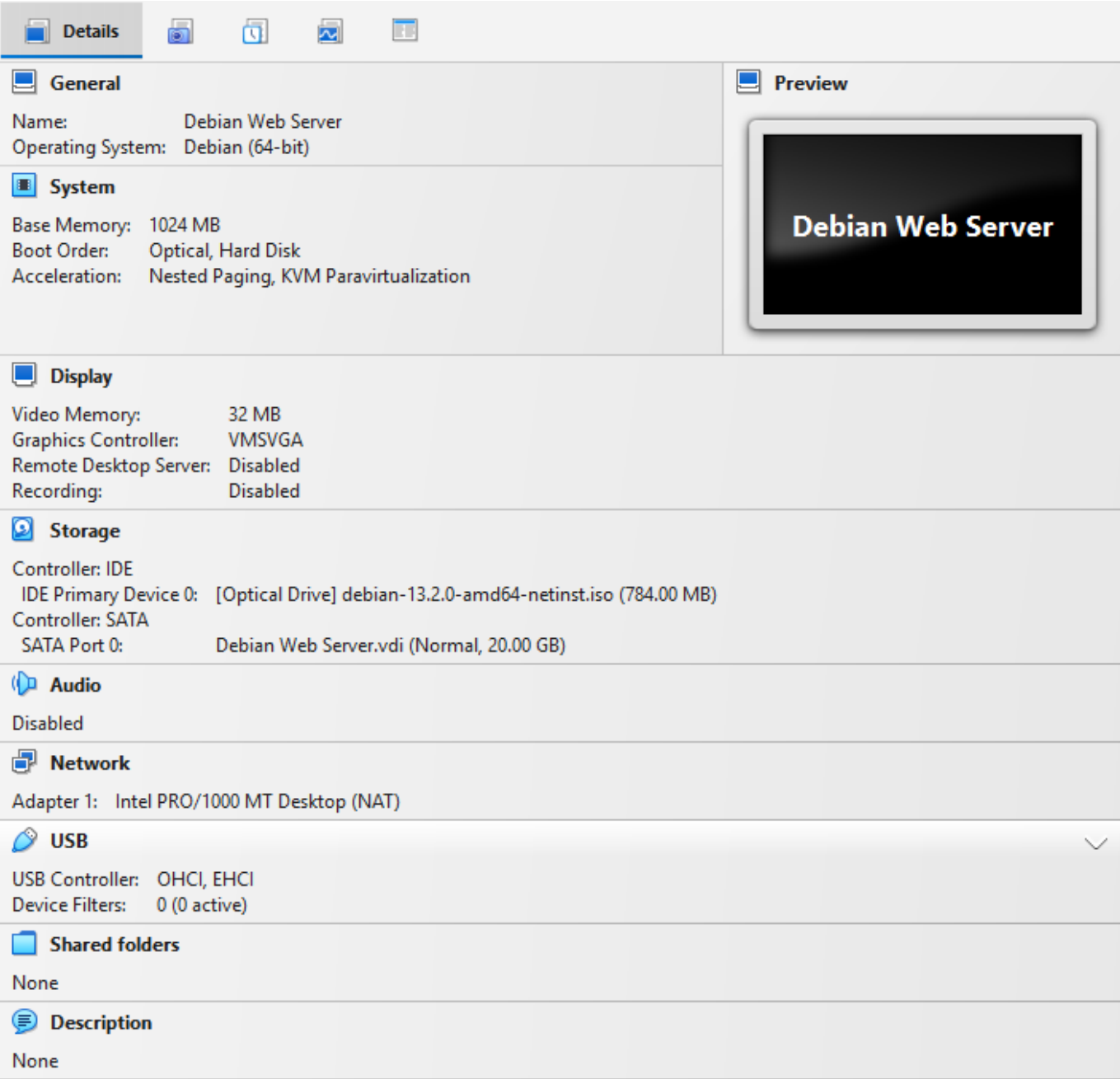# Question no 1

What are the server hardware specifications (virtual machine settings)? Take a screenshot - don't type it!

Question 2

What is the Debian Login Screen? (Take screenshot - do not type it!)

```
Debian GNU/Linux 13 webserver tty1

webserver login: ^
webserver login: pccc
Password:
Linux webserver 6.12.57+deb13-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.12.57-1 (2025-11-05) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
pccc@webserver:~$
```
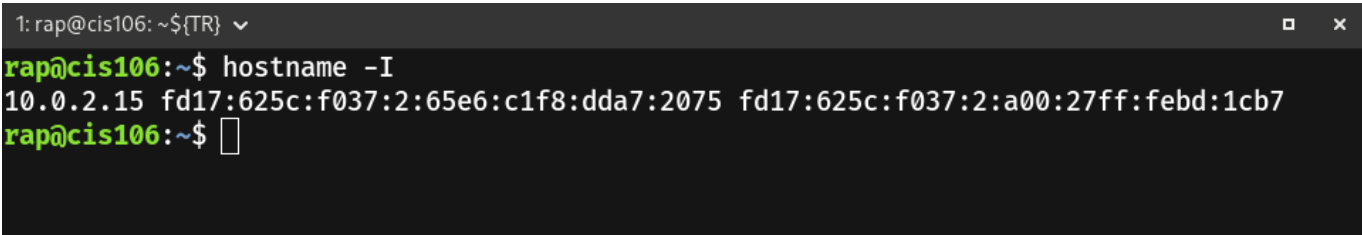
Question 3

What is the IP address of your Debian Server Virtual Machine? (type the command and show a screenshot of the commands output)

Command line: hostname -I

```
1: rap@cis106: ~${TR} ⌄                                                   ▫   ✕
rap@cis106:~$ hostname -I
10.0.2.15 fd17:625c:f037:2:65e6:c1f8:dda7:2075 fd17:625c:f037:2:a00:27ff:febd:1cb7
rap@cis106:~$ ▯
```

Question 4

How do you work with the Firewall in Debian? (Type and explain what each command does)## Question no 4

UFW Firewall Commands – Summary Table (Debian)

Task	Command	Explanation
Install UFW	`sudo apt install ufw`	Installs the Uncomplicated Firewall package
Enable firewall	`sudo ufw enable`	Turns the firewall on and enables it at startup
Check firewall status	`sudo ufw status`	Displays firewall status and active rules
Disable firewall	`sudo ufw disable`	Turns the firewall off
Default rule: deny incoming	`sudo ufw default deny incoming`	Blocks all incoming connections by default
Default rule: allow outgoing	`sudo ufw default allow outgoing`	Allows all outgoing connections

Task	Command	Explanation
Allow Apache	`sudo ufw allow 'Apache Full'`	Allows HTTP (80) and HTTPS (443) traffic
Reload firewall	`sudo ufw reload`	Applies firewall rule changes immediately

```
rap@cis106:~$ sudo apt install ufw
[sudo] password for rap:
ufw is already the newest version (0.36.2-9).
Summary:
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 0
```

```
rap@cis106:~$ sudo ufw status
Status: active

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

rap@cis106:~$
```

```
rap@cis106:~$ sudo ufw disable
Firewall stopped and disabled on system startup
rap@cis106:~$
```

```
rap@cis106:~$ sudo ufw allow "Apache Full"
Skipping adding existing rule
Skipping adding existing rule (v6)
rap@cis106:~$ 
```

```
rap@cis106:~$ sudo ufw app list
Available applications:
  AIM
  Apache
  Apache Full
  Apache Secure
  Bonjour
  CIFS
  CUPS
  DNS
  Deluge
  IMAP
  IMAPS
  IPP
  KTorrent
  Kerberos Admin
  Kerberos Full
  Kerberos KDC
  Kerberos Password
  LDAP
  LDAPS
  LPD
  MSN
  MSN SSL
  Mail submission
  NFS
  POP3
  POP3S
  PeopleNearby
  SMTP
  SSH
  Samba
  Socks
  Telnet
  Transmission
```

Question 5

What different commands do we use to work with Apache?

Apache Configuration Files and Directories (Debian)

File / Directory	Purpose
apache2.conf	Main Apache configuration file
ports.conf	Defines which ports Apache listens on
envvars	Sets environment variables used by Apache
sites-available/	Stores available virtual host configuration files
sites-enabled/	Contains enabled virtual host configurations (symbolic links)
mods-available/	Stores available Apache modules
mods-enabled/	Contains enabled Apache modules (symbolic links)
conf-available/	Stores additional Apache configuration files
conf-enabled/	Contains enabled extra configuration files

What is the command you use to check if Apache is running?

- The command is: systemctl status apache2

```
2: rap@cis106: ~${TR}
rap@cis106:~$ sudo systemctl status apache2
[sudo] password for rap:
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Mon 2025-12-08 18:56:58 EST; 13min ago
 Invocation: 8aeb86842916425ca862fe204a353ddd
       Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 7020 (apache2)
      Tasks: 55 (limit: 4618)
     Memory: 7.1M (peak: 7.4M)
        CPU: 179ms
     CGroup: /system.slice/apache2.service
             ├─7020 /usr/sbin/apache2 -k start
             ├─7022 /usr/sbin/apache2 -k start
             └─7023 /usr/sbin/apache2 -k start

Dec 08 18:56:58 cis106 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Dec 08 18:56:58 cis106 apachectl[7018]: AH00558: apache2: Could not reliably determine the server's fully qualifi>
Dec 08 18:56:58 cis106 systemd[1]: Started apache2.service - The Apache HTTP Server.
lines 1-17/17 (END)
```

What is the command you use to stop Apache?

- The command is: sudo systemctl stop apache2

What is the command you use to restart Apache?

- sudo systemctl restart apache2 `pccc@webserver:~$ sudo apachectl configtest` What is the command used to test Apache configuration?

- The command is: sudo apachectl configtest `pccc@webserver:~$ sudo apachectl configtest`

What is the command used to check the installed version of Apache?

- /usr/sbin/apache2 -v

Question 6

What are some common configuration files for Apache?

Question 7

Where does Apache store logs?

- Apache logs are stored at: /var/log

What are some basic commands we can use to review logs?

Basic Commands to Review Apache Logs

The most basic commands used to review Apache log files are:

Command	Purpose
cat	Displays the entire log file
less	Views log files one page at a time
more	Simple paged log viewer

Command	Purpose
tail	Shows the last lines of a log file
tail -f	Monitors log files in real time
head	Shows the first lines of a log file
grep	Searches for specific text patterns in logs
wc -l	Counts the number of entries (lines) in a log file

```
occc@webserver:/var/log$ head dpkg.log
2025-12-14 15:57:33 startup archives install
2025-12-14 15:57:33 install base-passwd:amd64 <none> 3.6.7
2025-12-14 15:57:33 status half-installed base-passwd:amd64 3.6.7
2025-12-14 15:57:33 status unpacked base-passwd:amd64 3.6.7
2025-12-14 15:57:33 configure base-passwd:amd64 3.6.7 3.6.7
2025-12-14 15:57:33 status half-configured base-passwd:amd64 3.6.7
2025-12-14 15:57:33 status installed base-passwd:amd64 3.6.7
2025-12-14 15:57:33 startup archives install
2025-12-14 15:57:33 install base-files:amd64 <none> 13.8+deb13u2
2025-12-14 15:57:33 status half-installed base-files:amd64 13.8+deb13u2
occc@webserver:/var/log$
```