

# Deliverable 1

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## Questions

### 1. What is a web server?

- On the hardware side, a web server is a computer that stores web server software and a website's component files (for example, HTML documents, images, CSS stylesheets, and JavaScript files). A web server connects to the Internet and supports physical data interchange with other devices connected to the web.
- On the software side, a web server includes several parts that control how web users access hosted files. At a minimum, this is an HTTP server. An HTTP server is software that understands URLs (web addresses) and HTTP (the protocol your browser uses to view webpages). An HTTP server can be accessed through the domain names of the websites it stores, and it delivers the content of these hosted websites to the end user's device.

### 2. What are some different web server applications?

#### **Application 1**

Apache

#### **Application 2**

LiteSpeed

### 3. What is virtualization?

- the process of creating virtual, software-based versions of physical computing resources like servers, storage, and network

### 7. What is Debian?

- free, open-source operating system based on the Linux kernel

### 8. What is a firewall?

- a network security system that monitors and controls incoming and outgoing traffic to protect a private network from unauthorized access.



### 4. What is virtualbox?

you have a single powerful computer, but you want to run multiple operating systems without needing separate physical machines for each one. That's where VirtualBox steps in, acting as a bridge that allows you to simulate additional computers within your existing setup. This means you can run Windows on a Mac, or

test Linux applications on a Windows machine. It's like having a mini-computer inside your computer, and once you wrap your head around it, the possibilities feel endless. answ

## 5. What is a virtual machine?

s a software-based emulation of a physical computer that runs on a host machine using a portion of its hardware answ

## 6. In the context of virtualization, what does host machine and guest machine mean?

## 9. What is SSH?

Secure Shell, is a network protocol that enables secure remote access to computers and servers over an unsecured network. It provides a secure, encrypted channel for communication, protecting data from eavesdropping and tampering.

## 10. What is an IP Address?

a unique numerical label assigned to every device connected to a computer network that uses the internet, acting like a digital address for communication and data transfer. It allows computers and devices to find and communicat

## 11. What is a network mask?

s a 32-bit number used in IPv4 networking to separate an IP address into a network portion and a host portion. This separation determines which devices are on the same local network and helps in routing data packets efficiently

## 12. What is a port? (in the context of networking/computers)

## 13. What is port forwarding?

a network configuration that allows a device on the public internet to access a specific device or service on a private local network by directing traffic to it

## 15. What is localhost? (in the context of networking/computers)

- the hostname that refers to your own computer, used to access services running on it through the special IP address

## 16. What does this ip address represent 127.0.0.1?

- local host special IP address

## 14. What is Git?

- is a free and open-source distributed version control system (DVCS) designed to track changes in source code during software development, and also for managing changes to any set of files. It was created by Linus Torvalds in 2005 for the development of the Linux kernel.

## 15. What is GitHub?

- is a web-based platform that uses the Git version control system to host and manage code