**Let’sUpgrade System Design** *Assignment*

*Session 1*

Q1) List the differences between proxy and VPN.

A: Here are four differences between VPNs and proxies.

1. **VPNs encrypt your information**

The biggest benefit of a VPN over a proxy server is that with VPN enabled, our browsing and any data we send or receive, will be encrypted. This is important: It means that hackers, government agencies, businesses, or anyone else won’t be able to see what we’re doing when online.

Say we access our online bank account while using a VPN. Because our information is encrypted, hackers won’t be able to access your bank account numbers. The same is true if we log onto our credit card provider’s online portal: Because our data is encrypted, criminals won’t be able to snag our credit card number or the password you use to log onto the portal.

2. **VPN providers promote online privacy**

If we want total privacy, work with a VPN provider that has a no-log policy. “No log” means the providers pledge not to track and store our activity while we are using the service to connect to the internet. This means that these providers won’t have any data to give to anyone else who wants information about what sites you browse or files you share. On the other hand, *a free proxy may monitor traffic and sell data to third-parties.*

3. **Free proxy connections can be slower**

Both proxy servers and VPNs can slow down our browsing, depending on how many users are accessing these services. Free proxy connections however can be slower and less secure because of less support, less configuration options, and slower infrastructure.

4. **You may spend more with a VPN**

We can connect through free VPNs. However, many tech experts recommend going with a VPN provider that charges a fee because paid services often offer more data privacy, more secure connections, and more reliable performance. Security of free VPN can be unreliable, as many providers use only one VPN connection, called point-to-point tunneling protocol (PTTP). A paid VPN service, on the other hand, can offer users data encryption which is more secure.

**Summary:**

A VPN and proxy server both mask your IP address. But a VPN will also encrypt the data you send and receive, something that a proxy server doesn’t do. If you are already using a VPN, then, connecting to a website or app through a proxy server would be an unnecessary step.

Q2) Can a server function as a client?

A: Yes, at times both clients and servers can reverse roles. If a system is providing resources for another it is in a server role. If it is asking for resources on another system it is a client.

However, server and client OS software are different because they have different requirements. A client desktop OS such as Vista is limited in the number of network connections, for example. You need to have Server software to do some things the client cannot.