**1. What is the significance of your load balancer program? What advantages does it offer as opposed to running a string reversing server separately.**

ANS)

Load balancers are typically used when a website requires many servers due to a high volume of requests that a single server cannot handle properly. Multiple servers also reduce a single point of failure, increasing the website's reliability. Typically, the servers all host the same material, and the load balancer's function is to distribute the demand so that each server's capacity is maximised, no server is overburdened, and the client receives the fastest possible response.

**2. What is the significance of the final program? What advantages does it offer as opposed to running a regular load balancer directly?**

**3. What would happen to your system, if a particular string reversing server were to crash?**

4. What would happen to your system, if a load balancer were to crash? How would you avoid it?

ANS)

If a single server goes down, the load balancer redirects traffic to the remaining online servers. When a new server is added to the server group, the load balancer automatically starts to send requests to it.

5. We have been using the TCP protocol here. What differences would we notice, if we switched over to UDP?

ANS)

TCP is a connection-oriented protocol, whereas UDP is a connectionless protocol. A key difference between TCP and UDP is speed, as TCP is comparatively slower than UDP. Overall, UDP is a much faster, simpler, and efficient protocol, however, retransmission of lost data packets is only possible with TCP.