IT Basics Assignment -3

1. What is Private and Public IP?

A Private IP is used within a private network to connect securely to other devices with in that same network. each device with in the same network has a unique private IP address.

A Public IP is used to identify the system in the wider network and it is provided by the internet service providers. and it is not constant every time it changes.

1. What is URL?

An URL is a reference to a resource on the Internet for a particular website.

1. What is protocol?

A protocol is set of rules or procedures for transmitting the data between computers.

1. What is High Availability?

High Availability infrastructure is configured to deliver quality performance and handle the different loads with zero down time.

1. What are the types of High Availability?

The types of high availability are

Active - Passive High Availability

Active – Active High Availability

1. Explain the types of High Availability?

Active-Passive High Availability: -

An active-passive cluster also consists of at least two nodes. However, as the name "active-passive" implies, not all nodes are going to be active. In the case of two nodes, for example, if the first node is already active, the second node must be passive or on standby.

The passive (failover) server serves as a backup that's ready to take over as soon as the active (primary) server gets disconnected or is unable to serve, an active-passive failover for when a node fails.

When clients connect to a two-node cluster in active-passive configuration, they only connect to one server. In other words, all clients will connect to**the same server**. Like in the active-active configuration, it's important that the two servers have exactly the same settings

Active-Active High Availability: -

An active-active High Availability is typically made up of at least two nodes, both actively running the same kind of service simultaneously. The main purpose of an active-active cluster is to achieve load balancing.

Load balancing distributes workloads across all nodes in order to prevent any single node from getting overloaded.

Because there are more nodes available to serve, there will also be a marked improvement in throughput and response times.

1. What is Domain Name?

A domain name is a string of text that maps to a numeric [IP address](https://www.cloudflare.com/learning/dns/glossary/what-is-my-ip-address/), used to access a website from client software.

1. What is Load Balancer?

A [load balancer](https://www.nginx.com/solutions/adc) is fixed in front of the servers and routing client requests across all servers capable of fulfilling those requests in a manner that maximizes speed and capacity utilization and ensures that no one server is overworked, which could degrade performance.

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.

1. What is scalability?

Scalability is the measure of a system's ability to increase or decrease in performance and cost in response to changes in application and system processing demands.