**The Internet**

Major networks were connected to each other and they followed TCP/IP protocol. The World Wide Web was created in 1991 to link the information on these networks using hyperlinks. Hyperlinks linked texts that contained similar information. This is called hypertext transfer protocol (HTTP). Later, hypermedia was created to add graphics. The ‘websites’ we see are hosted on servers, which are just computers with a specific IP address. They contain multiple pages of hyperlinks and hypermedia, with a single homepage.

Every computer connected to the internet has a unique IP address that is either obtained from the ISP or from a DHCP (Dynamic Host Configuration Protocol) server. A DHCP server is one computer on a network that assigns an IP address to all the computers on that network. The IP address itself is usually dynamic, meaning it is not a permanent one.

DHCP servers are also used to access DNS (Domain Name Servers). These maintain a directory of domain names and their IP addresses. When the domain name of a website is entered, the ISP checks it against a DNS server and connects you to the associated IP address. If a DNS server is down, another can be used to access the IP. Public DNS servers, like that hosted by Google, have many IPs stored, so they are more reliable.

A session is a limited time communication between two systems. An HTTP session is initiated by the web browser every time a website is visited. Here, the server doesn’t just respond to the browser, it also remembers the browser for the duration of the session. Each session has an ID that is generated randomly, for additional security. Thus, the source computer and server computer create a logical connection so that data can be transferred.

TCP/IP has two types of connection, open and closed. HTTP is a closed connection.