**What happens when you type a URL in the address bar in the browser?**

**1. You enter the URL in the browser.**

#### 2. The browser looks for the IP address of the domain name in the DNS(Domain Name Server).

The DNS checks at the following places for the IP address.

1. **Check Browser Cache**: The browser maintains a cache of the DNS records for some fixed amount of time. It is the first place to run a DNS query.
2. **Check OS Cache**: If the browser doesn't contain the cache then it requests to the underlying Operating System as the OS also maintains a cache of the DNS records.
3. **Router Cache**: If your computer doesn't have the cache, then it searches the routers as routers also have the cache of the DNS records.
4. **ISP(Internet Service Provider) Cache**: If the IP address is not found at the above three places then it is searched at the cache that ISP maintains of the DNS records. If not found here also, then ISP’s **DNS recursive search** is done. In "*DNS recursive search*", a DNS server initiates a DNS query that communicates with several other DNS servers to find the IP address.

#### 3. The Browser initiates a TCP connection with the server.

#### 4. The browser sends an HTTP request to the server.

#### 5. The server handles the incoming request and sends an HTTP response.

The status code is important as it contains the status of the response.

1. **1xx: Informational:**It means the request was received and the process is continuing.
2. **2xx: Success:**It means the action was successful.
3. **3xx: Redirection:**It means further action must be taken in order to complete the request. It may redirect the client to some other URL.
4. **4xx: Client Error:**It means some sort of error in the client’s part.
5. **5xx: Server Error:**It means there is some error on the server-side.