Introduction to Web Services

WWW

- Stands for World Wide Web also known as Web.
- It is a collection of website or web pages stored in web server and connected to devices through the Internet.
- These website may contain text, images, audio, sound, animation etc.
- The WWW, with Internet allows retrieval and display of website to your device.
- WWW was invented by Tim Berners Lee in 1989. *Internet and Hypertext as available at that time. but no one thought how to use the internet to link or share one document to another. Tim focused on three main technologies that could make computers understand each other, HTML, URL, and HTTP. So, the objective behind the invention of WWW was to combine recent computer technologies, data networks, and hypertext into a user-friendly and effective global information system.*

HTML

- Stands for Hypertext Markup Language
- Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser.
- It is generally assisted by other technologies like CSS, JavaScript, AJAX etc.
- It is tag based code, where tags are predefined. Tags are the instruction how web page will appear on browsers.
- It is not case sensitive.
- HTML files are stored with extension .HTM or .HTML
- Few tags are: <HTML>, <TITLE>,<A>,<IMG> etc

XML

- Stands for extensible markup language
- Extensible Markup Language is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.
- It allows us to exchange data between heterogeneous system.
- XML stores information in a plain text format so it is not blocked by any firewall.
- Tags are not predefined i.e. we can create our own tag
- It is case sensitive.

Difference between HTML and XML

HTML	XML
It focuses on presentation of data i.e. how the data will appear on web page.	It focuses on structure of data i.e. how data is stored. XML data can be presented on web page by using XSLT (XML Style sheet Language Transformation)
TAGs are fixed i.e. we cannot create our own tag	TAGs are not fixed, we can create our own tag
Case Insensitive	Case Sensitive
Ordering of TAG is immaterial	Ordering of TAG i.e. nesting of TAG must be in correct order

HTTP

- Stands for Hypertext Transfer Protocol
- Used to transfer all files and other data(resources) from one computer to another on the world wide web.
- Client(Browser) send request to Web Server using HTTP protocol and Server respond back to Client using HTTP i.e. Client and server over web communicate using HTTP protocol.
- HTTP is stateless protocol, various technique applied to make HTTP as State full like Cookies.
- See the format of URL:
  - http://www.google.com

DOMAIN NAMES

❖ Communicating with computer on internet using IP address is practically impossible as it is very difficult to remember IP address of every computer or website.

❖ System has been developed to assign names to IP Address and maintains a database of these names corresponding to IP address.

❖ These names are referred as Domain Name.

❖ Example – cbse.nic.in, gmail.com

❖ It is used in URL(uniform resource locator) to identify particular web servers.

❖ Domain name has more than one parts –
    Top Level Domain Name or Primary Domain Name
    Sub Domain names

❖ For example in cbse.nic.in in is the primary domain, nic is sub domain of in and cbse is sub-domain of nic.

DOMAIN NAMES

Generic Domain Names:-
- ✓ .com – commercial business
- ✓ .edu – educational institutes
- ✓ .gov – government agencies
- ✓ .net network organizations
- ✓ .org Organizations(nonprofit)

Country Specific Domain Names:-

.in – india

.au – australia

.ca – canada

.ch – china

.nz – new zealand

.pk – pakistan

.jp – japan

.us – united states of America

- Stands for Uniform Resource Locator.
- Each web site has a unique address called URL,
  for e.g. http://www.cbse.nic.in
- The basic format of URL is :
  type://address/path

□ For e.g.

Path of cbseacademics

□ http://www.cbseacademics.nic.in/index.html

Type of server or protocol

Address of server

□ Here http — protocol/schema, it may be ftp, gopher or any other protocol www.cbseacademics.nic.in is the domain name Index.html is the resource we are accessing