

# **Web Technologies**

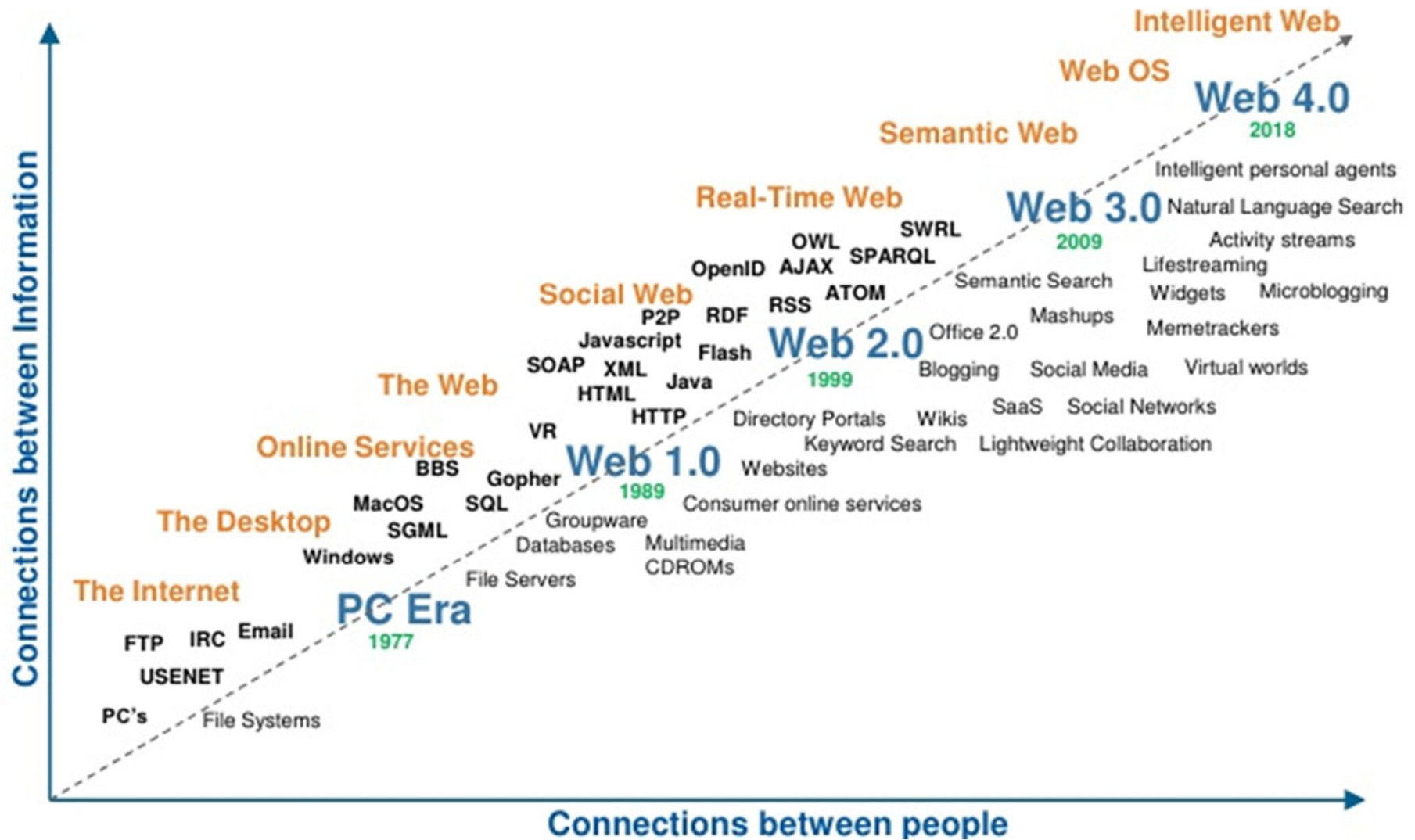
## **ITE1002**

Module-1:  
Static Web Programming – HTML and CSS

# Contents- Web Essentials:

- Evolution of Web
- Web architecture
- HTML
  - Lists
  - Links
  - Forms
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  - Tables
- Web Page Design
- Cascading Style Sheet (CSS)

# Evolution of Web



# Evolution of Web

- The **World Wide Web** allows computer users to execute web-based applications and to locate and view multimedia-based documents on almost any subject over the Internet.
- In 1989, **Tim Berners-Lee** of CERN (the European Organization for Nuclear Research) began to develop a technology for sharing information via hyperlinked text documents.
- Berners-Lee called his invention the **HyperTextMarkup Language (HTML)**.
- He also wrote communication protocols to form the backbone of his new information system, which he called the **World Wide Web**.
- In particular, he wrote the **Hypertext Transfer Protocol (HTTP)**—a communications protocol used to send information over the web.
- The **URL (Uniform Resource Locator)** specifies the address (i.e., location) of the web page displayed in the browser window.
  - Each web page on the Internet is associated with a unique URL. URLs usually begin with `http://`.

# W3C-World Wide Web Consortium

- In October 1994, Tim Berners-Lee founded an **W3C**
  - developing non proprietary, interoperable technologies for the World Wide Web.
- W3C's primary goal is to make the web universally *accessible*—regardless of disability, language or culture.
- The W3C home page ([www.w3.org](http://www.w3.org)) provides extensive resources on Internet and web technologies.
- The W3C is also a standards organization.
- Web technologies standardized by the W3C are called **Recommendations**.
- Current and forthcoming W3C Recommendations
  - HyperText Markup Language 5 (HTML5)
  - Cascading Style Sheets 3 (CSS3)
  - Extensible Markup Language (XML).
- A recommendation is not an actual software product but a document that specifies a technology's role, syntax rules and so forth.

# World Wide Web

- The world wide web is a sophisticated system for **universal information capture and delivery**
- The Web is a large number of computer documents or "**Web pages**" that are stored on computers around the world and are connected to one another using hyperlinks.
- These Web pages can be seen by anyone through their computer's "**Web Browser**," which is the program you are using now.
- A group of Web pages that follow the same theme and are connected together with hyperlinks is called a "**Web site**." Web sites and Web pages are written in a coding language that makes it possible to add pictures, sound and interactivity to plain old text, making people's reading experience more exciting.

# Web addresses

- Just like every house has a postal code, each Web page has an address describing where it can be found. On the Web these addresses are called URLs (Uniform Resource Locator).

http://domainname:portnumber/directory/filename

Example → <http://www.google.com/services/index.htm>

- **http:// - Protocol** - This part of the address indicates that it is a Web page.
- **portnumber** – Port number of the web server running . HTTP - 80
- **www** - This indicates that the Web page you are looking at is part of the World Wide Web. Many Web sites do not use www but are still part of the Web.
- **google.com** - This part of the address is the domain name and indicates the unique address of a Web site.
- **/services/** - The "/" symbol indicates you have moved into a specific directory in the Web sites. Directories are like the folders on your computer and help to organize Web pages in a Web sites.
- **index.htm** - A word with ".htm" or "html" following it indicates the name of the specific page in the Web site you are looking at.

# Web browsers

- Web browsers are programs used to explore the Internet. Software that creates a unique hypermedia-based menu on your computer screen and provides a graphical interface to the Web.
- There are many Web browser programs available including Netscape Navigator, Internet Explorer and Opera.

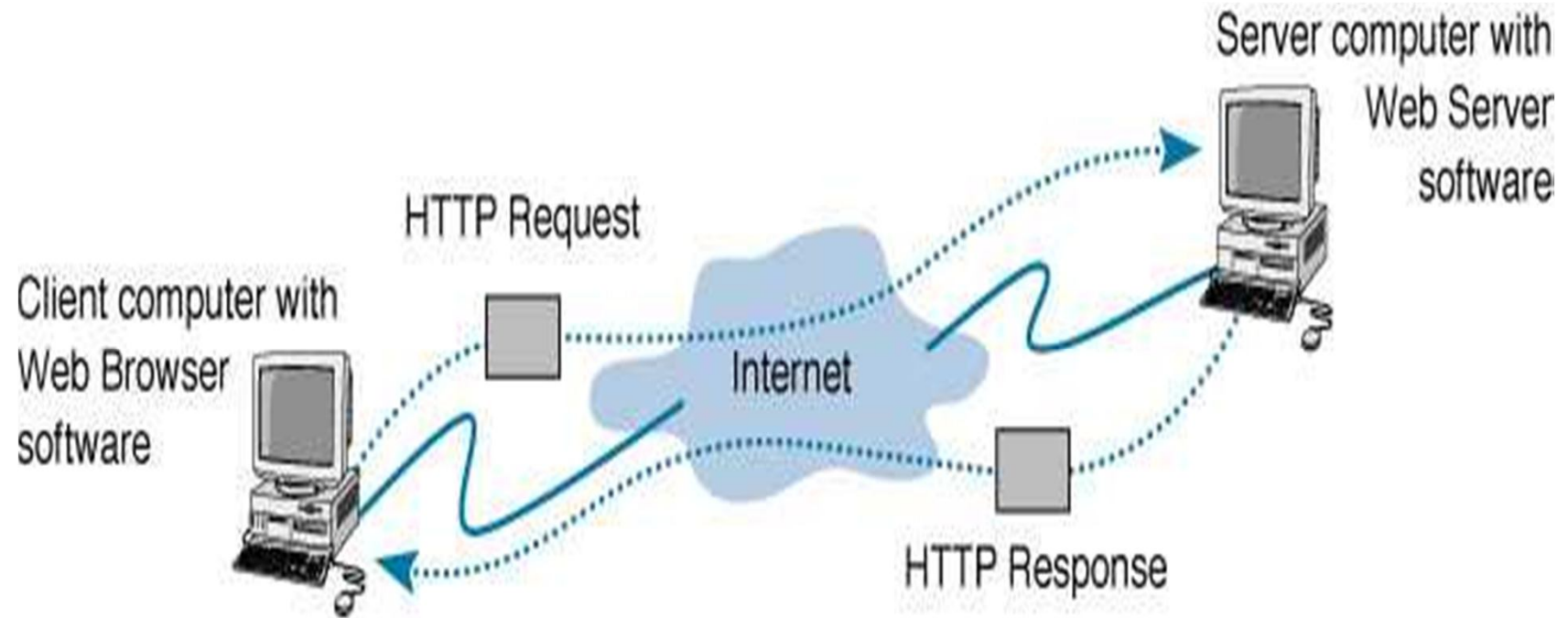




# Web Servers

- A web server is a computer with special **software to host web pages and web applications.**
- A web server serves web pages to clients across the Internet or an Intranet.
- The web server hosts the pages, scripts, programs, and multimedia files and serves them using HTTP, a protocol designed to send files to web browsers and other protocols.
- These include CGI scripts, server-side includes, SSL security, and Active Server Pages(ASP)

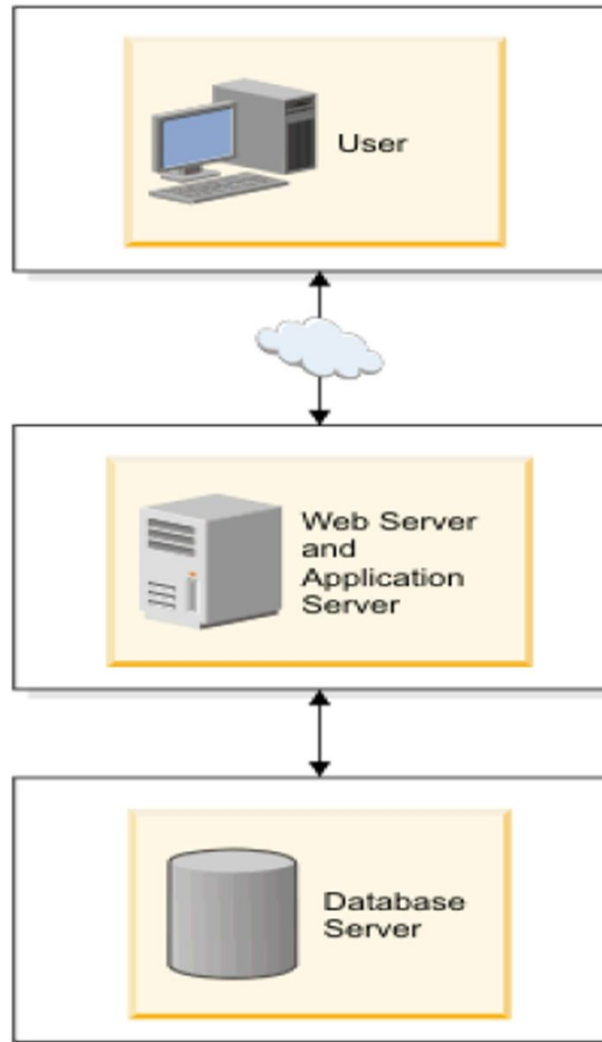
# How the WWW Works



# Web Architecture

- Multi-tier application ( $n$ -tier application)
  - Information tier (data or bottom tier)
    - Maintains data for the application
    - Stores data in a relational database management system (RDBMS)
  - Middle tier
    - Implements business logic and presentation logic
    - Control interactions between application clients and application data
  - Client tier (top tier)
    - Application's user interface
    - Users interact directly with the application through the client tier

# 3 tier Architecture



# N-tier Client-Server Architecture

