

**PHP Programming**  
**COMP203TH**  
**Lecture-1**

*“The dream behind the Web is a common information space in which we communicate by sharing information....”*

*-Tim Berners-Lee*

- **What is a web-page:**

- A web page is a document, commonly written in HTML (Hyper Text Markup Language), that is viewed in a Web Browser.
- A web page may contain text, graphics and hyperlinks to other web pages and files.
- Web pages are what make up the World Wide Web.
- A web page is identified by a unique Uniform Resource Locator (URL).

- **Uniform Resource Locator (URL):**

- It is the address of a resource on the Internet and the protocol used to access it.
- It indicates the location of a web resource; often referred to as Web Address.
- A URL incorporated the domain name, along with other detailed information to create a complete address to direct a browser to a specific page online called a web page.
- Some examples of URLs:
  - <http://www.gcbhoranj.info>
  - [http://www.gcbhoranj.info/dept\\_of\\_computerscience](http://www.gcbhoranj.info/dept_of_computerscience)
- A URL is composed of different parts e.g. :

```
http://www.example.com:80/path/to/myfile.html
```

http://www.example.com:80/path

→ Protocol

http://www.example.com:80/path/to/my

→ Domain Name

com:80/path/to/myfile.html

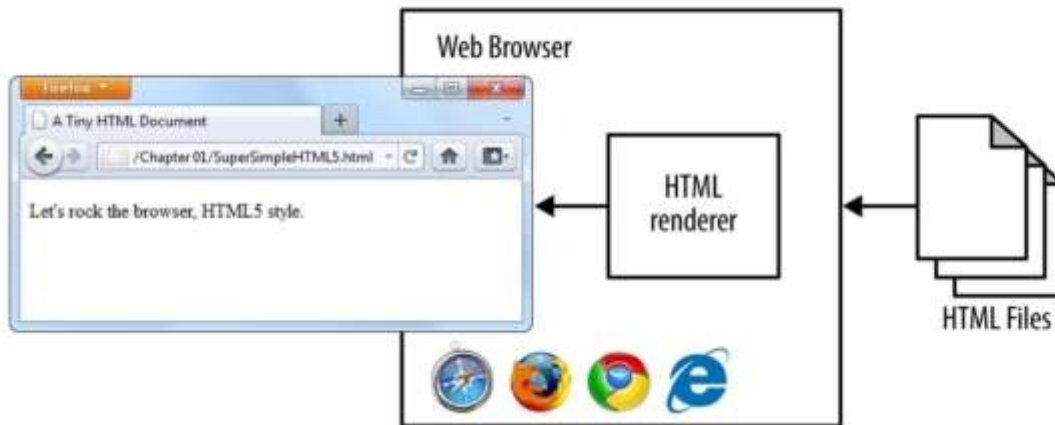
→ Port

com:80/path/to/myfile.html

→ Path to the file

- **Web Browser:**

- A web browser is a software program that allows a user to locate, access, and display web pages.
- Examples: Internet Explorer, Google Chrome, Firefox, Netscape, Opera, Safari.
- A web page is a file drafted using the Hyper Text Markup Language (HTML) that we can view on a web-browser. In general, these files or web pages are pulled from the web-server and then translated by the web browser for the user to view.
- If you don't have a web browser and attempt to view the HTML file, you will just see numerous amounts of code lines that may not make sense to average user.
- The browser will translate those code lines that make it easily readable for the user.

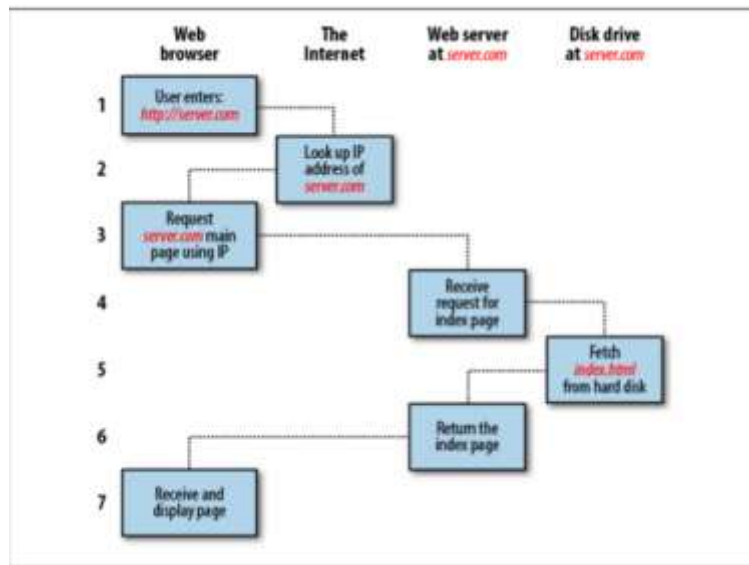


*Web browsers know all they need to know in order to load and display an HTML page.  
No extra software or configuration is necessary.*

- **Web Server:**

- A web server is software and hardware that uses HTTP (Hypertext Transfer Protocol) and other protocols to respond to client requests made over the World Wide Web.
- The main job of a web server is to display website content through storing, processing and delivering web pages to users.
- A web server communicated with a web browser using the HTTP. The content of most web pages is encoded in HTML. The content can be static (e.g. text and images) or dynamic (e.g. a computed price or the list of items a customer has marked for purchase (Flipkart/amazon)).
  - To deliver dynamic content, most web servers support server-side scripting languages like **PHP**, ASP, Python etc.
  - Server side scripting is used to employ scripts on a web server that can customize the response to the client.
  - Server side scripting runs on the server machine and typically has a broad feature set, which includes database access.
- Common web servers are:
  - **Apache HTTP Server**
  - Microsoft Internet Information Services (IIS)
  - Nginx (pronounced engine X)

- Lighttpd
- Sun Java System Web Server
- **HTTP:**
  - HTTP is a communication standard governing the requested and responses that take place between the browser running on the end user's computer and the web server.
  - The server's job is to accept a request from a client and attempt to reply to it in a meaningful way, usually by serving up a requested web page.
- **The Request/ Response Procedure:**
  - At its most basic level, the request/ response process consists of a web browser asking the web server to send it a web page and the server sending back the page. The browser then takes care of displaying the page.
  - Steps in request and response sequence are:
    - <sup>1</sup> You enter <http://server.com> into your browser's address bar.
    - <sup>2</sup> Your browser looks up the IP address for server.com.
    - <sup>3</sup> Your browser issues a request for the home page at server.com.
    - <sup>4</sup> The request crosses the Internet and arrives at the server.com web server.
    - <sup>5</sup> The web server, having received the request, looks for the web page on its hard disk.
    - <sup>6</sup> The server retrieves the web page and returns it to the browser.
    - <sup>7</sup> Your browser displays the web page.



*The basic client/server request/response sequence*

- **Static and Dynamic Web Sites/ Web Pages:**

- Originally, web sites were made up of a collection of documents written in the HTML language.
- The pages were text based, simple and static. Every time the user reloaded a page in his or her browser, it looked exactly the same. It consisted of HTML text, images and links.
- The early web was like an online library, documents connected by links, where the high-energy scientific community could freely read and access information throughout their company and eventually around the world.
- A dynamic web site is one with content that is regenerated every time a user visits or reloads the site.
- Although, it can be as simple as displaying the current date and time, in most cases it requires the use of a database, which contains the site's information and a scripting language that can retrieve the information from the database.
- Google and Yahoo are examples of dynamic sites, search engines that create customized pages based on a key word or phrase you type. The resulting page is created on the fly, customized just for you, based on your request.