Objective : Developing Web Application/UI for Web Application
UI (HTML,CSS,JavaScript)/UX(Photoshop, Flash,..)
Course Title:

1. **HTML**
2. **CSS**
3. **Java Script**
4. **Introduction BootStrap**
5. **HTML (Project-1)**
6. **HTML and CSS (Project-2)**
7. **HTML,CSS and Java Script (Project -3)**

Front End Developer/UI Developer (User Interface)/Web Development

Full Stack Java Development → Web Application/Web Developer
Full Stack .Net Development → Web Application/Web Developer

Full Stack Java

Module-1 → Front End
- **HTML**
- **JavaScript**
- **CSS**

Module-2 → Backend
- **Java**
- **Servlet**
- **JDBC**
- **JSP**
- **Spring Boot**

Full Stack .Net
Module-1 → Front End
- **HTML**
- **Java Script**
- **CSS**

Module-2 → Back End

C#.Net
ASP.Net

Full stack Python

Module-1

HTML
CSS
Java Script

Module2:

Python
Django/Flask

Duration: 45 sessions

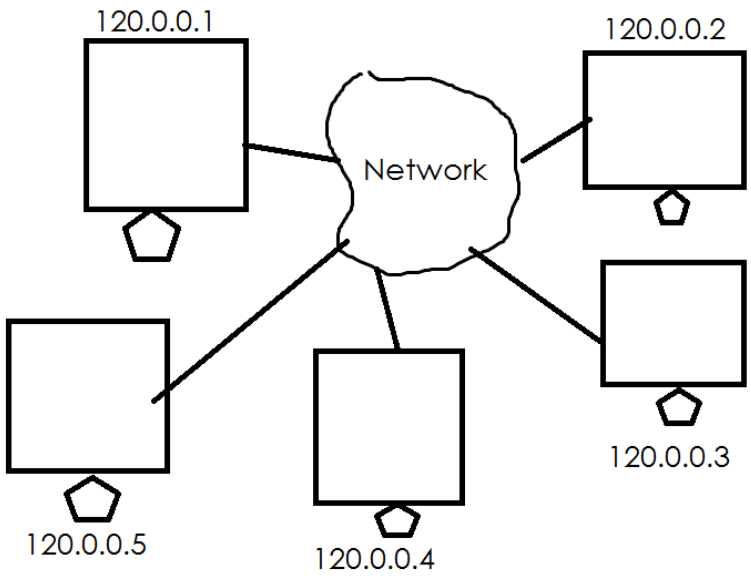
Telegram-id: codewithsatishgupta
Upload course content

Introduction to Web

What is networking?
Networking is logical or physical link between two or more devices.

Advantage
Sharing resources (software or hardware)

What is ip-address?
In networking each device or system is identified with a unique number called ip-address. This ip-address is given by network admins.



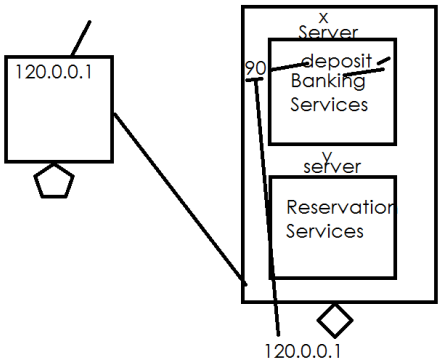
Networking required two programs.

1. Client
2. Server

Client who send request/input to server program
Server program which takes request from client process it and generate output/response.

Each server program in networking is identified with a unique number called portno.

What is portno?
Portno is integer number which is used to identify server running within system.



What is protocol?
A protocol defines set of rules and regulations to exchange information between two programs (client/server).

1. HTTP → Hyper Text Transfer Protocol
2. HTTPS → Hyper Text Transfer Protocol + SSL
3. FTP → File Transfer Protocol
4. SMTP → Simple Mail Transfer Protocol
5. TCP → Transmission Control Protocol
6. UDP → User Datagram Protocol

What is hostname?
Hostname is wrapper of ipaddress.

120.0.0.1 → localhost/nit/naresh

What is URL?
URL stands for Uniform Resource Location
This URL consists of,

1. Ip-address
2. Portno
3. Application-name
4. Resource name

IPAddress of system where application is installed.
Portno is server protno where application is installed
Name of the application from which resource is accessed
Resource name → static resource or dynamic resource

Http://120.0.0.1:8080/webapp1/index.html → www.nareshit.com

URI → Uniform Resource Identification
URN → Uniform Resource Name

What is ARPANET?

--> ARPANET full form is Advanced Research Projects Agency NET.

--> ARPANET was the very first network that was created using a distributed form of control. It was also considered to be one of the first networks to implement the protocols of TCP/IP. The creation of ARPANET basically paved the way for the beginning of the web and internet with the help of these technologies.

--> The basic idea behind the creation of ARPANET was to communicate with all the scientific users that existed amongst any university or institute.

--> The introduction of ARPANET happened in 1969 by the Advanced Research Projects Agency also known as ARPA that was a part of the US Department of Defense. The establishment of ARPANET took place with the help of PCs that different colleges had.

The technology helped in sharing the information as well as messages amongst the computers.

What is Internet?

--> Internet is a global network that connects billions of computers across the world with each other and to the World Wide Web. It uses standard internet protocol suite (TCP/IP) to connect billions of computer users worldwide.

--> It is set up by using cables such as optical fibers and other wireless and networking technologies. At present, internet is the fastest mean of sending or exchanging information and data between computers across the world.

What is Web?

The World Wide Web—commonly referred to as WWW, W3, or the Web—is a system of

interconnected public webpages accessible through the Internet. The Web is not the same as the Internet: the Web is one of many applications built on top of the Internet.

Tim Berners-Lee proposed the architecture of what became known as the World Wide Web. He created the first web server, web browser, and webpage on his computer at the CERN physics research lab in 1990. In 1991, he announced his creation on the alt.hypertext newsgroup, marking the moment the Web was first made public.

The system we know today as "the Web" consists of several components:

--> The HTTP protocol governs data transfer between a server and a client.

http
https

--> To access a Web component, a client supplies a unique universal identifier, called a

URL (uniform resource locator) or URI

(uniform resource identifier) (formally called

Universal Document Identifier (UDI)).
--> HTML (hypertext markup language) is the

most common format for publishing web

documents.
Linking, or connecting resources through

hyperlinks, is a defining concept of the Web,
aiding its identity as a collection of connected

documents.

What is W3C?

Soon after inventing the Web, Tim Berners-

Lee founded the W3C (World Wide Web

Consortium) to standardize and develop the

Web further. This consortium consists of core

Web interest groups, such as web browser

developers, government entities,

researchers, and universities.

Types of web applications

What is web application?

An application is collection of programs or resources. These resources accessed using internet.

1. Browser (Thin Client)
2. Http Server/Web Server

1. Static web application
2. Dynamic web application

Static web application

Static web application is called of static resources.

1. HTML pages
2. Images
3. Audio files
4. Video files

Example: Tutorials

Dynamic web applications

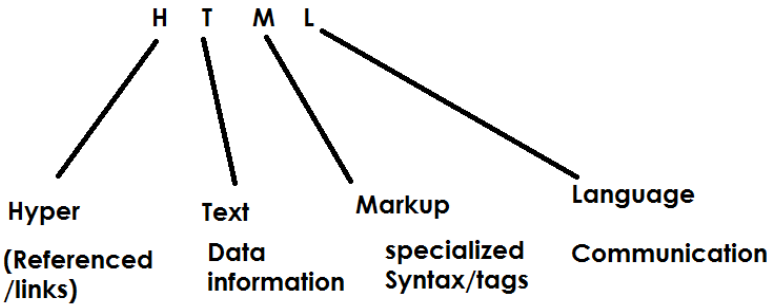
Dynamic web application consist of,

1. Static resources
2. Dynamic resources (Backend Programs)

Example: online reservation, online shopping, online banking,..

HTML

HTML stands for Hyper Text Markup Language.
HTML is not a programming language, it is a markup language.
HTML is used for developing web page. Page consist of information which shared on internet.
HTML is used for developing frontend for web application.
HTML is used in web application development for presenting data or information.



HTML is developed by Tim Berners-Lee in the year 1991.
Versions of HTML

HTML 1.0 – 1994
HTML 2.0 – 1995
HTML 3.0 – 1997
HTML 4.0 – 1998
HTML 4.1 – 1999
HTML 5.0 – 2014
HTML 5.1 – 2016
HTML 5.2 – 2017

HTML is interpreted language. HTML tags are interpreted and executed by HTML interpreter/Parsers exists within Browser.
No need to install any software to work with HTML.
Browser is software responsible in execution of HTML page/web page.

Advantage of HTML

1. **Easy to understand and develop web pages**
2. **HTML is case in-sensitive language (upper case and lowercase both are same)**
3. **HTML is easy to maintain**

Disadvantage HTML

1. **Need to write lots of code**

Every html file is having extension .html or .htm
HTML is web technology.

Who uses HTML?

1. Web Developer
    a. Front End Developer
    b. Back End Developer
2. Web Designer (UI/UX)
3. Full Stack Web Developers

Programming Langauges:

C,C++,Java

Web Technologies:

Frontend: HTML,CSS,JavaScript,BootStrap, JQuery, AngularJS,ReactJS

Backend: Servlets, JSP, Spring Boot and Micro Services

Database : Oracle

Structure of HTML Page

Q: What is Web Page, Web Application and Web Site?
Web page or HTML page used to present data or information to client (OR) Web page is a front end which is used to communicate with back end.
Web Application is a collection of web resources,

1. Static resources html, images, audio, videos, …
2. Dynamic resource server side programs (servlets,jsp,….)

Web site is place where web application is deployed or placed.

HTML is a markup language and it is collection of tags.

What is tag?
HTML present data/information using a special syntax called tag.
Tag is similar to keywords/reserved words in other language.
Tag is represented within angular brackets <tag-name>
Browser does not shows any error, if invalid tag or syntax in defining tag.

These tags are two types.

1. Paired tags
2. Unpaired tag

Paired tags are having beginning and end
Example: <h1> </h1>
Unpaired tags are having only beginning
Example:

HTML tags are parsed or rendered by HTML parser provided by browser.

Structure of HTML page
HTML page/document is divided into three sections.

1. Document Version
2. Head

3. Body

<!DOCTYPE>
<!DOCTYPE> is also called document type definition.
<!DOCTYPE> is used to define HTML version used to prepare HTML document.

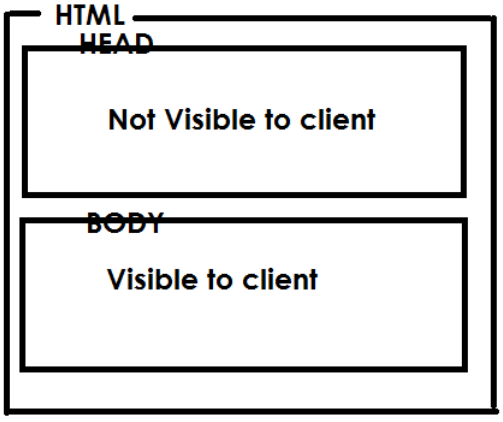
Syntax of HTML5

<!DOCTYPE html>

This syntax tells the browser this document is prepared using HTML5 Version.
This tag is appeared top of the web page
This tag is used by browser.

<html>…</html>
<html> is root tag of every webpage or web document
All other tags or elements are placed within <html> tag.

<html lang="en-US">



<HEAD>…</HEAD>
<head> tag is used to define meta data
<head> is called global scope/section.
Whenever webpage is loaded within browser, browser executes head section.

<head> is not displayed client.
The following are sub tags used within <head> tag.

1. Title
2. Style
3. Base
4. Script
5. Meta
6. link

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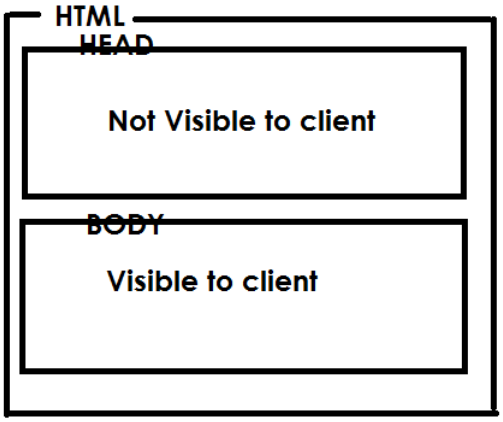

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<title>…</title>
This tag define title of web page. This title is shown on title bar.
Every webpage is having one title.

```
<!DOCTYPE html>
<html>
<head>
<title>Best Training in C,C++,Java </title>
</head>
</html>
```

<style>…</style>
This tag is used to define css (cascading style sheet) styles

```
<!DOCTYPE html>
<html>
<head>
<title>Best Training in C,C++,Java </title>
<style>
h1 {
       color: #1c87c9;
    }
</style>
</head>
<body>
<h1>Welcome to HTML Class </h1>
</body>
</html>
```

<base>

The <base> tag has recently become part of HTML5. It defines an absolute (base) URL for all the relative URLs in the HTML document. This tag also determines how links in the current document must be opened (in a new window, in the current window, etc.).

```
<html>
  <head>
    <title>HTML base tag</title>
    <base href="https://www.nareshit.com/" target="_blank">
  </head>
<body>
<a href="/index.html">index</a>
</body>
</html>
```

<script>…</script>

The HTML <script> tag declares client-side script (JavaScript) in an HTML document. When defining a client-side script the script tag is used for image manipulation, form validation, and dynamic changes of content.

```
<script src="javascript">
Declaring variables
Defining functions
Defining classes
</script>
```

DOM (Document Object Model)
BOM (Browser Object Model)

<meta>

The <meta> tag contains metadata, which specifies page description, keywords, author of the document, etc. The metadata is

used by browsers, search engines, and other web services, and isn't displayed on the web page.

Define the keyword for the search engines:

<meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript">

Define the website description:

<meta name="description" content="Tutorials on HTML, CSS and PHP">

Define the author of the page:

<meta name="author" content="nareshit">

Refresh the document every one minute (60 seconds):

<meta http-equiv="refresh" content="60">

<meta> tag

meta tags represent metadata. They are essentially used for defining and describing data about data, and are used to add extra information to the data inside the webpage.
There are many meta tags. Some of them help improve the SEO (Search Engine Optimisation) of your website, making sure that the content of your site is relevant to what people are searching for.

How to define the character set of a website

<meta charset="UTF-8"> defines the character set that will be used in the site.
UTF-8, which stands for 8-bit Unicode Transformation Format, is the standard character encoding used with the latest version of HTML, which is HTML5.

How to let Microsoft's Internet Explorer know which rendering view to use

You use the http-equiv="X-UA-Compatible" content="IE=edge" meta tag to choose and define the version of Internet Explorer in which the web page will be renedered.

This tag will ensure that the website will not be rendered as an older version of Internet Explorer

How to adjust viewport settings

it is important that all sites look good on all devices, especially mobile phones.
you need to include the meta name="viewport" content="width=device-width, initial-scale=1.0" tag in every HTML file.

viewport refers to how the site is displayed on different screen sizes, and how much visual area a user has available.

Each device has a different viewport. For example, mobile devices have a smaller one and desktop computers have a larger one.

content="width=device-width is the first step to making sure that websites look good on mobile devices.

This ensures that the HTML will adjust to the width of the device's screen.

initial-scale=1.0 sets how the webpage scales,and sets the initial zoom when the page is first loaded by the browser.

How to add a description of your webpage

Using a meta description tag for your page helps search engines figure out and rank your website against other websites. It's used primaraly for SEO (Search Engine Optimization) purposes.

The meta description tag is used to explain in a brief and concise way what your website is about.

A meta description tag could look something like this:

<meta name="description" content="NareshIt is Best Training Center in India ">

How to add the name of the website's author

Another useful meta element to include is the author's name.

<meta name="author" content="Naresh">

<link>: The External Resource Link element

The <link> HTML element specifies relationships between the current document and an external resource. This element is most commonly used to link to stylesheets, but is also used to establish site icons (both "favicon" style icons and icons for the home screen and apps on mobile devices)

The <link> tag sets the relationship between the current document and the external resource. It is generally used to link to the external CSS stylesheet.

```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" type="text/css" href="style.css">
  </head>
<html>
```

```
<link rel="shortcut icon" href="/images/favicon.ico">
```

1. Title
2. Style
3. Base
4. Script
5. Meta → author, viewport, description, keywords
6. Link

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