

Web Programming Technology (WPT)

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What is web programming ?

What is Web Application ? It is a distributed application in which the client and the server use HTTP for sending request and response!!!!

What is distributed application ? One applications is DISTRIBUTED between many processes , the processes communicate with each other.

If there are two processes , they will be called as CLIENT and SERVER

What is the ROLE of Client process in a distributed application ?

1. Interacts with the END USER
2. Sends a REQUEST to the server
3. Gets a RESPONSE from the server
4. Shows the response to the END USER

What is the ROLE of the Server process in a distributed application ?

1. TO run continuously waiting for the client request
2. The server MUST run on a fixed IP:PORT number
3. The server should receive a REQUEST from client and **send** a RESPONSE

Client and server processes MAY be on the same machine or on different machines

If Client and Server are on SAME machine }}}} IP will be same , PORT number will be different

If Client and Server are on DIFFERENT machines }}}} IP will be different , PORT number will be different

THE client and server MUST communicate with EACH other Using CERTAIN PROTOCOL !!!
PROTOCOL ??? Set of rules to send and create a request and send and create a response

Application Level Protocols (Telnet , FTP , SSH , HTTP , SMTP ,POP)

Network Level Protocols (TCP,UDP)

Intenet Protocol (IP)

Physical Level Protocol

We deal with application level protocols !

Client and Server MUST follow the same protocol .

Distributributed Application

Having 2 processes = Called as Two Tier Application

browser <-----> Web Server

mysql-client <-----> mysql-server

Having 3 Processes = Called as Three Tier Application

browser <----->Web Server <-----> MySQL server

Having >3 processes = Called as n tier application

browser <----->Webserver <-----Mail server -----> DB Server

A typical Distributed application is divided based on functionality

FRONT-END < -----> BACKEND
UI <-----> Business Logic + DB
Client Side < -----> Server (web server , DB server , LB server)

FRONT END for a typical WEB APPLICATION is called as

Http Client
OR
Web Client
OR
Browser

U I = user Interface

WHICH USER = END USER (Human being)

End User can see

Colors , fonts , images , audio, video

Text , Widgets (buttons , textfield, scroll bar , drop down list , tool tip ,
checkbox, radiobuttons textArea , list, tables)

WPT to display the UI = HTML = Hyper **Text** Markup Language

We Mark the text for displaying in different ways !!!

We will mark using some PREDEFINED HTML tags !!!!

<OPENINGTAG attribute1=value1 attribute2=value2 >
TAG BODY
</CLOSINGTAG>

TAG BODY === Is made up of EITHER only TEXT or SUBTAGS

EDITOR to write the code = VS Code

File can have extension = html or htm

Browser has embedded interpreter to TRANSLATE the MARK UP into actual UI

MARKUP <-----HTML Interpreter Present in the Browser ----->UI

Tags	
<html>	Outermost tag of an html file
<head>	Subtag of <html>
<title>	Subtag of <head> it has text that is displayed in browser title
<body>	Holds the content to be displayed in the CONTENT-AREA/DISPLAY-AREA of the browser
<h1> ,<h2>,<h3> ,<h4>,<h5>	In built heading tags
<u> , <i> ,	<u> = markup for underline , = markup for bold ,<i> =

	markup for italics
 	To add line-break on the browser
Grouping TAGS	
<div>	It simply groups a data logically and create divisions in the body
<p>	It is for paragraph , It will automatically add a new line
	It is a logical division of text within a div or a para
<pre>	Retains the spaces and new lines in the source file on the browser
	For unordered list
	Subtag of and it holds the LIST ITEM
	For Ordered list
<table><thead><tbody> <tr> <td>	<thead> = heading , subtag of <table> <tbody> = lower part of the table , subtag of <table> <tr> = rows subtag of <tbody> <td> = columns , subtag of <tr>

```
{ //1
  { //2
} // cannot be 1
  } // cannot be 2
```

```
{//1 open
  { //2 open
  } //2 closed
} //1 closed
```

Tags	
	
<audio>	
<video>	

Input Tags	
<input>	

Can we have an application made up of many processes ? YES