

UNIT - 14

① Client Side Scripting !

XHTML

→ Extensible Hypertext Markup Language

Three main Parts

- ① DOCTYPE declarations
- ② <head> section
- ③ <body> section.

(eg) :- <!DOCTYPE...>

```
<html>
  <head>
    <title> ... </title>
    <head>
      <body>
        <body>
          <html>
```

① Displayed header

<h1> <h2> <h3> <h4> <h5> <h6>

② Formatting Text

<p>

<pre> Preserve the whitespace and
lines in the text

<div> make division of sections
in the HTML document.

(eg) !.

<html>

<head>

<body>

<p> Hello world!</p>

<div>

It was very cool in those days

</div>

<pre>
The money then looked for something
to hit a fly </pre>

HTML

old

Hector said

It was very cool!

The monkey then looked

③ Setting font style

<i>

& center>

④ Text Alignment

<p align="center">

<p align="left">

<p align="right">

⑤ Setting the font

<base font face = "font-family: size=10">

⑥ colors

<base font face = "color: green; size=5; color=blue">

④ Horizontal Rules

<hr>

Horizontal line on the web browser.

(29) !.

<body>

<center>

<h3> Inspiring thought <\h3>

<\center>

<h1>

<p> when one door of happiness
. <\p> <\h1> <\h1>

 Helen Keller

<\body>

old

Inspiring thought

when one door of happiness

Helen Keller

⑧ Images

⑨ Hypertext

<body> click here to get a

book on engineering
</body>

click here to get a book on engineering

⑩ use of image as a link

→ open new page
→ new window
→ target=blank

⑪

Lists

↳ collections of items or elements.

Two types

- ① unordered lists
- ② ordered lists

Concluded list

<html>

<head> <title>concluded </title>

<body>

<h2> All about computer </h2>

Following are some popular operating S/Os

<ul type = "disc">

 DOS

 windows 98

 windows xp

</body>

</html>

</>

All about computer

following are some popular OS

- DOS

- windows 98

- window xp

ordered list

↳ list of items which follows some specific sequence.

⟨ol⟩

⟨li⟩ → displays the numbered actions separate line.

⟨ol type = "A"⟩

A.

B.

C.

⟨ol type = "I"⟩

I.

II.

III.

⟨ol type = "1"⟩

I

II

III

⟨ol type = "l"⟩

1.

2.

3.

(eg) <html>

<head>

<title> ordered list demo </title>

<head>

<body>

<h4> This is a typical list </h4>

<ol type = "A">

 first

 second

 third

<h4> The list is starting from 5 </h4>

 start = "5">

 Ice cream

 Mango

 Pineapple

<body>

</html>

off

This is a typical list

- A. first
- B. second
- C. third

The list is starting from 5

- 5. Ice cream
- 6. Mango

- 7. Juice.

~~India~~ India
Col type = "I"

 National Bird : peacock

 <> India

Col type = "i"

 India

 <>

<>

India
National

(i) India

12) Table

13) Forms

Text <input type = "text" size = "30" value = "">

Textarea

<Text area cols = "40" rows = "5" name = "myname">

checkbox

<form name = "checkboxforms">

<input type = "checkbox" name = "options1" value = "apple"> Apple </br>

Radio button

<input type = "radio" name = "grocery" value = "mango"> mango

Button

<input type = "submit" value = "send">

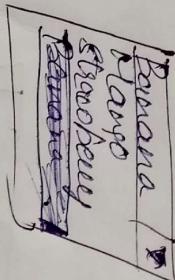
End]

menu

↳ select name = "my menu"

↳ option value = "mango" ➔ Mango & option

↳ option value = "strawberry" ➔ strawberry
↳ select ➔ option



④ frame

scroll Bars

↪ horizontal

heads

titles ➔ my frame ↪ titles

heads

frame set cols = "620, 50%"

frame src = "images/demo.html"

name = "left-vertical" no resel

`flameSetLocs = "x: 170 y: 170"`

`flameSet = "radioButDemo.html"`

`name = "Right-top" scrollUp = act01`

`flameSet: "radioButDemo.html" name = "Right-Botto`

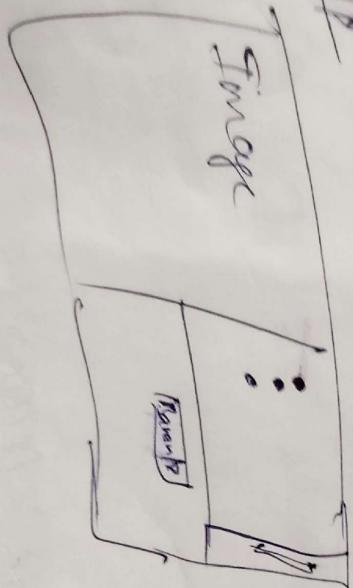
`scrollUp = no1`

`<flameSet>`

`<flameSet>`

`<ctrls>`

`off`



JavaScript

↳ Scripting language

Syntax:

① Script type!

<style type = "text/css">

(or)

↳

<script type = "text/javascript">

</script>

<script type = "text/javascript" src = "firstpage.js">

</script>

② Identifiers!

either letters,

begin with either letters, underscore

or dollar sign.

③ Observation

③ Reserved words:

if, else, break, case, delete, for

④ comment:

<!-- -->

<!-- single line comment can be used
in javascript

/* */ & /> multi-line comments

⑤ semi sequence:

! Pgm :

<!DOCTYPE

<head>

<title> my javascript </title>

<head>

<body>

<center>

<script type="text/javascript">

JavaScript statements
commands will be
written here

This is the first paragraph

of page

document.write ("welcome to first page

</script> <center> </body> </html>

Variables & datatype

Q10

Welcome to first page of JavaScript

⑥ Variables & datatype

① Primitive type:

↳ Two entities Primitive &

Objects.

↳ Store the reference to the actual values

② Number

* String, Boolean, undefined, null

③ Literals

↳ numeric literals & string literals

numbers

(integer values, floating pt)

(Ex. 10, 10.3, 10.0)

String literals

↳ sequence of characters -

It can be written in double quotes " "

or in single quotes ' '

(Ex. 'Run some code'

③ Other Primitive Types

* Boolean

↳ true or false

* Null

↳ no value.

* undefined

↳ not assigned any value to it.

④ Variable declaration

↳ declare the variable using the reserved word Var.

e.g.) `Li! Doctor . . .;`

short > head >

either variable in JavaScript file's

<head>

<body>

<script type="text/javascript">

Var a, b, c;
Var string;

a = 2;
b = 3;

c = a+b;

String = "The result "

document.write ("Performing addition of 2 & 3.
" +
);

document.write (c);
<script> </body> </html>

Op

Performing addition of 2 & 3

The result = 5

⑧ Operations!

- * conditional operator (<, >, <=, >=, ==)
- * Assignment operator = (eg): a = 5
- * Arithmetic , * , / , % , + , - , x , / , ^
- * loge .
- * increment - + + (repeat + i) till 0 & so on
- * decrement - (eg) i = i - -

var a, b, c;
var string;

a = 2;

b = 3;

c = a+b;

string = "The result";

document.write ("Performing addition of 2 & 3.
" + " " + b + " " + ");

document.write ("
");

<script> <body> <html>

</p>

Performing addition of 2 & 3

The result = 5

⑧ Operators!

- * conditional operator ($<,>, \leq, \geq, ==$)
- * Assignment operator = (eg: $a = 5$)
- * Arithmetic , (+, -, *, /, %)
- * loge .
- * increment " + + (eg: $i++$)
- * decrement " - - (eg: $i--$)

Q) Study concatenation operator!

→ two string can be concatenated using + operator.

(Q8) ↴

<!DOCTYPE . . .

<html>

<head><title> string concatenation </title>

</head>

<body><center> ↴
script type = "text/javascript">

Var first_string ,

first_string = "programmer" ;

document.write(<h3>" + first_string +
" the web "</h3>");

</script>

<center>

<body>

<html>

</p>

Programming the web

Types of operations:-

↳ Returns the primitive type of Variables .

(eg):-

<!DOCTYPE

<html> <head> <title> type </title>

<head>
<body>

<h3> following are the types of variables

<h3> <bul> -

<script type = "text/javascript">

Var myste = "computer";

Var mynum = 100 ;

Var myboolean = false ;

Var myobj ;

Var mynum1 ; Declared but not assigned

Var myobj1 ; any value .

myobj1 = NeoObject ;

myobj1 = null ; It will consider as object type

document.write("My name = " + typeof(myname)
+ "
+ "
");

document.write("My boolean = " + typeof(myboolean)
+ "
+ "
");

document.write("My obj = " + typeof(myobj) + "
document.write("My obj = " + typeof(myobj) + "
+ "
");

document.write("My num = " + typeof(mynum)
+ "
+ "
");

document.write("My str = " + typeof(mystr)
+ "
+ "
");
<script> </body> </html>

Output

Following are the type of various variables

My name = number

My boolean = boolean
My obj = object
My obj1 = object
My num1 = undefined

My str = string

Implicit type conversion

operand A B

10 + string

10 + "Hello"

"Hello"

Explicit type conversion

↳ parseInt, floatInt

parseInt (closed)

= 10.34 as it

= 10.34 convert to number

5 * 10 = 60

5 * "Hello" = ~~5 * "Hello"~~

= nan



cannot convert value result
convernt the number to string
a get the nan

Boolean data conditions

→ the number 0 is considered as
↳ false
and any other number means
↳ true

→ empty string is considered as
↳ false.

→ all other string → true

→ special value NaN is taken as
↳ false

→ undefined value is taken as
↳ false.

(exp)

<body>

<script type="text/javascript">

var a;

var b;

a = 12 * 5;
document.write(a + "
");

b = 12 * "Hello";
document.write(b);

</script></body>

Explicit type conversion

↳ Type conversion in JavaScript

→ Numeric value can be converted to in the string type using the `toString` method.

Eg:

`Var my-num = 2;`

`Var mystr;`

`my-str = my-num.toString();`

↳ my-str become 2

* `Boolean(my-val)`

↳ converts the my-val to Boolean type

* `Number(my-val)`

* `String(my-val)` converts the my-val to number type

↳ to string type.

Two methods

↳ Separate out the numeric data from alphanumeric value.

`ParseInt()` & `ParseFloat()`.

eg:

`<body>`

`<script type="text/javascript">`

`document.write(
"The int value`

`from 12abc is : "+ParseInt(12abc))`

`document.write(
+ "The float value`

`from 12.25abc is : "+ParseFloat`

`(12.25abc))`

`</script></body>`

Output

The int value from 12abc is : 12

The float value from
12.25abc is : 12.25

Q Demonstrate

① Demonstrate the alignment of text

using the HTML tag and wrote
a atom! Script to display text
`<html> bold, italics & strikethrough
<head>
<title>
</head>
<body>`

`<div align = "center">`

This line is aligned at center
`</div>`

`</body> </html>`

② Is it possible to insert some
white space in the text and
display it on web page? If so
then write the HTML script
for the same

③ Develop an HTML Script to display your class timetable.

Q Explain how could you use HTML frame to provide a website that includes an advertisement of your company along with the content from any other web page. Show that HTML you would need to do this, assume that for your example the "other web page" is the www.yahoo.com. Make sure that you explain how this works.

(a)

JavaScript: Events

JavaScript actions may be triggered from events, (e.g.: changes on form fields or a submit button being clicked; focus → form field gets focus Validation) onblur = mouse leaves a field on click = mouse click on mouseover = mouse moves over a field onmouseout = mouse moves away from a field onmousedown = mouse is clicked onmouseup = mouse is released onload = page is finished loading (initial action) onerror = error occurs onsubmit = submit button is clicked onanimation = animated button

Types of scripting languages

① Server side Scripting language:

- It can use huge resources of the server
- complete all processing on the server and send plain pages to the client.
- Reduces client-side computation overhead.

② Client side Scripting language

- Does not involve server processing.
- complete application is downloaded to the client browser.
- Client browser executes it locally.
- Are normally used to add interactivity to webpages eg: different menu styles, graphic displays or dynamic advertisements.

Different scripting languages

① Active Server page (ASP)

- Server side scripting language
- developed by Microsoft.
- Good at connecting to Microsoft databases
- Runs only on Microsoft servers.

& PERL: → practical extraction & report language

→ old UNIX language.

→ found on all windows and unix servers.

→ can handle text manipulation tasks.

→ excellent web scripting language.

* PHP: Hypertext Pre processor

→ especially good at connecting to MySQL

→ very popular language.

→ runs on UNIX & Windows

→ HTML embedded scripting language.

→ syntax looks like C, JAVA & PERL

→ increases dynamic content & good user interface.

→ server side execution.

* JSP (Java Server Pages)

→ developed by sun

→ uses Java

→ provide server - specific framework like

MICROSOFT's ASP

* ASP.NET Commons Nature?.

- server side solution
- needs to launch separate instance of user application for each web request.
- allows direct interaction with users.

* ASP.NET

- Server-side technology to create faster, reliable and dynamic web pages.
- support .NET framework languages (C#, VB.NET, JScript.NET)
- provides flexibility to designers and developers to work separately.

* VB Script:-

- Microsoft's scripting language
- client side scripting language
- very easy to learn
- includes the functionality of Visual Basic.

JavaScript Popup Boxes

* **Alert box!** To make something comes

through to the user.

* **Confirm box!**

↳ To deny or accept something

* **Prompt box!**

↳ The user to input a value
before entering a page.

JSP

```
→ A JSP page works embedded Java code  
<html>  
<head> <title> Hello </title>  
</head>  
<body>  
  
<% if (request.getParameter("name") == null)  
{ out.println("Hello world"); }  
else  
  
out.println("Hello," + request.getParameter("name"));%>  
</body>  
</html>
```

* JSP is converted into Java + servlets.

PHP

→ widely used for web server scripting
→ extensive libraries including for
database access using ODBC.

char()

```
<head> <title> Hello </title> </head>
<body>
```

```
<?php if(isset($_REQUEST['name']))
```

```
Echo "Hello world"; ?>
```

```
else Echo "Hello," + $_REQUEST['name']; ?>
```

```
</body> </html>
```

(eg) :- Javascript used to validate form (if

```
<html> <head>
```

```
<script type = "text/javascript">
```

```
function validate() {
```

```
var credits = document.getElementById("credits").value;
```

```
if (isNaN(credits)) credits = 0; credits >= 16; ?>
```

```
Alert("Credits must be a number greater than 0
```

```
& less than 16");
```

```
return false; ?>
```

```
</script>
```

```
<head> <body>
```

```
<form action="create accuse" onsubmit="return  
validate()>
```

```
Title : <input type="text" id="title" size="20"
```

```
<br/>
```

```
credit! <input type="text" id="accus" value="2" />
```

```
<input type="submit" value="submit" />
```

```
</form>
```

```
</body> </html>
```

Project Specification

Project specification is a comprehensive description of how the software will be used from user's perspective and performance details such as speed, availability, response time, etc., for the development of a project. It contains all goals, functionality and details required for the development team to fulfill the vision of the client. Its primary purpose is to communicate to the developers on what they need and how they need to deliver it.

For ex:
Consider the construction of a house, if we go up to an architect to proceed the plan, first thing we would ask is about the cost estimation of the project and probably the architect would reply with two words saying "It's depends". He intends to ask the client about what he wants, how he wants or how much he wants. Whether he needs a 3 BHK, 2 BHK, a fully furnished house or semi furnished house, he needs a garage or not ?, etc, And the reply from the client will actually determine the cost and timeline of the project.

Project specification is a blueprint of the project. It communicates the specific details about the project that need to be planned, budgeted and implemented. The more thorough the project spec. is the more accurate

the budget will be.

Some basic elements of project specification include,

Introduction , Project objectives , Brief project description , Site user role , functional requirements per user role , design specification , flow or logic diagram , Success Criteria , site map , content plan , Marketing plan , Site Maintenance ,

project timeline , deadline , budget .

The specs should be simple and crystal clear . Nobody needs to write it for 30 - 40 pages . It is a very clear set of instructions about how your project will work .

Ex: If your site has some user validation in its front page . You would ask your developer for a logo on top corners , colour mood of the page , few pop up menus which contain about , services , etc , centre division might contain the sign in part & sign up option .

Every site must contain a user path . If we purchase a mobile phone , and turn it on , it will ask for the language selection , the wifi setup , etc .

Every project must actually begin with few designed mock ups or wireframes . These mockups & wireframes will provide a good idea on how the project will look and make some changes if we need any .

We need to precisely explain the tech stack related information such as frontend . Backend.

Frontend includes HTML, CSS, JavaScript, Angular JS, etc.,
Backend includes Ruby on Rails, PHP, etc.,

Once the spec is submitted, the developer will analyse if these are the slight requirements , are they complete? are they compatible? , are they achievable? , are they reasonable? , are they testable?

If at all the client's project spec meets all these valid points ,then the developers will be able to read the mind of the client & deliver the product within the given timeline .