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SUBJECT :- WEB DESIGNING

Chapter - 1

Intro to JavaScript

JavaScript is a Programming language.

JavaScript is a Client Side Scripting Language.

What is Scripting ?

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scripting language means story writer language of product development

ex- web app , desktop app , android app etc.

There are two types of scripting

1. Client Side (Executes in browser [JavaScript])
2. Server Side (Executes in Server [PHP])

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Chapter - 2

Output from JavaScript

JavaScript is a Programming language.

JavaScript is a Client Side Scripting Language.

What is Scripting ?

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scripting language means story writer language of product development

ex- web app , desktop app , android app etc.

There are two types of scripting

1. Client Side (Executes in browser [JavaScript])
2. Server Side (Executes in Server [PHP])

SCRIPTING TYPE OF JAVASCRIPT

1. Internal Scripting

```
<head> or <body>  
<script> write your JavaScript Code..</script>  
</head> or </body>
```

2. External Scripting

```
<head> or <body>  
<script src="externalpage.js"></script>  
</head> or </body>
```

What is Data ?

Any information is called a data ex : - number , text , word , audio , video or any file .

How to get any output (result) in JavaScript

window.alert()

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if you want to display your result in a dialog box (Popup box) so you have to use window.alert() method .

document.write()

if you want to display your result in your webpage without using any html tag so you have to use document.write() method .

console.log()

if you want to display your result in the console window of your browser so you have to use console.log() method .

innerHTML

if you want to display your result with the help of html tag in your webpage so you have to use innerHTML method .

LET`S CREATE A BASIC PROGRAM

1. write a program to print **STP Computer Education** a dialog box.

```
<body>
<script>
window.alert("STP Computer Education");
</script>
</body>
```

Note:-

Letter ex- a , b , c = every alphabet is known as **character** in the respect of programming.

Words ex- stp , css , apple = every words are known as **string** in the respect of programming.

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Let`s know some usefull symbol name

- () Parenthesis
- [] square brackets or box brackets
- { } braces or curly brackets
- <> angle brackets
- ' ' single quote
- "" double quote
- :
- ;
- / forward slash

```
*****  
\\    backward slash  
&    and  
-    hyphens  
_    underscore  
=    assign  
==   equal to  
*    astric
```



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Chapter - 3

Keywords

What is programming ?

The steps that you take to achieve any result will be called programming.

किसी भी परिणाम को पाने के लिए जो कदम आप उठाते हैं उसी को आप प्रोग्रामिंग कहेंगे।

STP COMPUTER EDUCATION JavaScript Reserved Words (Keywords)

Keywords are the way to define the meaning of any data for your interpreter and compiler.

abstract	arguments	await*	boolean
break	byte	case	catch
char	class*	const	continue
debugger	default	delete	do
double	else	enum*	eval
export*	extends*	false	final

finally	float	for	function
goto	if	implements	import*
in	instanceof	int	interface
let*	long	native	new
null	package	private	protected
public	return	short	static
super*	switch	synchronized	this
throw	throws	transient	true
try	typeof	var	void
volatile	while	with	yield



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Chapter - 4

JavaScript Functions

Identity of a function is ()

A function is a group of statements that together perform a task And it works when you call it.

There are two types of Functions.

1. Built in function (predefined function)

Their work is already sure And these can be called just. You can't make predefined function only you can call predefined function

2. User defined function

JavaScript allows you to define functions according to your need. These functions are known as user-defined functions.

Working with predefined functions

Name of some predefined functions

1. **alert()** : window.alert()

2. **write()** : document.write()

3. **log()** : console.log()

Note : remember you can only call predefined functions you haven't any permission to change or edit predefined functions .

How to call a predefined function

If you want to call a function you have to learn about mouse or keyboard events

Mouse Events

onclick , onchange , onmouseover , onmouseout



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SUBJECT :- WEB DESIGNING

Chapter - 7

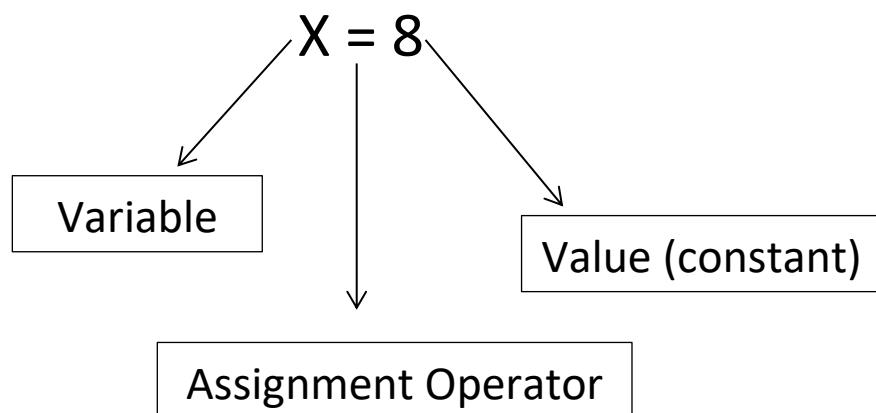
Variables

What is Variables ?

Variable is a medium that allows us to work on data stored in memory .

Variable एक माध्यम है जिसकी मदद से हम मेमोरी में store किये गए data पे काम कर सकते हैं

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Assignment Operator

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Chapter - 10

Selectors in JavaScript

Selectors are used to select html elements to perform some task and actions on html elements.

There are so many Selectors in JavaScript .

1. **getElementsByName()** : select HTML element through tag name.
2. **getElementsByName()** : select HTML element through the value of name attribute.
3. **getElementById()** : select HTML element through the value of id attribute.
4. **getElementsByClassName()** : select HTML element through the value of class attribute.

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SUBJECT :- WEB DESIGNING

Chapter - 16

Comments and Operators

Comments are a medium with the help of which we understand the meaning of our code

Comments एक माध्यम हैं जिसकी मदद से आप अपने code के meaning को समझा सकते हैं।

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Types of Comments

1. **Single line comment** // single line comment looks like this

2. **Multi line comment** /* multi line comment looks like this */

Example of single line comments

```
<script>  
  
var = x = 6 ; // here we are declaring variable  
  
</script>
```

Example of multi line comments

```
<script>  
Var = x ,y,z; /* from here we are going to start variable declaration  
method that is called after declaration */  
  
X = 6;  
  
Y = 5;  
  
Z = 10;  
  
</script>
```

Operators in JavaScript

1. What is operator ?

Operators is a mathematical symbol used to manipulate between two data .

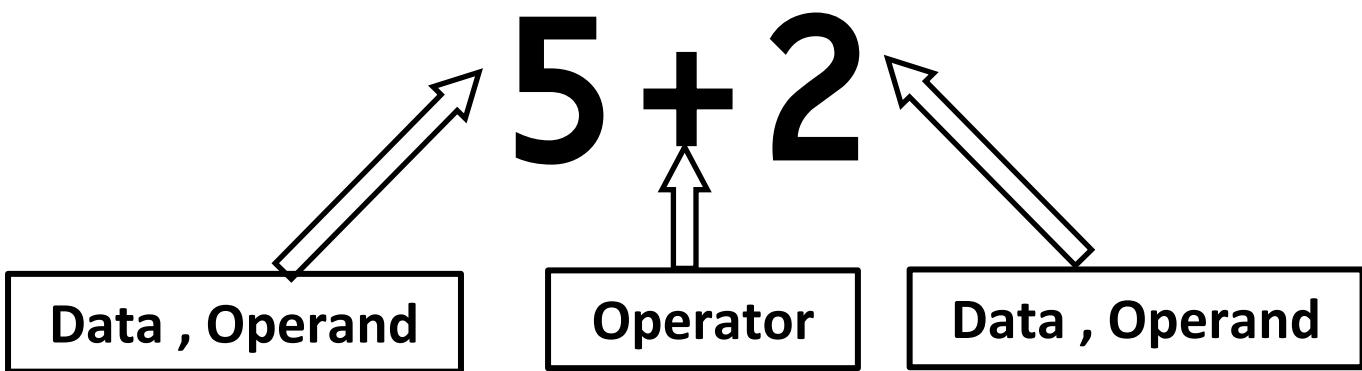
Operator का उपयोग दो data के बीच अदल बादल करने के लिए किया जाता है।

2. What is operands ?

The data of operators are known as operands .

किसी भी प्रकार के डाटा को operator के शब्दों में operand कहा जाता है।

Explanation with diagram



Types of operator in JavaScript

1. Arithmetic operators
2. Assignment operators
3. Comparison operator
4. Logical or relational operator
5. Type operators
6. Bitwise operator
7. Conditional or ternary operator

Arithmetic Operators

Operators	Name
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus (Remainder)
++	Increment
--	Decrement

Assignment operators

=	assign
+=	addition assign
-=	subtraction assign
*=	multiplication assign
/=	division assign
%=	modular assign

Comparision operators

==	equal to
====	equal to and equal type
!=	not equal
!==	not equal or not equal type

>	greater than
<	less than
>=	greater than or equal to
<=	less than or equal to
?	ternary operator

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Chapter - 23

Match Function With RegExp

Regular expression are used to perform pattern-matching and "search-and-replace" functions on text.

Syntax :-

/[pattern]/modifier

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Example :-

use this for capital letter : /[A-Z]/g

use this for small letter : /[a-z]/g

use this for numbers : /[0-9]/g

Modifiers

1. g = case sensitive
2. l = case insensitive

match()



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SUBJECT :- WEB DESIGNING

Chapter - 26

Content Writing

Predefined functions for content writing

1. createElement("P")
2. createTextNode("text here")
3. appendChild()

```
index.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>
5 content Writing
6 </title>
7 </head>
8 <body id="bdy">
9
10 <script>
11 var tag = document.createElement("P");
12 var content = document.createTextNode("Welcome to Our course");
13 tag.appendChild(content);
14 var body = document.getElementById("bdy");
15 body.appendChild(tag);
16 </script>
17 </body>
18 </html>
19
```

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SUBJECT :- WEB DESIGNING

Chapter - 30

Introduction to Array

Array is a variable that stores more than one value because the variable created with an array has more than one memory block .

ऐसे एक ऐसा वेरिएबल है जो एक से ज्यादा वैल्यू को स्टोर करता है क्योंकि ऐसे से बनाये गए वेरिएबल के पास एक से ज्यादा मेमोरी बलॉक होते हैं

Example :- STP COMPUTER EDUCATION

var x = ordinary variable (it can store only one data)

var x [] = array variable (but it can store more than one data)

How to create an Array ?

```
<script>  
var students = [ "amit" , "ankit" , "456" ] ;  
window.alert( students );  
</script>
```

Output :- amit , ankit , 456

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SUBJECT :- WEB DESIGNING

Chapter - 31

Practical with Array Part 4

OBJECT

Object is a method to enhance the features of an array

ऑब्जेक्ट array की सुविधाएं को बढ़ाने का एक तरीका है इसकी माध्यम से ज्यादा से ज्यादा data को संभाला जाता है।

How to create an object ?

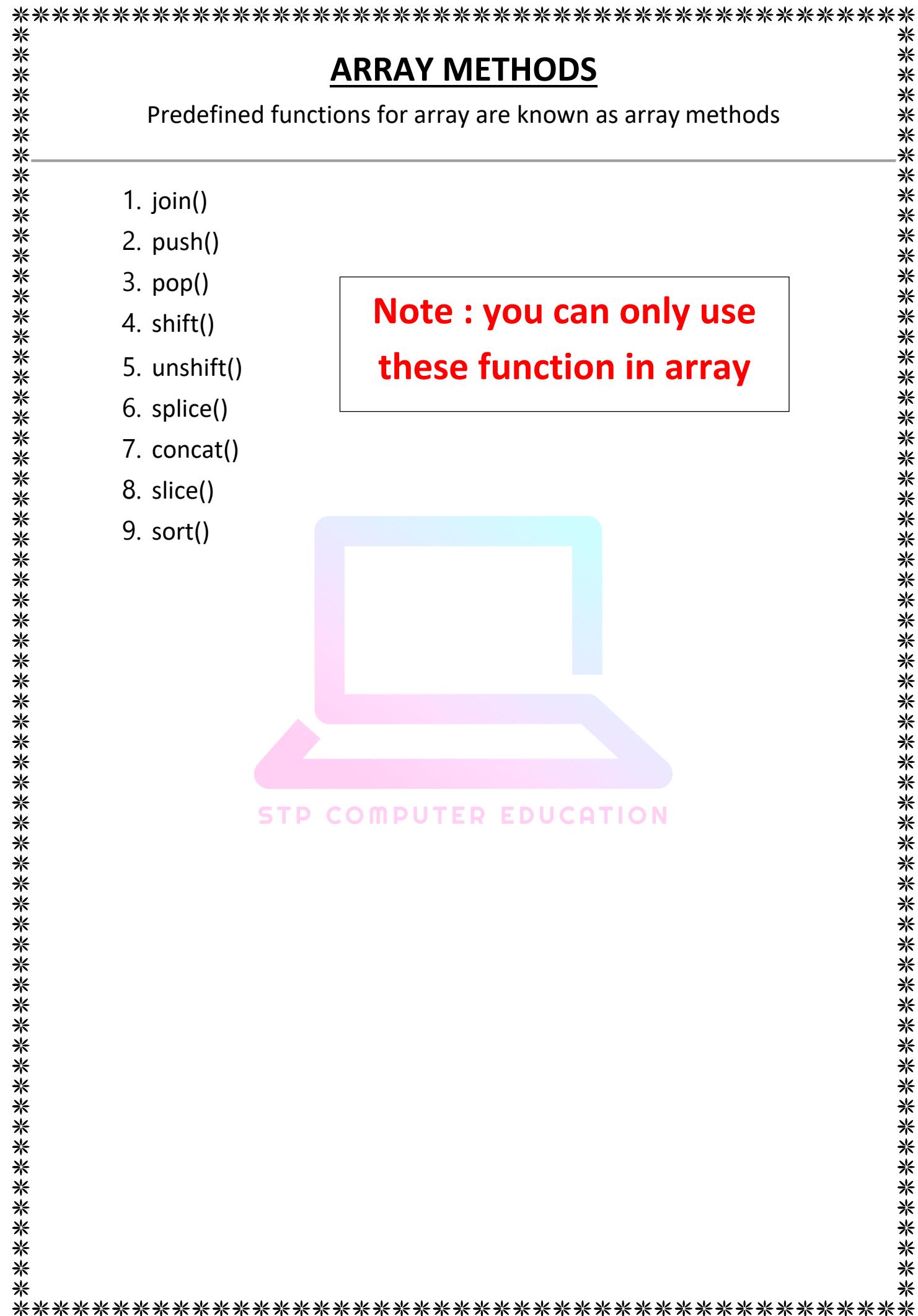
```
<body>  
<script>  
var user = [ firstname : "Amit", lastname : "Kumar"];  
window.alert( user.firstname + user.lastname );  
</script>  
</body>
```

ARRAY METHODS

Predefined functions for array are known as array methods

1. join()
2. push()
3. pop()
4. shift()
5. unshift()
6. splice()
7. concat()
8. slice()
9. sort()

**Note : you can only use
these function in array**



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Chapter - 32

Introduction to Loop

loop is a method that defines how much time the code will execute

लूप एक माध्यम है जिसकी मदद से आप आपने कोड को आदेश दे सकते हो कि आप का कोड कितने बार चले।

Statement used In Loop

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- for
- while
- do while

Syntax of for loop

for(Statement 1 , statement 2 , statement 3)

{

instructions

}

enter variable value

condition

variable with
increment operator

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Chapter - 33

Practical with Loop Part 3

JavaScript Programming Questions

1. Write a Program to print all natural numbers from 1 to n.
2. Write a Program to print all natural numbers in reverse (from n to 1)
3. Write a Program to print all even numbers between 1 to 100.
4. Write a Program to print all odd number between 1 to 100.
5. Write a Program to find sum of all natural numbers between 1 to n.
6. Write a Program to find sum of all even numbers between 1 to n.
7. Write a Program to find sum of all odd numbers between 1 to n.
8. Write a Program to print multiplication table of any number.
9. Write a Program to count number of digits in a number.
10. Write a Program to calculate sum of digits of a number.
11. Write a Program to calculate product of digits of a number.
12. Write a Program to enter a number and print its reverse.



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Chapter - 34

Event Handlers

To perform special actions on selected elements with the help of JavaScript are known as event handlers

We can implement event handlers in three ways

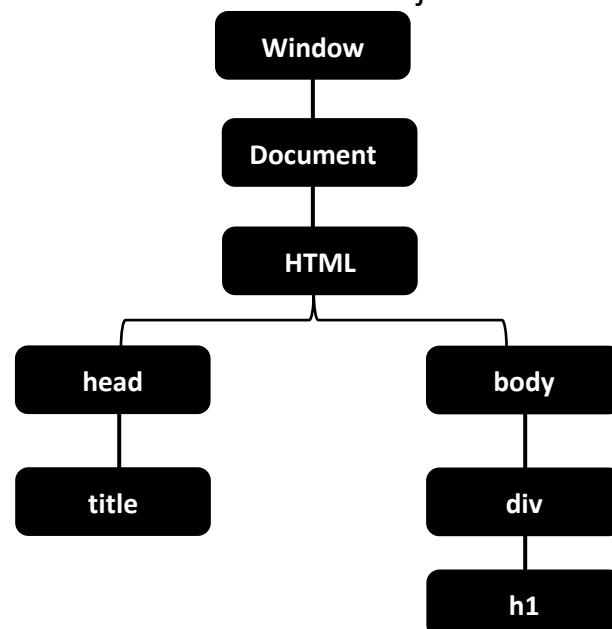
1. Using the attributes of an html tag : `onclick` , `onmouseover` , `onmouseout`
2. Using DOM object property
3. Using special methods

STP COMPUTER EDUCATION DOM (Document Object Model)

When a browser loads a webpage , the browser creates a document object model of that page Diagram of DOM

```
<html>
<head><title></title></head>

<body>
<div>
<h1></h1>
</div>
</body>
</html>
```



what is object ?

in the respect of DOM all the html elements are known as object or element object because html elements has no limits to contain data.

What are properties or methods ?

Collections of predefined function which controls the html element are known as properties and methods .

Using special methods

// ie 9 to higher and all modern browser

1. addEventListener("event",function,phase)
2. removeEventListener("event",function,phase)



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Chapter - 35

Time Interval System

setinterval()

setInterval is a method that repeats any instruction repeatedly after a certain time.

setInterval() एक method है जो किसी भी instruction को एक निश्चित समय के बाद बार बार रीपीट करता है।

Syntax :-

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setinterval(function,time in milisecond);

clearinterval()

we use clearInterval() to stop the execution of setInterval() method

setInterval() को रोकने के लिए clearInterval() का उपयोग करते हैं।

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Chapter - 40

BOM - Webpage Security And Keyboard Programming

BOM Properties

history.forward() = trigger the forward button of browser

history.back() = trigger the back button of browser

history.go() **STP COMPUTER EDUCATION**

trigger the forward, back & reload button of browser using the parameter value.

history.go(1) = trigger the forward button of browser.

history.go(0) = trigger the reload button of browser.

history.go(-1) = trigger the back button of browser.

Webpage Securities

oncontextmenu = trigger Right Click on Webpage

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Chapter - 43

Cookies Part 6

Types of Cookies

1. Session cookie : temporary cookie

Example : document.cookie = "data = amit"

2. Persistent cookie : permanent cookie

Example : document.cookie = "data = amit; expires=Sun, 27 Dec 2020 12:00:00 UTC"

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Attributes for Cookie

- ❖ expires
- ❖ max-age : seconds of days
- ❖ path = /
- ❖ secure

➤ **expires** and **max-age** attributes are used to create persistent cookie.

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Chapter - 44

Window Object Method

Escape sequences in javaScript

\ = Activate Keyboard formatting
\n = New Line

Window object methods()

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1. **window.alert()**
2. **window.btoa()** : convert a string to machine understandable
3. **window.atob()** : convert encoded string to real string
4. **window.setInterval()**
5. **window.clearInterval()**
6. **setTimeOut()**
7. **window.open()**

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Chapter - 49

Window Object Properties Part 1

list of location category properties

1. **window.location** = return full path of current page.
2. **window.location.href** = return also full path of current page.
3. **window.location.hostname** = return domain name or hostname of current page.
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4. **window.location.hash** = return #hash link triggered name of current page.
5. **window.location.protocol** = return the protocol (http or https) of current page.
6. **window.location.pathname** = return the pathname (/index.html) of current page.

list of location category methods

1. **location.assign()** = to load a new webpage
2. **location.reload()** = to reload webpages
3. **location.replace()** = to replace the current existing document with new webpage
