

Netvigator
Java Script

120-2-20

Saathi

Introduction to Java Script :-

- Java Script is a high level (untyped) & interpreted programming language.

Despite some naming, syntactic and standard library similarities, Java Script and Java are otherwise unrelated.

Java Script was created in 10 days in May 1995 by Brendon Eich, then working at Netscape and now of Mozilla.

- The original name of Java Script was Mocha (name chosen by founder of Netscape).
- In September 1995, name changed to LiveScript.
- Again in December 1995, name changed to ~~FreeScript~~ Java Script.

Programmer
Date _____ / _____ / _____
Name _____ At _____ & _____ To _____
Level to capability _____ Help by (Concise) _____ **Saathit**

- HTML decide which element show on webpage.

CSS decide design & decoration & position.

* Why Java Script

Java Script is used in web pages to add functionality, validate forms, communicating with server & read write HTML elements.

- Java Script is a Client Side scripting language.

Java Script Interpreter :-

- As the browser goes through the Java Script, it passes it to a special programme called interpreter which convert Java Script to machine code your computer understand.

- Browser come equipped with Java Script interpreters

Java script

- Java Script is a programming language.
- Java Script statements are Separated by Semicolon.
- Java Script statements are composed of : Values, operator, Expression, keywords & comments.

JS literals :-

constant.

- 34.25 number
- 304 number
- "Hello" String.

- Variable are used to store data Values.

- The Var keyword is used to declare Variables

Var x = 5;

if(j>5)

dynamic
variable
change acc. to
values.

Var m = 6;

l = m * 5

Var s = "Hello";

s = 4;

document.write(s + l);

by concatenation

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JS operators

- Operators are used to manipulate data and give a data as a result.

 $3 + 4$ $2 * 5$ $x = 5$

JS execution expression

- An expression is a combination of values, variable, and operators, which computes to a value.

 $x = 3 + 4 * 5$ $y = "x" + x;$

JS keyword

- Var is a keyword
- As of now there are 63 keywords in JavaScript.

JS comment

• // or /* or */

Comments are ignored & will not be executed.

(3.)

* * *

my
line
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Multiple

multiple

Date

- * → complete hide
- * f → one side hide

Identifier Naming rules -

- In java script, the first character must be a letter, an underscore (-), or a dollar sign (\$)
- Subsequent character may be letter, digit, underscores, or dollar sign

* Re-declaration of Variables :-

if you re-declare a java script variable, it will not loss its value.

last value
assign regi no.
show regi.
Same variable now

* Concatenation operators :-

- Var x = "Hello" + "Students";
Hello Students
= "2" + 4 + 5;

first list 24 55
 ≈ 245

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Assignment Operator :- for store

- $=$ is an assignment operator
- $==$ is equal to operator
for comparison.

Arithmetic operators :-

$+$, $-$, $*$, $/$, $\%$, $++$, $--$

Compound assignment operator.

$x = 5$. $+=$, $-=$, $*=$, $/=$, $\%=$

S.C

Relational operators :-

comparisons

$==$, $==$, $!=$, $>$, $<$, \geq , \leq



Difference $x = "2"$
 $x = \omega$.

$x == y$ true / only one face value

$x == y$ false / both type & face value value,
one is string & int -

Conditional Operator Ternary expression

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frame of string.
numbers
boolean
undefined
null.

Control Statement :-

Java Script offer almost the same control statement as we have in c language.

- if, if else, ?:
- switch
- while, do while, for, for in

exp1 ? exp2 : exp3

Switch :-

Switch (expression)

S

Cases: + only constant value
not variable

// code here

break;

default;

// code here

S

$x + "x" + i + " = "$

Sadhi

+ 1621

C68174

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white -

i <= 10.

c++

* while (condition)

S

// code here

g.

do white.

Var n=5 ; i=1;

do g

down ()

i++;

3 while (i <= 10);

for (statement 1 ; statement 2 ;
Statement 3) S

// code here

g.

for (i = 1 ; i <= 10 ; i++) S

down -

3

popup boxes:-

- Javascript has three kind of popup boxes
 - Alert box
 - Confirm box.
 - prompt box.

Alert box:-

when an alert box pop up,
the user will have to click
OK' to proceed.

Ex:-
• alert ("message to show on
by alert box");
at windows.alert.

```
<Head>
</script <body>
<script >
alert ("Hello");
</script >
<h1> welcome to the page </h1>
</body>
</html>
```

Confirm box:-

- When a confirm box pop up ; the user will have to click either 'OK' or 'cancel' to proceed.
- If the user click 'OK' the box return true . if the user click cancel the box return false.
- Confirm ("some message")

Var x = Confirm ("msg");

if (x)

document.getElementById("Body").style.backgroundColor
= "red";

3

</script>

Prompt box:-

A prompt box is often used if you want the user to input a value before entering a page.

five b

$$y_1 = \text{null } y_0$$

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2020-21 Academic Year

- When a prompt box ^{pop} up, the user will have to click either "OK" or "cancel" to proceed after entering an I/p value.
 - If the user clicks "OK" the box returns the I/p value, if the user clicks "cancel" the box returns null.
 - `prompt("message", "default value");`

```
Var x = prompt ("Enter a number", "5");  
if (x == null)  
    x = 5;
```

```
for(i=1; i<-10; it+)
document.write("<br/>" + x+
    " " + it + "=" + x + i);
```

۲

classcripty 2

(5) x

三

functions in java script :-

functions is a block of code designed to perform certain action.

function functionName (Variable list)

5

// code here

3

function is important because we can use or call a function again & again.

why funct? :-

- You can reuse code.
 - Script inside fncn is not executed until fncn is invoked (we have to call the fxn)

Variable in junction

4 Local Variable

4 Global Variable.

funcⁿ inside we call
variable than it is local variable

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fun name()

{ var x; local variable
y = 4; global vari

we don't used Variable here
So it is global variable.
java Script itself declare its
global variable.

<head>

</head>

<body>

<script>

function mySignature()

{

document.write("Name"
);

document.write("www.mysig.com");

}

</script>

<h1> Welcome --- <h1>

button on click = "mySignature()" > my sign <button>

<script>

mySignature(); (funcⁿ call)

</script> / if we need button then

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returning Value

- functⁿ may return a value using keyword return.
- functⁿ can only return one value.
- Once a functⁿ returns a value, control returns back to the caller.

```
<body>
<script>
    function sum(a,b)
        {
            return (a+b);
        }
```

```
</script>
```

```
<h1> ---
```

```
<script>
```

```
var s = sum(3,4);
```

```
document.write("sum of 5 & 7  
is " + s);
```

```
</script>
```

* Event handling in java Script :-

Event are the action that can be detected by javascript.

- When a user click the mouse.
- When a web page has loaded.
- When an image has been loaded.
- When the mouse moves over an element.
- When an input field is changed.
- When an HTML form is submitted.
- When a user strokes a key.

Event handling .

Sometime we want to execute a java script when an event occurs , Such as when a user click a button .

Event are normally used with combination with function & the function will not be executed when the function occurs .

Event Attributes -

- on load: A page or image is finished loading.
- on unload: The user exits the page.
- on blur: An element loses focus.
- on change: The content of a field changes.
- onclick: Mouse click on object.
- on dblclick: Mouse double click on object.
- on mouse down: A mouse button is pressed.
- on mouse move: The mouse is moved.
- on mouse out: The mouse is moved off an element.
- on mouse over: The mouse is moved over an element.
- on mouse up: A mouse button is released.

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

```
function effect()
```

3

```
var x = document.getElementById
```

```
by Id ("para1");
```

```
x.style.backgroundColor =
```

```
"lightblue".
```

for (c)

2.

back

```
function effect()
```

```
var var x = doc.getElementById
```

```
("para1")
```

```
x.style.backgroundColor = "white";
```

3

```
</script>
```

```
<head>
```

```
<body>
```

```
<div> wel </div>
```

```
<p id="para1" onmouseover
```

```
= "effect()"
```

```
onmouseout = "effect back()"
```

```
This -
```

```
• </p>
```

```
already -
```

```
html -
```

document Object Methods 3 - object

- get element by Id ()
- get elements by Tag Name ()
- get elements by Name ()
- get elements by class Name ()

<html>

<head>

<script>

function f1()

{
 var x = document.getelementsbytag("p");
 }

(Q) var x = document.getelementbyId('p1');
 alert(x); /alert(x.tagname)
 o/p Show alert.alert(x.innerHTML);

x.innerHTML = "This is this";

inner.HTML;

alert(x[0]);

alert(x[1]);

<h1> — <h1>

<p id="p1">

<p>

<body>

<html>

>>> button onclick="f1();> click<button>

`<script>
function f1()`

`5
Var x = document.getElementById("p1");
x.style.color = "green";
x.style.fontSize = "20px";`

3

`<script>
<head>
<body>
 <h1> <h2>
 <p id="p1"> </p>
 <button onclick="f1()"> click
 </button>`

Form Validation in JavaScript

- Form is an HTML element to take information from the user, using various input elements.

`<form action = "Some URL" method
 = "get">`

`<input type = "text" name = "User"/>
<input type = "password" name = "pwd"/>
<input type = "number" name = "age"/>
<input type = "Submit"/>
</form>`

HTML

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```
<html>
<head>
<script src = "my script.js">
</script>
</head>
<body>
<form action = "registration.php"
method = "get" onsubmit =
"return validation()">
name<input type = "Text"
name = "username"/>
<input type = "Submit"/>
</form>
</body>
</html>
```

J8

function Validation

```
Var result = true;
Var i = document.getElementsByTagName("input");
for(i=0; i<result.length; i++)
if(i.value.length == 0)
result = false;
return(result);
```

3

Plans

Output

Date: / /

Email Validation in JS

```
<html>
<head>
<script>
function validate()
{
    var result = true;
    var e = document.getElementById("email");
    var at index = e.indexOf('@');
    var dot index = e.lastIndexOf('.');
    if (at index < 1 || dot index >= e.length - 2 || dot index - at index < 3)
        result = false;
    return (result);
}

</script>
<head>
<body>
<form onsubmit="return validate()">
    Email id <input type="Text"
        name="Email" required/>
    <input type="Submit" value="register"/>
</form>
</body>
</html>
```

Script >

weight = parseFloat(prompt("what's weight"))
switch (weight)

5

case 10.5;

document.write ("your weight is 10.5kg");
break;

case 20.5;

document.write

break;

default:

document.write ("your weight"
+ weight + "does not
match");