

JAVASCRIPT INTRODUCTION



HTML



CSS

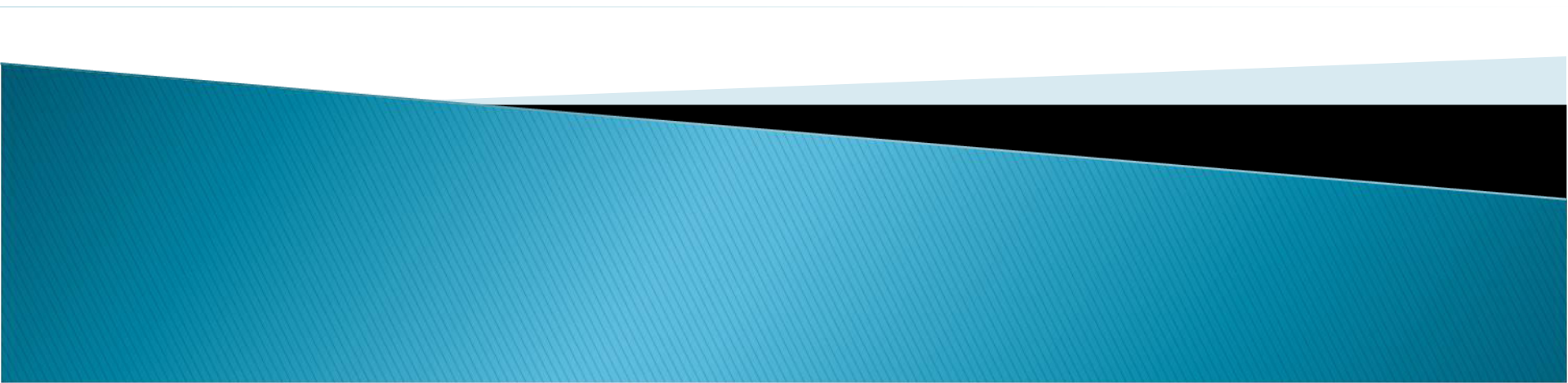


JavaScript




THINK.....

What we cant do with HTML and CSS?



- Can't use **Variables**.
- Can't work with **Control Statements** like if-else, loops etc
- Can't create **Dynamics Effects** to our web pages.
- Can't display **Messages** like “Do you want to delete?” on our web pages.
- Can't create **Database** to store our data.
- Can't **Embed** with other scripting languages


What is JavaScript?

- ▶ JavaScript was designed to add interactivity to HTML pages
 - ▶ JavaScript is a scripting language
 - ▶ A scripting language is a lightweight programming language.
 - ▶ JavaScript is usually embedded directly into HTML pages.
 - ▶ JavaScript is an interpreted language (means that scripts execute without preliminary compilation).
 - ▶ Everyone can use JavaScript without purchasing a license.
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What can a JavaScript do?

- ▶ JavaScript gives HTML designers a programming tool
- ▶ JavaScript can put dynamic text into an HTML page.
- ▶ JavaScript can read and write HTML elements
 - A JavaScript can read and change the content of an HTML element

Where JavaScript is used??

- JavaScript is used to create interactive websites. It is mainly used for:
 - Client-side validation
 - Dynamic drop-down menus
 - Displaying data and time
 - Displaying popup windows and dialog boxes (like alert dialog box, confirm dialog box and prompt dialog box)
 - Displaying clocks etc.
- 

Using Javascript in html pages

```
<html>
```

```
  <body>
```

```
    <h1>My First Web Page</h1>
```

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

```
      document.write("<p>" + Date() + "</p>")
```

```
    </script>
```

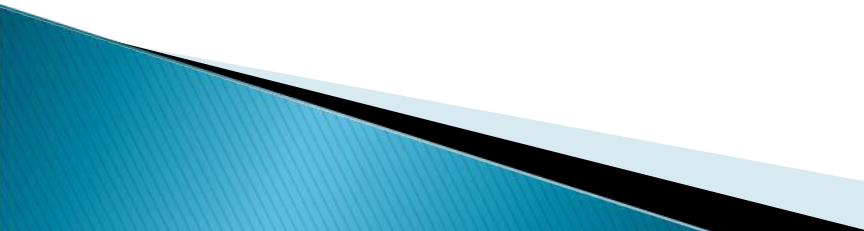
```
  </body>
```

```
</html>
```



Using an External JavaScript

```
<html>  
  <head>  
    <script type="text/javascript"  
      src="xxx.js"> </script>  
  </head>  
  <body>  
  </body>  
</html>
```




- ▶ JavaScript can also be placed in external files.
- ▶ External JavaScript files often contains code to be used on several different web pages.
- ▶ External JavaScript files have the file extension .js

An example using different scripts in page

```
<html>
<body>
<p>paragraph 1 </p>
<script type="text/javascript">
document.bgColor="blue";
alert("first script block");

</script>
<p>paragraph 2 </p>
<script type="text/javascript">
document.bgColor="red";
alert("second script block");
```



```
</script>  
<p>paragraph 3</p>  
<script type="text/javascript">  
document.bgColor="green";  
alert("third script block");
```

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


[A html page](#)



There are various inbuilt functions used in javascript

- ▶ Document.write:For printing some text on the page. All html tags can also be used in this case.
- ▶ Document.bgColor:which changes the color of the page.
- ▶ Alert:which display a message box.
 - ▶ `window.alert("sometext")`
- ▶ Prompt:which ask the user to input some value.
 - ▶ `window.confirm("sometext");`
- ▶ Confirm:it ask the user for confirming the values input.
 - ▶ `window.prompt("sometext","defaultvalue");`

Types of Data in Javascript

- ▶ Numeric data
 - ▶ Text data
 - ▶ Boolean data
- 

Variables in Javascript

- ▶ A variable can have a short name, like `x`, or a more descriptive name, like `carname`.

Rules for JavaScript variable names:

- ▶ Variable names are case sensitive (`y` and `Y` are two different variables)
- ▶ Variable names must begin with a letter or the underscore character
- ▶ Variable can also begin with `_` and `$`.
 - ▶ Eg: `var x = 3.14`
 - ▶ `Var y="Hello".`
 - ▶ `Var y="hello", x=3.14;`

Variables

- While naming your variables in JavaScript, keep the following rules in mind.
- You should not use any of the JavaScript reserved keywords as a variable name. These keywords are mentioned in the next section. For example, **break** or **boolean** variable names are not valid.
- JavaScript variable names should not start with a numeral (0–9). They must begin with a letter or an underscore character. For example, **123test** is an invalid variable name but **_123test** is a valid one.

- JavaScript variable names are case-sensitive. For example, **Name** and **name** are two different variables.

```
▶ var x;  
  var carname;  
<html>  
<body>  
<script type="text/javascript">  
var myfirst;  
myfirst="hello";  
alert(myfirst);  
myfirst=1234  
alert(myfirst);  
</script>  
</body>  
</html>
```

Arithmetic Operators

Operator	Description	Example	Result
+	Addition	x=2 y=2 x+y	4
-	Subtraction	x=5 y=2 x-y	3
*	Multiplication	x=5 y=4 x*y	20
/	Division	15/5 5/2	3 2,5
%	Modulus (division remainder)	5%2 10%8 10%2	1 2 0
++	Increment	x=5 x++	x=6
--	Decrement	x=5 x--	x=4

Assignment Operators

Operator	Example	Is The Same As
=	$x=y$	$x=y$
+=	$x+=y$	$x=x+y$
-=	$x-=y$	$x=x-y$
=	$x=y$	$x=x*y$
/=	$x/=y$	$x=x/y$
%=	$x\%=y$	$x=x\%y$

Comparison Operators

Operator	Description	Example
==	is equal to	5==8 returns false
===	is equal to (checks for both value and type)	x=5 y="5" x==y returns true x===y returns false
!=	is not equal	5!=8 returns true
>	is greater than	5>8 returns false
<	is less than	5<8 returns true
>=	is greater than or equal to	5>=8 returns false
<=	is less than or equal to	5<=8 returns true

Logical Operators

Operator	Description	Example
&&	and	x=6 y=3 (x < 10 && y > 1) returns true
	or	x=6 y=3 (x==5 y==5) returns false
!	not	x=6 y=3 !(x==y) returns true

Basic Examples

```
<script>
```

```
x=3
```

```
y=20*x+12
```

```
alert(y)
```

```
</script>
```

```
<script>
```

```
s1=12
```

```
s2=28
```

```
s=s1+s2
```

```
document.write("output  
is"+s)
```

```
</script>
```



External Javascript

```
<html>
```

```
<head>
```

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

```
</head>
```

```
<body>
```

```
<p>here is the javascript used</p>
```

```
</body>
```

```
</html>
```



External Javascript

```
var a=prompt("enter the temperature in degree  
farenheit");  
var b;  
b=5 / 9*(a-32)  
alert(b);  
document.write(b);
```

Changing inner HTML

- `document.getElementById("aa").innerHTML="Hello".`

- `<html>`
- `<head>`
- `<script>`
- `function changeLink()`
- `{`
- `document.getElementById('myAnchor').innerHTML="W3Schools";`
- `document.getElementById('myAnchor').href="http://www.w3schools.com";`
- `document.getElementById('myAnchor').target="_blank";`
- `}`
- `</script>`
- `</head>`

- `<body>`
- `<a id="myAnchor"`
`href="http://www.microsoft.com">Microsoft`
``
- `<input type="button" onclick="changeLink()"`
`value="Change link">`
- `</body>`
- `</html>`