

Java Script



What is JavaScript?

- Scripting Language:
 - Uses resources of another language
- Javascript is a scripting language
 - JS uses HTML and Java resources
- JS makes HTML pages live

JS programs are called as scripts



Created by Brendan Eich



What JS can do?

- JS makes HTML pages live
- Modifies text on the page
- Shows popup messages
- Event Driven :
 - Action will be taken based on the user interaction
 - Executes codes on mouse click, key press, load
- JS programs are called as scripts
- Client validation



java();

What's cool in Javascript?



- Full integration with HTML/CSS
- 2. Simple things can be done simply
- 3. Supported by all browsers and enabled by default



Where to put the JavaScript?

1. In <body> section

Ex:

Advantage:

The script generates the content of the page.



Where to put the JavaScript?

2. In <head> section

Ex:

```
<html>
  <head>
      <title> Home Page </title>
      <script type="text/javascript">
          document.write("Hello World! - Head Section");
     </script>
  </head>
  <body>
       Hello World! In a paragraph 
  </body>
</html>
```

Advantage:



The script will be loaded before page is loaded

JavaScript and DOM

- document object properties
 - bgcolor (used to set background color of the page)
 - Ex: document.bgColor="yellow";
 - fgcolor (used to set text color attribute of <body> tag)

```
Ex: document.fgColor="red";
```

- title (used to set the title of the document, which is usually done by the <title> tag)
- Ex : document.title="Hello World !";



JavaScript and DOM

- document object methods
- write(): used to print contents onto a web page.
 - Ex: document.write("Welcome");

- getElementById(): used to retrieve element with a specific id.
 - Ex: document.getElementByld("msg").innerHTML = "Hello World";

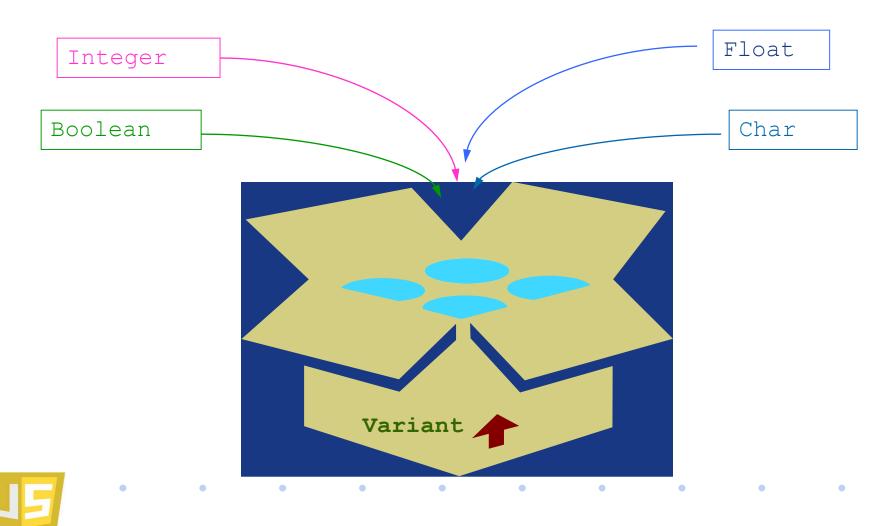


Java Script Variables

- Information is stored in variables.
- It's value can be change during the execution of script.
- It can be referenced by its name to see its value or to change its value.
- Data type supported Variant.
- Variant can store any type of data.

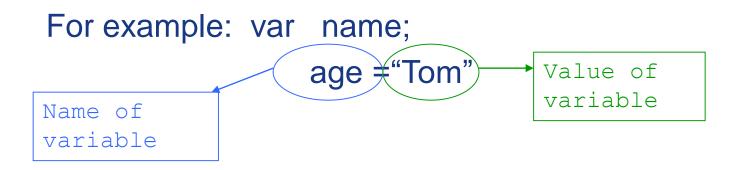


Variant



Rules to name a variable

- Must begin with a letter
- Cannot contain a period (.)
- Cannot exceed 255 characters
- One variable cannot be used to store multiples values in a scope.





JS Control Structures

Control Structures

- Sequential execution
 - Statements execute in the order they are written
- Transfer of control
 - Next statement to execute may not be the next one in sequence
- Three control structures
 - Sequence structure
 - Selection structure
 - · if
 - if...else
 - switch
 - Repetition structure
 - while
 - do...while
 - for
 - for...in



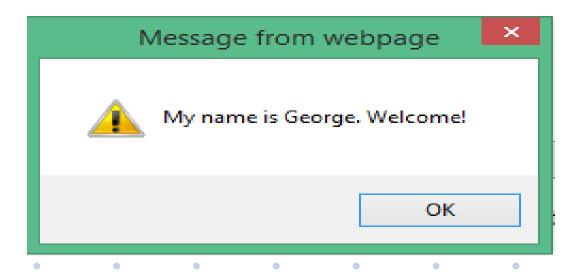
Pop ups in JS

- There are three popup boxes supported by JavaScript
 - window.alert()
 - window.confirm()
 - window.prompt()



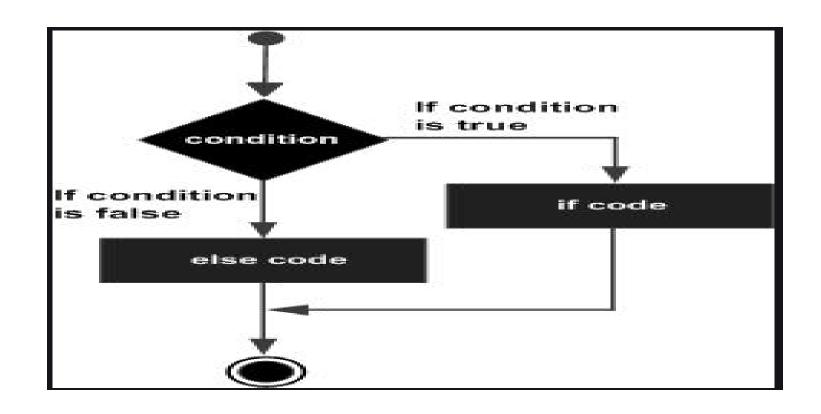
Alert in JS

```
<body>
<script type="text/javascript">
window.alert("My name is George. Welcome!")
</script>
</body>
```



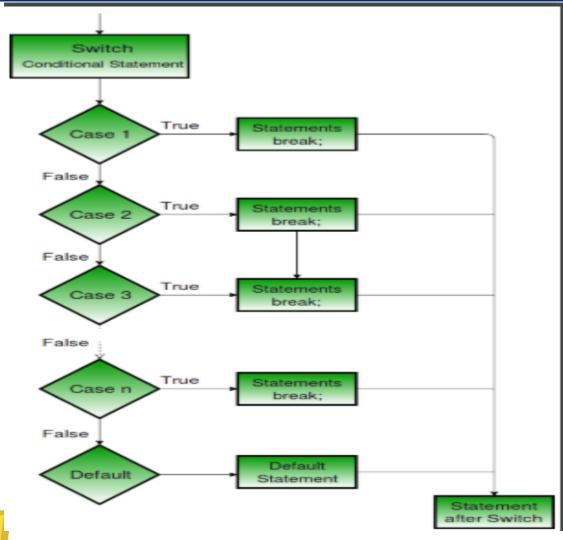


If..else





Switch ... case





Switch...case

```
yar grade='A';
document.write("Entering switch block<br />");
switch (grade)
  case 'A': document.write("Good job<br />");
            break;
  case 'B': document.write("Pretty good<br />");
            break;
  case 'C': document.write("Passed<br />");
           break;
  case 'D': document.write("Not so good<br />");
            break;
  case 'F': document.write("Failed<br />");
           break;
  default: document.write("Unknown grade <br />")
document.write("Exiting switch block");
```



Prompt JS



Prompt JS

```
<script type="text/javascript">
var y=window.prompt("please enter your name")
window.alert(y)
</script>
```

javascriptkit.com needs some information	×
Script Prompt: please enter your name	OK Cancel
undefined	



JavaScript - Functions

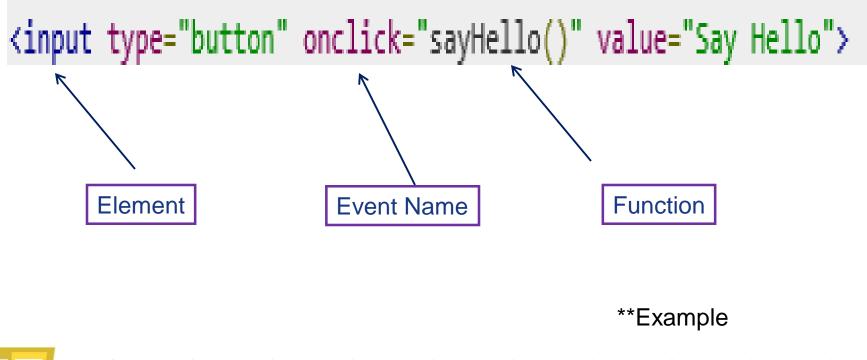
Usually are placed in <head> section

```
<html>
   <head>
     <script type="text/javascript">
        function sayHello()
           document.write ("Hello there!");
     </script>
   </head>
   <body>
     Click the following button to call the function
     <form>
         <input type="button" onclick="sayHello()" value="Say Hello">
     </form>
     Use different text in write method and then try...
   </body>
</html>
```



Event delegation in JS

- Event : An action that is to be delegated upon user's interaction
- Ex: onclick, onkeypress, onfocus, onblur etc.





 onfocus: An event gets triggered when an element (textbox / button/radiobutton) is active



 onblur: An event gets triggered when an element (textbox / button/radiobutton) is inactive



onclick: An event gets triggered when mouse is clicked

```
<button type="button"onclick="showMessage()">Click Me!</button>

<script type="text/javascript">
    function showMessage() {
       alert("Bye!");
}
</script>
```



onkeydown: An event gets triggered when key is being pressed(not released)

```
<input type="text" onkeydown="showMessage()">
<script type="text/javascript">
    function showMessage() {
      alert("You pressed a key!");
    }
</script>
```



onkeyup: An event gets triggered when key is released

```
<input type="text" onkeyup="showMessage()">
<script type="text/javascript">
    function showMessage() {
      alert("You released a key!");
    }
</script>
```



onkeypress: An event gets triggered when a key is pressed and released

```
<input type="text" onkeypress="showMessage()">
<script type="text/javascript">
    function showMessage() {
     alert("You pressed a key!");
}
</script>
```





