

JavaScript

Do You Know?

- HTML
- CSS

What is JavaScript ?

- JavaScript is the programming language of HTML and the Web. It makes web page dynamic.
- It is an interpreted programming language with object-oriented capabilities.
- Javascript is Event Based programming language.
- It is a Client side Scripting Language as well as Server side

JavaScript History

- 1995 by Brendan Eich (NetScape)
- Mocha
- LiveScript
- JavaScript
- ECMAScript (European Computer Manufacturer's Association)

Features of JavaScript

- All popular web browsers support JavaScript as they provide built-in execution environments.
- JavaScript follows the syntax and structure of the C programming language. Thus, it is a structured programming language.
- JavaScript is a weakly typed language, where certain types are implicitly cast (depending on the operation).
- JavaScript is an object-oriented programming language that uses prototypes rather than using classes for inheritance.
- It is a light-weighted and interpreted language.
- It is a case-sensitive language.
- JavaScript is supportable in several operating systems including, Windows, macOS, etc.
- It provides good control to the users over the web browsers.

Application of JavaScript

- Client-side validation,
- Dynamic drop-down menus,
- Displaying date and time,
- Displaying pop-up windows and dialog boxes (like an alert dialog box, confirm dialog box and prompt dialog box),
- Displaying clocks etc.
- JavaScript is a dynamically typed language

Tools

- Notepad
- Notepad ++
- Any Text Editor

JavaScript and Java Same?

NO

NO

No

NO

Advantage of JavaScript

- Client Side Execution
- Validation on Browser
- Easy Language

Disadvantage of JavaScript

- Less Secure
- No Hardware Access
- JavaScript Enable Browsers

Way of adding JavaScript

- Inline
 - Inside head Tag
 - Inside body Tag
- External file
 - Inside head Tag
 - Inside body Tag

`<script>`

`</script>`

Inline

- **Inside head Tag**

```
<html>
  <head>
    <title>Hello JS</title>
    <script type="text/javascript">
      document.write("Hello World");
    </script>
  </head>
  <body>
    <h1>I am Heading</h1>
    <p>I am first Paragraph.</p>
  </body>
</html>
```

Inline

- **Inside body Tag**

```
<html>
```

```
  <head><title>Hello JS</title></head>
```

```
  <body>
```

```
    <h1>I am Heading</h1>
```

```
    <p>I am first Paragraph.</p>
```

```
</html>
```

```
    <script type="text/javascript">  
    </body>    document.write("Hello world");  
    </script>
```

External

- **Inside head Tag**

```
<html>
```

```
  <head><title>Hello JS</title>
```

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

```
  </script>
```

```
</head>
```

```
<body>
```

```
  <h1>I am Heading</h1>
```

```
  <p>I am first Paragraph.</p>
```

```
</body>
```

```
</html>
```

Notepad



```
document.write("Hello Worlds");
```

- Save with .js extension
Ex: - geek.js
- Now link this file to HTML

External

- **Inside body Tag**

```
<html>  
  <head><title>Hello JS</title></head>  
  <body>  
    <h1>I am Heading</h1>  
    <p>I am first Paragraph.</p>  
  
    </body>  
  </html>  
  <script src="geek.js" type="text/javascript">  
  </script>
```

Notepad



```
document.write("Hello Geekyshows");
```

- Save with .js extension
Ex: - geek.js
- Now link this file to HTML

```
<script type="text/javascript">
    document.write("Hello World"); </script>
</script>
```

- <script> - Opening Script Tag.
- src – It's an attribute of script tag. It defines source/location of script file.
- geek.js – This is our script file. Where geek is file name and .js is the extension of javascript file.
- type – It's an attribute of script tag which tells the browser it is a javascript. This is optional now a days.
- text/javascript – Its type of document
- document.write("Hello World"); - This is a function to display data.
- </script> - Closing Script tag


```
<html>
```

```
  <head><title>Hello JS</title></head>
```

```
  <body>
```

```
    <h1>I am Heading</h1>
```

```
    <p>I am first Paragraph.</p>
```

```
      <script src = “geek1.js” type="text/javascript"></script>
```

```
      <script src = “geek2.js” type="text/javascript"></script>
```

```
      <script src = “geek3.js” type="text/javascript"></script>
```

```
  </body>
```

```
</html>
```

```
<html>
```

```
  <head><title>Hello JS</title></head>
```

```
  <body>
```

```
    <h1>I am Heading</h1>
```

```
    <p>I am first Paragraph.</p>
```

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

```
      document.write("Hello world");
```

```
    </script>
```

```
    <script src = "geek1.js" type="text/javascript"> </script>
```

```
  </body>
```

```
</html>
```

Display

- `document.write()`
- `window.alert()`
- `console.log()`
- `innerHTML`

document.write()

This function is used to write arbitrary HTML and content into page. If we use this function after an HTML document is fully loaded, will delete all existing HTML. It is used only for testing purpose.

Ex: - `document.write("Hello World");`
`document.write(variable);`
`document.write(4+2);`
`document.write("Hello World.
");`
`document.write("Hello World.
" + variable + "
");`

window.alert()

This function is used to display data in alert dialog box. alert really should be used only when you truly want to stop everything and let the user know something.

Ex: - window.alert("Hello World");

 window.alert(variable);

 window.alert(4+2);

 window.alert("Hello World" + variable);

console.log()

This function is used to display data in console. This is used for debugging purpose. We can identify our code's error.

Ex: - console.log("Hello World");

console.log(variable);

console.log(4+2);

console.log("Hello World" + variable);