

JavaScript code can be inserted into anywhere in an HTML document by using the `<script>` tag. You can have any number of scripts.

To include JavaScript in an HTML file.

1. Script in `<head>...</head>` section
2. Script in `<body>...</body>` section
3. Script in `<body>...</body>` and `<head>...</head>` sections.
4. Script in an external file and then include in `<head>...</head>` section.

JavaScript in `<head>...</head>` section.

```
<html>
<head> <script>
document.write("hello world");
</head> </script>
<body>

</body>
</html>
```

O/p: hello world.

[filename.html]

JavaScript in `<body>...</body>` section.

```
<html>
<head>
</head>
<body>
```



```
<script>
document.write("how r u");
</script>
</body>
</html>
o/p: how r u.
```

Java Script in <body> ... </body> and <head> ... </head> sections

```
<html>
<head>
<script>
document.write("head section");
</script>
</head>
<body>
<script>
document.write("body section");
</script>
</body>
</html>
```

Output: head section
body section.

Save the file extension (filename.
html).

Script in external file and then include
in `<head> ... </head>` section

external file

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

Save with the extension filename.js

main file

```
<html>  
<head>  
<script src="filename.js">  
  
</script>  
</head>  
<body>  
<script>  
</body>  
</html>
```

Save the file ~~as~~ with extension "filename.~~js~~
html"

5

```
<html>
<head>
<script>
function sayhello()
{
    document.write("hello world");
}
</script>
</head>
<body>
<input type="button" onclick="sayhello()"
      value="Sayhello">
</body>
</html>
```

Output

- ① Sayhello
- ② hello world

⑥

```
<html>
<head>
  <script>
    function sayhello()
    { alert ("hello world"); }
  </script>
</head>
<body>
  <input type="button" onclick="sayhello()"
    value="Sayhello">
```

</body>
</html>

Output

1) Sayhello
when you click on the button.
2) hello world.

⑥

```
<html>
<head>
  <script>
    function sayhello()
    {
      alert ("hello world");
      document.write ("document write");
    }
  </script>
</head>
<body>
  <input type="button" onclick="sayhello()"
    value="Sayhello">
```

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

⑦

Output: ① [sayhello.]

② Alert dialog box

when you click on the alert dialog box, you will be able to see the document write.

You can put your Javascript code in `<head>` and `<body>` section altogether as follows

```
<html>
<head>
<script>
function sayhello()
{
    alert("Hello in the head");
}
</head>
</script>
<body>
<input type="button" onclick="sayhello()"
value="sayhello">
</body>
</html>
```

⑧
No need.

Variables

Like many other programming languages, JavaScript has Variables. Variables can be thought of as named containers.

You can place data into these containers and then refer to the data simply by naming the container.

Before using a variable in a JavaScript program, you must declare it.

Variables are declared with the var keyword as follows:

Defn → It is a quantity whose value can be change during the execution of the program.

Variable Initialization → Storing a value in a variable is called variable initialization.

Note → You should not re-declare same variable twice.

JavaScript is untyped language. This means that a JavaScript variable can hold a value of any data type. Unlike any other languages, you don't have to tell JavaScript during variable declaration what type of value the variable will hold.

Example

```
<html>
<head>
</head>
<body>
<script>
var name;
name = "suire";
var hobbys = 'cooking';
document.write ("College name is " + name + "<br>");
document.write ("rollno is " + rollno + "<br>");
</script>
</body>
</html>
```

Output: College name is Suire
rollno is 12.
hobby is cooking.

There are mainly four ways to declare a Javascript variable.

<html>

<body>

<script>

// 4 ways to declare a Javascript variable.

Var x1 = 5;

Var y1 = 6;

Var z1 = x1 + y1;

document.write(z1); // use var

let x2 = 5;

let y2 = 6;

let z2 = x2 + y2;

document.write(z2); // use let

x3 = 5;

y3 = 6;

z3 = x3 + y3;

document.write(z3); // use no keyword

const price1 = 5;

const price2 = 6;

let total = price1 + price2;

document.write(total); // use constant

</script>

</body>

</html>

Variable Scope means the life of the variable. There are two types of scope local & global scope.

When you define a variable inside a function, that variable is local to a function.

← Access the global variable inside the function.
Can't access the local variable outside the function.

Example

<html>

<head>

</head>

<body>

<script>

var a1 = 20;

document.write(a1 + "
");

function methodC()

{

let a2 = 30;

document.write(a2 + "
");

}

methodC();

document.write(a1 + "
");

document.write(a2 + "
");

</script>

O/p

20

30

20

Last value
will not be
printed