

What is JavaScript?

JavaScript is a client-side as well as server side scripting language that can be inserted into HTML pages and is understood by web browsers.

JavaScript is also an Object based Programming language. Advantages:

- Less server interaction – You can validate user input before sending the page off to the server. This saves server traffic, which means less load on your server.
- Immediate feedback to the visitors – They don't have to wait for a page reload to see if they have forgotten to enter something.
- Increased interactivity – You can create interfaces that react when the user hovers over them with a mouse or activates them via the keyboard.
- Richer interfaces – You can use JavaScript to include such items as drag-and-drop components and sliders to give a Rich Interface to your site visitors.

Differences between Java and JavaScript?

JAVA	JavaScript
Java is an OOP programming language	JavaScript is an OOP scripting language.
It creates applications that run in a virtual machine or browser	The code is run on a browser only.
Java code needs to be compiled	JavaScript code is all in the form of text.

Data Types?

- Number
- String

- Boolean
- Object
- Undefined
- Null
- Symbol

isNaN?

isNaN returns true if the argument is not a number otherwise it is false.

NaN?

NaN is a short form of Not a Number. Since NaN always compares unequal to any number, including NaN, it is usually used to indicate an error condition for a function that should return a valid number. When a string or something else is being converted into a number and that cannot be done, then we get to see NaN.

Exports & Imports?

Imports and exports help us to write modular JavaScript code. Using Imports and exports we can split our code into multiple files.

```
//----- lib.js -----</span>

export const sqrt = Math.sqrt;</span>

export function square(x) {</span>

return x * x;</span>

}

export function diag(x, y) {

return sqrt(square(x) + square(y));

}
```

```
//----- main.js -----</span>

{ square, diag } from 'lib';

console.log(square(5)); // 25

console.log(diag(4, 3)); // 5
```

What is negative infinity?

Negative Infinity is a number in JavaScript which can be derived by dividing negative numbers by zero.

How to break JavaScript Code into several lines?

Breaking within a string statement can be done by the use of a **backslash**, '\', at the end of the first line: `document.write("This is \a program");`

undeclared & undefined?

Undeclared variables are those that do not exist in a program and are not declared. If the program tries to read the value of an undeclared variable, then a runtime error is encountered.

Undefined variables are those that are declared in the program but have not been given any value. If the program tries to read the value of an undefined variable, an undefined value is returned.

NULL?

The NULL value is used to represent no value or no object. It implies no object or null string, no valid boolean value, no number, no array object.

NULL & undefined?

Undefined means a variable has been declared but has not yet been assigned a value. On the other hand, null is an assignment value. It can

be assigned to a variable as a representation of no value. Also, undefined and null are two distinct types: undefined is a type itself (undefined) while null is an object.

difference between innerHTML & innerText?

innerHTML – It will process an HTML tag if found in a string

innerText – It will not process an HTML tag if found in a string

Adding new elements dynamically?

```
<html>

<head>

<title>t1</title>

<script type="text/javascript">

    function addNode() {

        var newP = document.createElement("p");

        var textNode = document.createTextNode(" This is a new text
node");

        newP.appendChild(textNode);

        document.getElementById("firstP").appendChild(newP);

    }

</script>

</head>

<body> <p id="firstP">firstP<p> </body>

</html>
```

argument object? how to get the type of arguments?

JavaScript variable arguments represent the arguments that are passed to a function. Using typeof operator, we can get the type of arguments passed to a function. For example:

```
function func(x){
    console.log(typeof x, arguments.length);
}
func(); //==> "undefined", 0
func(7); //==> "number", 1
func("1", "2", "3"); //==> "string", 3
```

Define variables in JavaScript?

- **Var** – The JavaScript variables statement is used to declare a variable and, optionally, we can initialize the value of that variable. Example: var a =10; Variable declarations are processed before the execution of the code.
- **Const** – The idea of const functions is not to allow them to modify the object on which they are called. When a function is declared as const, it can be called on any type of object.
- **Let** – It is a signal that the variable may be reassigned, such as a counter in a loop, or a value swap in an algorithm. It also signals that the variable will be used only in the block it's defined in.

The scopes of a variable?

- Global Variables – A global variable has global scope which means it is visible everywhere in your JavaScript code.
- Local Variables – A local variable will be visible only within a function where it is defined. Function parameters are always local to that function.

Global variables? Disadvantages?

Global variables are those that are available throughout the length of the code, that is, these have no scope. The var keyword is used to declare a local variable or object.

The problems that are faced by using global variables are the **clash** of variable names of local and global scope. Also, it is difficult to debug and test the code that relies on global variables.

difference between Local storage & Session storage?

Local Storage – The data is not sent back to the server for every HTTP request (HTML, images, JavaScript, CSS, etc) – reducing the amount of traffic between client and server. It will stay until it is manually cleared through settings or program.

Session Storage – It is similar to local storage; the only difference is while data stored in local storage has no expiration time, data stored in session storage gets cleared when the page session ends. Session Storage will leave when the browser is closed.

What is Callback?

A callback is a plain JavaScript function passed to some method as an argument or option. It is a function that is to be executed after another function has finished executing, hence the name 'call back'. In JavaScript, functions are objects. Because of this, functions can take functions as arguments, and can be returned by other functions.

What is Closure? Give an example.

Closures are created whenever a variable that is defined outside the current scope is accessed from within some inner scope. It gives you access to an outer function's scope from an inner function. In JavaScript, closures are created every time a function is created. To use a closure, simply define a function inside another function and expose it.

'this' keyword?

'This' keyword refers to the object from where it was called. This has different values depending on where it is used. In a method, this refers to the owner object and in a function, this refers to the global object.

TypeOf Operator?

The typeof operator is used to get the data type of its operand. The operand can be either a literal or a [data structure](#) such as a variable, a function, or an object. It is a unary operator that is placed before its single operand, which can be of any type. Its value is a string indicating the data type of the operand.

How to create a cookie using JavaScript?

The simplest way to create a cookie is to assign a string value to the document.cookie object, which looks like this

```
document.cookie = "key1 = value1; key2 = value2; expires =  
date";
```

How to read a cookie using JavaScript?

Reading a cookie is just as simple as writing one, because the value of the document.cookie object is the cookie. So you can use this string whenever you want to access the cookie.

- The document.cookie string will keep a list of name = value pairs separated by semicolons, where name is the name of a cookie and value is its string value.
- You can use strings' split() function to break the string into keys and values.

How to delete a cookie using JavaScript?

If you want to delete a cookie so that subsequent attempts to read the [cookie in JavaScript](#) return nothing, you just need to set the expiration date to a time in the past. You should define the cookie path to ensure that you delete the right cookie. Some browsers will not let you delete a cookie if you don't specify the path.

What is the difference between Attributes and Property?

Attributes- provide more details on an element like id, type, value etc.

Property- is the value assigned to the property like type="text", value='Name' etc.

How to access HTML elements via javascript?

getElementById('idname'):	Gets an element by its ID name
getElementsByClass('classname'):	Gets all the elements that have the given classname.
getElementsByTagName('tagname'):	Gets all the elements that have the given tag name.
querySelector():	This function takes css style selector and returns the first selected element.

Timers?

setTimeout(function, delay) function is used to start a timer that calls a particular function after the mentioned delay. The

setInterval(function, delay) function is used to repeatedly execute the given function in the mentioned delay and only halts when cancelled. The

clearInterval(id) function instructs the timer to stop.

Timers are operated within a single thread, and thus events might queue up, waiting to be executed.

Comments in Javascript?

// for Single line comments and

/* Multi Line Comment */

Difference between ViewState and SessionState?

'ViewState' is specific to a page in a session.

'SessionState' is specific to user specific data that can be accessed across all pages in the web application.

difference between "==" and "==="

"==" checks only for equality in value (type correction)

=== is 'strict equality operator' and checks both the value and the type of the two variables.

how to submit a form?

To submit a form using JavaScript use **document.form[0].submit();**

Does JavaScript support automatic type conversion?

Yes JavaScript does support automatic type conversion, it is the common way of type conversion used by JavaScript developers

How to change the style/class of an element?

document.getElementById("myText").style.fontSize = "20";

```
document.getElementById("myText").className = "anyclass";
```

looping structures in JavaScript?

- For (for ... in ...) (for (x of array)) (Number.foreach(callback()))
- While
- do-while loops

Variable typing?

Variable typing is used to assign a number to a variable and the same variable can be assigned to a string. `i = 10;` `i = "string";`

Convert the string of any base to integer?

The `parseInt()` function is used to convert numbers between different bases. `parseInt()` takes the string to be converted as its first parameter, and the second parameter is the base of the given string.

In order to convert 4F (of base 16) to integer, the code used will be

```
parseInt ("4F", 16);
```

Result of 3+2+"7"?

Since 3 and 2 are integers, they will be added numerically. And since 7 is a string, its concatenation will be done. So the result would be 57.

delete?

The `delete` keyword is used to delete the property as well as its value.

```
var student= {age:20, batch:"ABC"};
```

```
delete student.age;
```

types of Pop up boxes?

An **alert** box displays only one button which is the OK button.

a **Confirmation** box displays two buttons namely OK and cancel.

A prompt box is a box which allows the user to enter input by providing a text box. The prompt() method displays a dialog box that prompts the visitor for input. A prompt box is often used if you want the user to input a value before entering a page. When a prompt box pops up, the user will have to click either "OK" or "Cancel" to proceed after entering an input value.

How to empty an Array in JavaScript?

```
arrayList = []      arrayList.length = 0;
```

```
arrayList.splice(0, arrayList.length);
```

```
while(arrayList.length)
{
    arrayList.pop();
}
```

The output of the following code?

```
var Output = (function(x){
    Delete X;
    return X;
}) (0);
```

```
console.log(output);
```

The output would be 0. The delete operator is used to delete properties from an object. Here x is not an object but a local variable. delete operators don't affect local variables.

```
var X = { Foo : 1};  
var Output = (function() {  
    delete X.foo;  
    return X.foo;  
}) ();  
console.log(output);
```

The output would be undefined. The delete operator is used to delete the property of an object. Here, x is an object which has the property foo, and as it is a self-invoking function, we will delete the foo property from object x. After doing so, when we try to reference a deleted property foo, the result is undefined.

```
var Foo = Function Bar() { return 7; };  
  
typeof Bar();
```

The output would be Reference Error. A function definition can have only one reference variable as its function name.

What is the use of Void(0)?

Void(0) is used to prevent the page from refreshing and parameter "zero" is passed while calling.

Void(0) is used to call another method without refreshing the page.

How can a page be forced to load another page in JavaScript?

The following code has to be inserted to achieve the desired effect:

```
<script language="JavaScript" type="text/javascript" >  
  
<!-- location.href="http://newhost/newpath/newfile.html";  
//--></script>
```

What are **escape characters**?

Escape characters (**Backslash**) is used when working with special characters like single quotes, double quotes, apostrophes and ampersands. Place backslash before the characters to make it display.

```
document.write "I m a "good" boy"
```

```
document.write "I m a \"good\" boy"
```

pop()

The pop() method takes the last element off of the given array and returns it.

push()

The push method is used to add or append one or more elements to the end of an Array.

shift()

shift() takes the last element off of the given array and returns it.

unshift()

Unshift is used to prepend one or more elements to the beginning of the array.

Append a value to an array?

`arr[arr.length] = value;` or `array.push(value)`

Disadvantage of using innerHTML?

If you use innerHTML in JavaScript the disadvantage is

- Content is replaced everywhere
- We cannot use like "appending to innerHTML"
- Even if you use +=like "innerHTML = innerHTML + 'html'" still the old content is replaced by html
- The entire innerHTML content is re-parsed and build into elements, therefore it's much slower
- The innerHTML does not provide validation and therefore we can potentially insert valid and broken HTML in the document and break it

break, continue?

Break statement exits from the current loop.

Continue statement continues with the next statement of the loop.

How do JavaScript primitive/object types passed in functions?

One of the differences between the two is that Primitive Data Types are passed By Value and Objects are passed By Reference.

- By Value means creating a COPY of the original. Picture it like twins: they are born exactly the same, but the first twin doesn't lose a leg when the second twin loses his in the war.

- By Reference means creating an ALIAS to the original. When your Mom calls you “Pumpkin Pie” although your name is Margaret, this doesn’t suddenly give birth to a clone of yourself: you are still one, but you can be called by these two very different names.

How generic objects can be created?

Generic objects can be created as:

```
var I = new object();
```

```
var emp = {name:"Tim", age:42}
```

Assign object properties?

```
obj["class"] = 12;      or      obj.class = 12;
```

TypeOf?

'Typeof' is an operator which is used to return a string description of the type of a variable.

Try ... Catch ... Finally ?

```
Try{  
  
}  
  
Catch(exp) {  
  
}  
  
Finally{  
  
}
```

blur()?

Blur function is used to remove the focus from the specified object.

Operating system in the client machine?

The '**Navigator.appversion**' is used to find the name of the operating system in the client machine.

Strict mode?

Strict mode is a way to introduce better error-checking into your code.

- When you use strict mode, you cannot use implicitly declared variables, or assign a value to a read-only property, or add a property to an object that is not extensible.
- You can enable strict mode by adding "use strict" at the beginning of a file, a program, or a function.

Get the status of a CheckBox?

```
document.getElementById('checkbox1').checked
```

Explain window.onload and onDocumentReady?

The onload function is not run until all the information on the page is loaded. This leads to a substantial delay before any code is executed.

onDocumentReady loads the code just after the DOM is loaded. This allows early manipulation of the code.

Anonymous function?

A function that is declared without any named identifier is known as an anonymous function. In general, an anonymous function is inaccessible after its declaration. Anonymous function declaration -

```
var anon = function() { alert('I am anonymous'); };
```



```
anon();
```

An anonymous function can be assigned to a variable. It can also be passed as an argument to another function.

In case you are facing any challenges with these JavaScript Interview Questions, please comment on your problems in the section below.

Difference between .call() and .apply()?

The function .call() and .apply() are very similar in their usage except a little difference. .call() is used when the number of the function's arguments are known to the programmer, as they have to be mentioned as arguments in the call statement. On the other hand, .apply() is used when the number is not known. The function .apply() expects the argument to be an array.

The basic difference between .call() and .apply() is in the way arguments are passed to the function.

Define event bubbling?

Event bubbling is a way of event propagation in the HTML DOM API, when an event occurs in an element inside another element, and both elements have registered a handle for that event. With bubbling, the event is first captured and handled by the innermost element and then propagated to outer elements. The execution starts from that event and goes to its parent element. Then the execution passes to its parent element and so on till the body element.

JavaScript allows DOM elements to be nested inside each other. In such a case, if the handler of the child is clicked, the handler of the parent will also work as if it were clicked too.

boolean operators?

The 'And' Operator (&&), 'Or' Operator (||) and the 'Not' Operator (!) can be used in JavaScript.

How can a particular frame be targeted, from a hyperlink, in JavaScript?

This can be done by including the name of the required frame in the hyperlink using the 'target' attribute. `>New Page`

Difference between web-garden and a web-farm?

Both web-garden and web-farm are web hosting systems. The only difference is that web-garden is a setup that includes many processors in a single server while web-farm is a larger setup that uses more than one server.

Reading and Writing a file in JavaScript?

This can be done by Using JavaScript extensions (runs from JavaScript Editor), example for opening of a file. `fh = fopen(getScriptPath(), 0);`