1. What is JavaScript?

JavaScript is the programming language of HTML and the Web.  It is the program for the behavior of web pages.

1. How do you write JavaScript and where in HTML files you can have JavaScript?

The code is enclosed in between the <Script> and </script> tag. Generally, it is a good practice to write the javascript just before the closing tag of the body.

1. What are different data types in JavaScript?

In JavaScript, there are three primary data types, two composite data types, and two special data types.

## [Primary Data Types](javascript:void(0))

The primary (primitive) data types are:

* String
* Number
* Boolean

## [Composite Data Types](javascript:void(0))

The composite (reference) data types are:

* Object
* Array

## [Special Data Types](javascript:void(0))

The special data types are:

* Null
* Undefined

1. What are undeclared and undefined variables?

A variable is undeclared when it does not use the var keyword. It gets created on the global object (that is, the window), thus it operates in a different space as the declared variables.

Something is undefined when it hasn’t been defined yet. If you call a variable or function without having actually created it yet the parser will give you annot defined error.

What are global variables? How are these variable declared and what are the problems associated with using them?

A variable that does not use the var keyword. It gets created on the global object (that is, the window), thus it operates in a different space as the declared variables.

They clutter up the global namespace and are slower to look up than local variables.

First of all, having many global variables is always a bad thing because it's easy to forget you declared a variable somewhere and accidentally re-declare it somewhere else. If your first variable was local then you don't have a problem. If it was global, then it just got overwritten. This gets even worse when you get into implied global (e.g. when you say someVar = someValue without declaring someVar with the var keyword).

Secondly, global variables take longer for Javascript to "find" than local variables. The difference in speed isn't huge, but it does exist.

1. What do mean by NULL in JavaScript?

Null is where the thing is known to exist, but it's not known what the value is.

1. Explain window.onload and onDocumentReady?

[window.onload](https://developer.mozilla.org/en-US/docs/Web/API/GlobalEventHandlers.onload)

* By default, it is fired when the entire page loads, including its content (images, css, scripts, etc.)
* In some browsers it now takes over the role of document.onload and fires when the DOM is ready as well.

Document.ready (a jQuery event) will fire when all the elements are in place, and they can be referenced in the JavaScript code, but the content is not necessarily loaded. Document.readyexecutes when the HTML document is loaded.

1. What are global and local variables?

The variables declared within a function are known as local variables. Their scope is within the function. The variables declared outside the function are known as global variables. The can accessed globally.

1. **What are the ways to create the objects**

Define and create a single object, using an object literal.

Define and create a single object, with the keyword new.

Define an object constructor, and then create objects of the constructed type.

1. **How many ways we can create the arrays.**

Using an array literal is the easiest way to create a JavaScript Array.

Using the JavaScript Keyword new

1. **What are arguments in javascript functions.**

Function **arguments** are the real **values** passed to (and received by) the function.

1. **What is prototypal inheritance in javascript.**

In JavaScript, a **prototype** is a property of functions and of objects that are created by constructor functions. The prototype of a function is an object. Its main use is when a function is used as a constructor. The **prototype** object can be used to derive one object from another. For example, you can use the [Object.Create](https://msdn.microsoft.com/en-us/library/ff925952(v=vs.94).aspx) function to derive a new object using the prototype of some other object.

1. **What are enumerators in JavaScript.**

The enumerator object is useful if you want to iterate through a large collection. Iterating through a large collection with the enumerator object is faster than any other way in JavaScript. It allows using a walk- through mechanism to iterate through the items. There is a pointer, which designates he currently selected element and can be used to navigate within the enumerator object. In a newly created enumerator object., the currently selected item is the first item of the collection.

**Callbacks and closures.**

A callback function, also known as a higher-order function, is a function that is passed to another function (let’s call this other function “otherFunction”) as a parameter, and the callback function is called (or executed) inside the otherFunction. A callback function is essentially a pattern (an established solution to a common problem), and therefore, the use of a callback function is also known as a callback pattern.

A closure is an inner function that has access to the outer (enclosing) function’s variables—scope chain. The closure has three scope chains: it has access to its own scope (variables defined between its curly brackets), it has access to the outer function’s variables, and it has access to the global variables.

The inner function has access not only to the outer function’s variables, but also to the outer function’s parameters. Note that the inner function cannot call the outer function’s arguments object, however, even though it can call the outer function’s parameters directly. You create a closure by adding a function inside another function.

7. Module based programming in JavaScript.

Modules divide programs into clusters of code that, by some criterion, belong together. This chapter explores some of the benefits that such division provides and shows techniques for building modules in JavaScript. The benefits of organizing a program into several files or modules are similar. Structure helps people who aren’t yet familiar with the code find what they are looking for and makes it easier for the programmer to keep things that are related close together.

8.What is strict mode in JavaScript

The "use strict" directive is new in JavaScript 1.8.5 (ECMAScript version 5). It is not a statement, but a literal expression, ignored by earlier versions of JavaScript. The purpose of "use strict" is to indicate that the code should be executed in "strict mode”. With strict mode, you cannot, for example, use undeclared variable.

9.what is the difference between == and ===

== is just comparing the two values, and if they are of different types, type conversion is done

=== compares the values and well as their types - so no type conversion will be done here.

10.Ternary operator.

The **conditional (ternary) operator** is the only JavaScript operator that takes three operands. This operator is frequently used as a shortcut for the [if](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/if...else) statement.

Syntax

Condition? expr1 : expr2

### **Parameters**

**condition**

An expression that evaluates to true or false.

**expr1, expr2**

Expressions with values of any type.

11.Difference between public, private and static variables and their use cases.

A variable declared outside a function, becomes **GLOBAL**.

A global variable has **global scope**: All scripts and functions on a web page can access it.

Private members are made by the constructor. Ordinary vars and parameters of the constructor becomes the private members.

A function is an object. That provides us with a nifty way to create static variables or, in other words, the variables which persist along multiple calls. There are languages which allow to put a static keyword before a variable, and then such variable is not cleared in next calls.