**Java Script Question & Answer**

1. What is JavaScript?

Ans: JavaScript is an implementation of the ECMAScript language standard and is typically used to enable programmatic access to computational objects within a host environment. It can be characterized as a prototype-based object-oriented scripting language that is dynamic, weakly typed and has first-class functions.   
JavaScript is primarily used in the form of client-side JavaScript, implemented as part of a web browser in order to provide enhanced user interfaces and dynamic websites. However, its use in applications outside web pages is also significant.  
JavaScript uses syntax influenced by that of C syntax, also JavaScript copies many Java programming language names and naming conventions; The key design principles within JavaScript are taken from the Self and Scheme programming languages.

1. Why Choose JavaScript?

Ans: The main reason for choosing JavaScript is its widespread use and availability. Of the other scripting languages like VBScript, which can be used for the same purposes as JavaScript, is only supported by Internet Explorer, and Perl is not used at all in web browsers. JavaScript is also very versatile and not just limited to use within a web page. For example, it can be used to automate computer administration tasks

1. What can you do with JavaScript that you can’t do with HTML?

Ans: The important feature that JavaScript can add to a web site design is the capability to introduce dynamic interactivity into pages. JavaScript reacts to users actions in most cases like as the user moves, clicks or drags the mouse over the page.. For instance, if the user moves their mouse over some text or a graphic, JavaScript can perform a rollover and make that graphic or text change to something else.  
JavaScript can provide functionality, such as password protection, browser detection, or display information, such as the correct time and date on a webpage. JavaScript can be used to give the website designer more control over a user's browser, and how that browser sees the web pages. There are literally millions of things one can do with JavaScript.

1. Write down some features of JavaScript.

Ans: Features of JavaScript are given below:

JavaScript is the engine that makes things move on a page, by working with dynamic design elements.

JavaScript allows designers to release those aspects of design creatively that cannot be expressed in static HTML.

It is a ranged language and ranges from extremely simple built in functions and statements that can make the page jump to fairly sophisticated coding structures.

It lives right among the HTML tags and most JavaScript programs are relatively small.

It captures user events that cause actions to happen on a web page.

1. Describe about an Interpreted Language?

Ans: an interpreted language is a programming language in which programs are 'indirectly' executed ("interpreted") by an interpreter program. This can be contrasted with a compiled language which is converted into machine code and then 'directly' executed by the host. JavaScript is an interpreted language. Most like browser Netscape Navigator or Internet Explorer acts as a translator between JavaScript and the native language that a computer uses. The process involves a browser interpreting the JavaScript code and then creating an equivalent machine language and having a computer executed the interpreted code. Generally interpreted languages are easier to learn and use but they take more time to run in a computer.

1. What is the difference between Prompt( ) and Alert( )?

Ans: Prompt(): It is an useful built in function that can take two arguments. By using this function user can pass desired values to run the complete program.

Alert(): It is another useful built in function in JavaScript. This function sends a message to the page. The contents of the message can vary depending on what the user does or the messages can be static. When the alert box appears with the message the user clicks to close it.

1. Write about case sensitivity of JavaScript.

Ans: JavaScript is a case sensitive interpreted language. It is necessary to pay attention to the cases of everything that typed in JavaScript. Just a little change in case will invalidate the JavaScript code. So, debugging JavaScript is often a matter of not seeing what is expected on the screen rather than seeing any clue that has been coded the script incorrectly. Ignoring case sensitivity is likely to be one bug in the code that user should suspect immediately.

1. Differences between JS and HTML.

Ans: Differences between JavaScript and HTML are as follows:

JavaScript is a programming language where as HTML is a markup language.

HTML describes what is to be presented on a page and JavaScript dynamically changes what is on an HTML page.

Both use code.HTML code is in a series of angle brackets that describes how to treat the material between the opening and closing brackets. JavaScript is a set of statements and functions that does something in an HTML page.

JavaScript is case sensitive. The HTML around the script need not to be case sensitive.

JavaScript can refer to and alter objects described by HTML.

1. What is difference between do-while and while?

Ans: The do loop keeps repeating the code inside the curly braces as long as the while condition is met. The main thing to note regarding do loops is that the code inside of the loop will be run before evaluating the while condition. That is not the case with the while loop. The while loop first evaluates the code within the while condition and then runs the code inside the curly braces.

1. What is difference between do Loop and For Loop?

Ans: Do loop continues by checking a condition. This loop ended when the particular condition is met otherwise it continues it task. So do loop has no fixed no of loop.

For loop is a fixed loop as it continues from a fixed value and ended after reaching a fixed value.

1. What is Array?

Ans: An array is a collection of homogenous data elements which are stored in consecutive memory locations. Always address location of array starts from 0. In JavaScript arrays are treated as objects. Each property in an array is called an Element and each element can be assigned a value. An array can be declared in JavaScript in the following ways…

Var myArray=new Array( );

Var myArray=new Array(“Value 1”, “Value 2”, “Value 3”, “Value 4”, “Value 5”);

Var myArray=new Array(dimension argument);

1. What is difference between Event and Event handler?

Ans: Events are actions that take place in a document, usually as the result of user activity. Common examples of user actions that trigger events include clicking a button or typing a character into a text field.

All JavaScript actions are executed when a particular event occurs when an event occurs, the event object can be used to obtain and manage any information associated with the state of that particular event. JavaScript console actions, document print, save, open, or close actions, page open and close events, form field mouse, keystroke, calculation, format, and validation events, and menu item selection events.

1. Why JavaScript called loosely/weakly data type?

Ans: For developing a program it is necessary to use different data. But data are different types and it is necessary to identify them distinctly to perform different operation. Weakly typed programming language allows a value of one type to be treated as another, for example treating a string as a number and it is not necessary to declare the variable type when the variable name is declared. This can occasionally be useful, but it can also allow some kinds of program faults to go undetected at compile time and even at runtime. JavaScript variable didn’t require any declaration for its type. So javaScript called loosely/weakly data type.

1. What is difference between break and continue?

Ans: Break and Continue statements usually used in the loops or conditional statements. Break statements allow the program to terminate the condition or loop and the continue statement jump to test the termination condition of the loop effectively skipping the current iteration of statements within the loop.

1. What is difference between Switch case and if-else?

Ans: When testing for a condition to execute one or more selective statements, the if-else statement is the most common to use. The condition statement is executed depending on the condition resolves to a Boolean value true or false.

When it is necessary to makes multiple comparisons against a condition switch case statement is the effective way. Using switch and case statements, the switch statement includes what amounts to a true condition to be matched with the different cases. If the case matches the expression in the switch statement, the statements in the case are executed. Then the parser moves down to the next case statements. To prevent it from occur each case is broken with the break statement.

1. What is difference between method and function?

Ans: Function is a definition of a set of deferred actions. Functions are invoked by event handlers or by statements elsewhere in the script. Functions carry out actions and return values. A function is a named set of JavaScript statements interpreted all at once by calling the function name. JavaScript has several built-in functions, but programmer can extend the list by writing his own.

When a function is the property of an object it is called method. Method is an action that a particular object can perform. A method either does something to the object or with the object that affects other parts of a script or document. They are commands of a sort, but whose behaviors are tied to a particular object. Methods are implemented just like functions, but they're always associated with a particular object.

1. What do you mean by nested loop?

Ans: When on loop reside into another loop, it’s called a nested loop. The first loop(outer) keeps track of the terms and the second loop (inner) keeps track of the operation.

1. What can you do with JavaScript that you can’t do with HTML?

Ans:The important feature that JavaScript can add to a web site design is the capability to introduce dynamic interactivity into pages. The concept of dynamic interactivity implies changes in response to an action. With dynamic interactivity on a page features of the page change as the user moves, clicks or drags the mouse over the page.

1. Describe about an Interpreted Language?

Ans: There are two type of language-1.Compiled and 2.Interpreted. JavaScript is an interpreted language. Most like browser Netscape Navigator or Internet Explorer acts as a translator between JavaScript and the native language that a computer uses. The process involves a browser interpreting the JavaScript code and then creating an equivalent machine language and having a computer executed the interpreted code. Java and C are compiled language. Generally interpreted languages are easier to learn and use but they take more time to run in a computer.

1. What do you mean by DOM?

Ans: The Document Object Model (DOM) is an **application programming interface** (API) for valid HTML and well-formed XML documents. It defines the **logical structure of documents** and the way a **document is accessed and manipulated.It** is based on an object structure that closely resembles the structure of the documents it models.

The document object is used to represent the current web page that your script is running on. Since in HTML there is no DOCUMENT element, the document object in JavaScript contains a few different attributes of the BODY element and it also includes most of the elements contained within the body of the page.

1. What do you mean by Cookies?

Ans: Cookies are usually **small text files** that are stored on your computer's browser directory or program data subfolders. Cookies are created when you use your browser to visit a website that uses cookies to keep track of your movements within the site, help you resume where you left off, remember your registered login, theme selection, preferences, and other customization functions.   
A cookie can be used for authentication, storing site preferences, shopping cart contents, the identifier for a server-based session, or anything else that can be accomplished through storing text data. A cookie consists of one or more name-value pairs containing bits of information, which may be encrypted for information privacy and data security purposes. The cookie is sent as an HTTP header by a web server to a web browser and then sent back unchanged by the browser each time it accesses that server.

1. What is method?

Ans: **When a function is the property of an object it is called method. Method is an action that a particular object can perform**. A method either does something to the object or with the object that affects other parts of a script or document. They are commands of a sort, but whose behaviors are tied to a particular object. Methods are implemented just like functions, but they're always associated with a particular object. If a property is like a descriptive adjective for an object, then a method is a verb. To set a method into motion (usually called invoking a method), a JavaScript statement must include a reference to it- via its object with a pair of parentheses after the method name- as in the following example

document.orderForm.submit()

1. Write down the structure of a ternary operator with an example?

Ans: Ternary operators are permissible when the entire ternary operation fits on one line. Longer ternaries should be split into if else statements. Ternary operators should not ever be nested. Optionally parentheses can be used around the condition check of the ternary for clarity.

//Good, simple and readable

$variable = isset($options['variable']) ? $options['variable'] : true;

//Nested ternaries are bad

$variable = isset($options['variable']) ? isset($options['othervar']) ? true : false : false;

1. Write down of toString(),sort() and join()?

Ans: toString(): This method returns a string representing the specified object. The toString method parses its first argument, and attempts to return a string representation in the specified radix (base). Returns a string representing the specified Number object.  
Syntax: number.toString( [radix] ); where an integer between 2 and 16 specifying the base to use for representing numeric values.

sort(): This method is used to change the order of an array elements when it is necessary to sorts the array string elements alphabetically. After entering all the string elements in the array, just entering the array name and sort( )method in the code will ordered the elements alphabetically.

join():The join() method joins all elements of an array into a string, and returns the string.The elements will be separated by a specified separator. The default separator is comma (,).

1. What do you mean by “With” statement?

Ans:     "with" statement is used when numerous function of an object is used or a function of an object is to be used numerous times .Using with(), it is possible to reduce object references and make the code more readable.

Syntax:  
with(object)  
{  
     // Calling the functions or methods of the object  
}

1. Explain Naming Rules and Conventions.

Ans: Naming a variable and function following rules and conventions should be followed:

Names should be formed from the 26 upper and lower case letters (A .. Z, a .. z), the 10 digits (0 .. 9), and \_ (underbar). Use of international characters should be avoided because they may not read well or be understood everywhere.

$ (dollar sign) or \ (backslash) in names should not be used

\_ (underbar) as the first character of a name should not be used. It is sometimes used to indicate privacy, but it does not actually provide privacy. Conventions that demonstrate a lack of competence should be avoided..

Most variables and functions should start with a lower case letter.

Constructor functions which must be used with the new prefix should start with a capital letter. JavaScript issues neither a compile-time warning nor a run-time warning if a required new is omitted. Bad things can happen if new is not used, so the capitalization convention is the only defense we have.

Global variables should be in all caps. (JavaScript does not have macros or constants, so there isn't much point in using all caps to signify features that JavaScript doesn't have.)

1. What is difference between substring() and charAt()?

Ans: substring(begin,end): Enters the beginning and ending numeric positions of a part of the string object.

charAt(n): **Enters the value of the position of a character in a string**

1. What is the difference between setInterval() and settimeout()?

Ans: setInterval() method repeats a script action every so many milliseconds initiating the script after the specified number of millliseconds.

setTimeout( ) method works the same as setInterval( ), except that it does not repeat the script.

Both clearInterval( )and clearTimeout( ) cancels the actions initiated by the setting methods.

1. What do you mean by ceil( ) and floor( )?

Ans: floor( ):The floor() method rounds a number DOWNWARDS to the nearest integer, and returns the result.  
Syntax: Math.floor(x); x is aRequired number

The ceil() method rounds a number UPWARDS to the nearest integer, and returns the result.  
Syntax: Math.ceil(x); x is aRequired number

1. What is the function of typeOf(),parseInt() and eval()?

Ans: typeof returns one of the following strings:

number

string

boolean

object

function

undefined

typeof(typeof(x)) is always string, no matter what x actually is.

parseInt(): The parseInt(radix) function parses a string and returns an integer.The radix parameter is used to specify which numeral system to be used, for example, a radix of 16 (hexadecimal) indicates that the number in the string should be parsed from a hexadecimal number to a decimal number.

If the radix parameter is omitted, JavaScript assumes the following:

If the string begins with "0x", the radix is 16 (hexadecimal)

If the string begins with "0", the radix is 8 (octal). This feature is deprecated

If the string begins with any other value, the radix is 10 (decimal)

Eval( ): The eval() function **evaluates and/or executes a string of JavaScript** code. First, eval() determines if the argument is a valid string, then eval() parses the string looking for JavaScript code. If it finds any JavaScript code, it will be executed.  
Syntax: eval(string); string is Optional. The string to be evaluated/executed

1. What do mean by history object? Write down it’s method?

Ans: The JavaScript History Object is property of the window object. The most common use of the history object is to move back and forth in a site by referencing the previously visited sites. The JavaScript runtime engine automatically creates this object.

Properties

current - The current document URL.

length - The number of entries in the history object.

next - The URL of the next document in the history object.

previous - The URL of the last document in the history object.

Methods

back() - Go to the previous URL entry in the history list. This does the same thing as the browser back button. The following HTML code creates a back button:   
<FORM><INPUT TYPE="button" VALUE="Go Back" onClick="history.back()"></FORM>  
forward()- Go to the next URL entry in the history list. This does the same thing as the browser forward button. This is only effective when there is a next document in the history list. The back function or browser back button must have previously been used for this function to work. The following HTML code creates a forward button:   
<FORM><INPUT TYPE="button" VALUE="Go Forward" onClick="history.forward()">  
</FORM>  
go(relPos | string) - This function will accept an integer or a string. If an integer is used, the browser will go forward or back (if the value is negative) the number of specified pages in the history object (if the requested entry exists in the history object). The following example will move the browser back one page.   
<FORM> <INPUT TYPE="button" VALUE="Go Back" onClick="history.go(-1)"> </FORM>

1. What is the difference between while and do while?

Ans: The do loop keeps repeating the code inside the curly braces as long as the while condition is met. The main thing to note regarding do loops is that the code inside of the loop will be run before evaluating the while condition. That is not the case with the while loop. The while loop first evaluates the code within the while condition and then runs the code inside the curly braces.

**Reserved Words:** Reserved words are those in JavaScript that have been **reserved for statements and built in functions.**

**Regular Expression**: A regular expression is an object that **describes a pattern of characters**. Regular expressions are used to perform **pattern-matching and "search-and-replace**" functions on text.

Descriptive Question and Answer

1. What do you mean by Webpage?

Ans: A webpage or web page is a document or resource of information that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a computer screen. or mobile device. This information is usually in HTML or XHTML format, and may provide navigation to other web pages via hypertext links. Webpage may be retrieved from a local computer or from a remote web server. Webpage are requested and served from web servers using Hypertext Transfer Protocol (HTTP).

1. What do you mean by weakly typed and strongly typed language?

Ans: For developing a program it is necessary to use different data. But data are different types and it is necessary to identify them distinctly to perform different operation. Programming languages are classified into two types depending on the uses of data. Weakly typed programming language allows a value of one type to be treated as another, for example treating a string as a number and it is not necessary to declare the variable type when the variable name is declared. This can occasionally be useful, but it can also allow some kinds of program faults to go undetected at compile time and even at runtime.

Strongly typed programming language doesn’t allow a value of one type to be treated as another and it is necessary to declare the variable type as well as the variable name. This is useful to detect some kinds of program faults at compile time and even at runtime. An attempt to perform an operation on the wrong type of value raises an error. Strongly typed languages are often termed type-safe or safe.

1. What do you mean by escape sequence? Write down some escape sequence.

Ans: Escape sequences includes by prefacing a code with a backslash(\) for **additional control over string literals**. For example the literal \’ prints an apostrophe without affecting the literal itself. Other escape codes include the following-

\n new line

\’ single quote or apostrophe

\” double quote

\\Backslash

Escape sequences **works well with the alert( ) function**, it does not work the same with write( ) function. The character substitutions for apostrophes and quotes return the same result but the \n sequence does not rather we’ve to use the <br> to achieve a new line.

1. What do you mean by object? Write some built in object.

Ans: **Objects are collection of properties arranged in a hierarchy**. JavaScript supports working with objects. The highest level of objects in the context of JavaScript and an HTML page is the window. Everything in an HTML page is the property of the window object.There are several useful objects already available in JavaScript, and user can create his own. Objects are used for working with specific data and have different functions which help the user in programming tasks.

Objects are unique in some way, even if two or more objects look identical to the user in the browser. Three very important facets of objects define what it is, what it looks like, how it behaves and how scripts control it. Those three facets are properties, methods and event handlers.

Built in Objects: The built-in objects in JavaScript **are Date, Math, String, Array, and Object**. Each is used in a unique and not-quite-consistent way.

1. What do you mean by Array? Declare an Array.

Ans: An array is a collection of homogenous data elements which are stored in consecutive memory locations. Always address location of array starts from 0. In JavaScript arrays are treated as objects. Each property in an array is called an Element and each element can be assigned a value. An array can be declared in JavaScript in the following ways…

Var myArray=new Array( );

Var myArray=new Array(“Value 1”, “Value 2”, “Value 3”, “Value 4”, “Value 5”);

Var myArray=new Array(dimension argument);

1. What is the difference between”= =” and “= = =”?

Ans: ”= =” and “= = =” are comparison operator. ”= =” is compare values of two variable but “= = =” compare not only values of two variables but also the type of the variables.

1. What do you mean by Global Variable and Local Variable?

Ans: Local: These variables only exist inside the specific function that creates them. They are unknown to other functions and to the main program. As such, they are normally implemented using a stack. Local variables cease to exist once the function that created them is completed. They are recreated each time a function is executed or called.  
Global: These variables can be accessed (ie known) by any function comprising the program. They are implemented by associating memory locations with variable names. They do not get recreated if the function is recalled.

1. What do you mean by function and return statement?

Ans: Function is a definition of a set of deferred actions. Functions are invoked by event handlers or by statements elsewhere in the script. Functions carry out actions and return values. A function is a named set of JavaScript statements interpreted all at once by calling the function name. JavaScript has several built-in functions, but programmer can extend the list by writing his own.

**Return Statement**: The return statement specifies the value to be returned by a function and performs the act of returning that value to where the function was called from. The following example returns the average of three numbers entered as arguments:   
 Code:   
function average(a, b, c)   
{   
   return (a + b + c)/3;   
}

JavaScript supports "return" statements to allow functions to return values back to calling expressions. Here are some basic rules on the return value from a function.

If no return statement is used in a function, the calling expression will receive a special value: "undefined".

If the return value is a primitive value, the calling expression will receive a copy of the return value.

If the return value is an object reference, the calling expression will receive a copy of the object reference.

1. What do you mean by event and event handler?

Ans. Events are actions that take place in a document, usually as the result of user activity. Common example of user actions that trigger events include clicking a button or typing a character into a text field.

All JavaScript actions are executed when a particular event occurs When an event occurs, the event object can be used to obtain and manage any information associated with the state of that particular event. JavaScript console actions, document print, save, open, or close actions, page open and close events, form field mouse, keystroke, calculation, format, and validation events, and menu item selection events.

Event Handler is a special attribute that associates an object with an event. For instance, button is associated with a mouse click by using the onClick event handler.