**JavaScript**

JavaScript is a loosely-typed client side scripting language that executes in the user's browser. JavaScript interact with html elements (DOM elements) in order to make interactive web user interface.

JavaScript implements [ECMAScript](http://www.tutorialsteacher.com/articles/what-is-ecmascript) standards, which includes core features based on [ECMA-262 specification](http://www.ecma-international.org/ecma-262/5.1/) as well as other features which are not based on ECMAScript standards.

**Advantages of JavaScript:**

1. JavaScript is easy to learn.
2. It executes on client's browser, so eliminates server side processing.
3. It executes on any OS.
4. JavaScript can be used with any type of web page e.g. PHP, ASP.NET, Perl etc.
5. Performance of web page increases due to client side execution.
6. JavaScript code can be minified to decrease loading time from server.
7. Many JavaScript based application frameworks are available in the market to create Single page web applications e.g. ExtJS, AngularJS, KnockoutJS etc.

**Points to Remember :**

1. JavaScript code must be written within <script> tag.
2. External JavaScript file (.js) can be referenced using <script src="/PathToScriptFile.js"></script> where src attribute is used to specify the full path of .js file.
3. Html5 standard does not required type="text/javascript" attribute, whereas prior html standards requires type attribute.
4. The <script> tag can be added into <head> or <body> tag.
5. The script included into <head> tag may not be able to access DOM elements because <head> loads before <body>. Write script before ending of </body> tag if script code needs to access DOM elements.
6. Popup message can be shown using global functions - alert(), confirm() and prompt().
7. alert() function displays popup message with 'Ok' button.
8. confirm() function display popup message with 'Ok' and 'Cancel' buttons. Use confirm() function to take user's confirmation to proceed.
9. prompt() function enables you to take user's input with 'Ok' and 'Cancel' buttons. prompt() function returns value entered by the user. It returns null if the user does not provide any input value.
10. It is recommended not to use eval() because it is:

* Slow
* Not secure
* Not readable and maintainable

Ex: var str = '({"firstName":"Bill","lastName":"Gates"})';

var obj = eval(str);

obj.firstName; // Bill

**Closure in JavaScript**

*Closure means that an inner function always has access to the vars and parameters of its outer function, even after the outer function has returned.*

function OuterFunction() {

var outerVariable = 1;

function InnerFunction() {

alert(outerVariable);

}

InnerFunction(); }