

## **Java vs. Java Script**

Java and Java Script share two very similar names, but they are completely different languages that possess few commonalties. They differ both in their purpose and the applications they can run. Java Script does not permit programmers to create stand alone applications, or applications that can run by themselves that are not imbedded in another language, while Java is a complex language that allows programmers to create entire stand alone applications, or applications that run all buy themselves. Java Script is a much simpler language, similar in structure to HTML, and thus, Java Script is much easier to learn, but it must always be imbedded in another text, usually HTML.

One similarity of the two languages is that they are both object -oriented languages. Object oriented languages allow programmers to change properties of objects. Thus, the actions you can take depend on the type of object you are manipulating. For example, if you are working with shapes like squares and circles, and the action you wish to take is to make the objects 3D, the squares will become cubes while circles spheres.

Discussion on the topic based upon my research:

## **Java**

Some have asked what is Java, exactly? Java is a programming language designed to allow programmers to create applications that can be downloaded from a network and run safely on almost any computing platform. It runs on almost all types of computers, supplies software components as needed, and contains built-in security features. The language was designed similar to C++, but with syntax that is easier to understand. While it incorporates all the recent major advances in computer sciences, it is still so young it lacks the tools available for programming that are available in C++ or visual basic.

Java is considered by some the closest thing that we have to a universal computer language. Java's virtual machine, made up of software, allows Java to run on almost any computer. The virtual machine does is takes messages from the computer and translates them for Java, and vice versa. Because Java's virtual machine is so unique and powerful, it has been compared to the structure of Esperanto.

Incipient stages of Java emerged from development by Sun Microsystems in 1990 as a language to run household appliances. Then, it expanded to the Internet. In 1991 this programming language, then called Oak, climbed the evolutionary ladder to become object

oriented. In 1995, Oak began to receive a lot of attention and its name was changed to Java.

Security is one of Java's main advantages, and one of the reasons it has become so popular. In Java, security is inherent. The language was designed this way so that devious programmers could not create applets that could go into users' computers and steal valuable passwords. Java only permits applets to function within a sand box, thus, forcing the applet to stay within the sandbox's boundaries, inhibiting hacking. So unique and reliable is this safety feature that it is used 1000 times more than Microsoft's safety device, Active X, which is built on mutual trust between internet users and providers.

One disadvantage to Java is that it is slower than C++. So, while its safety seems to insure a temporary dominance of the Internet, it is by far less appealing for applications delivered outside the net (CD roms, etc.)

There are two forms of Java that are of interest to the reader: applets and applications. Applets are small bits of Java code embedded in HTML for web page viewing. Applications, on the other hand, are stand alone programs, for example, HotJava Browser.

## Java Script

Most elements that appear on web pages are Java Script objects. The syntax of Java Script is very similar to that of HTML, making it easy to learn. Furthermore, it is parsed sequentially, meaning that the computer reads the language in sequence, performing each step in the order in which it was written.

Java Script differs from HTML in that it is object oriented; while HTML includes attributes within an element's definition, Java Script links the object and the property, allowing one to be changed. For example, if you have a document and you want to change the background color, you would work with the `document.bgcolor`. Use Java Script with single lines of code placed within anchor tags, or for more complex functions contained within tags or before anchoring tags.

Java Script is also an object oriented programming language. Objects can be maneuvered through what is called method acting, when actions methods perform. Some methods work for any object and some work for just some objects. For example, let's call your object `pete` and your action `walk`. To make your object, `pete`, perform the action, `walk`, you would write `pete.walk`. Properties can also be changed with method acting. So, for example, if you would like to make your object, `pete`, `red`, you would code `pete.red`. To perform both property and method, you could write `pete.red.walk`, or `object.property.method`.

Basic Scripts are easy to write with the knowledge of names of objects and properties that modify them. Functions are long, complicated strings of Scripts, which can be compiled with if/then operators such as && and parenthesis.

## References

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Dougherty, A. (1997). JavaScript 101. ZDNet Developer [On-line]. Available <http://www.zdnet.com/devhead/stories/articles/0.4413,2142327,00.html>

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ZDWebopedia. (1999). Object Oriented [On-line]. Available [http://www.zdwebopedia..com/TERM/o/object\\_oriented.html](http://www.zdwebopedia..com/TERM/o/object_oriented.html)

## JavaScript and Java Applet downloads

### JavaScript

1. <http://www.lonewolf.gr/software/>
  - for buttons only
2. <http://javascript.internet.com/games>
  - for game sprites

3. <http://javascript.internet.com>

- all kinds of scripts

4. <http://javascript.about.com/compute/javascript>

- categorical listings of scripts and where to find free downloads

### Applets

1. <http://java.sum.com/applets/indexes.html>

2. <http://www.better-homepage.com/free-applet-links.html>

3. <http://javabotique.internetl.com>

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