HOW VBA COMPARES WITH OTHER PROGRAMMING LANGUAGES

VBA has many similarities with most modern, procedural programming languages, including Java and JavaScript®, C and C++, and Windows Script Host. However, VBA runs as an in-process automation controller, whereas the other languages (apart from JavaScript and other scripting languages) are used to compile standalone applications.

VBA Compared with Java and JavaScript

VBA is similar to Java and JavaScript in that it is a high level, procedural programming languages that has full garbage collection and very little memory-pointer support. In addition, code developed in Java and JavaScript—supports on-demand compilation and can be executed without being compiled.

VBA has another similarity with JavaScript in that it cannot be executed as a standard application. JavaScript is embedded within webpages, as a mechanism for manipulating the web browser's Document Object Model (DOM). Likewise, VBA programs are executed inside a host environment such as

CorelDraw, or MS Word, so as to manipulate the host's object model.

Most VBA applications can be compiled to P-code so as to make them run more quickly, although the difference is hardly noticeable given the sophistication of today's computer hardware. Java can be similarly compiled; JavaScript, however cannot.

VBA Compared with C and C++

Visual Basic — similarly to C and C++ — uses functions. In Visual Basic, functions can be used to return a value but subroutines cannot. In C and C++, however, functions are used regardless of whether you want to return a value.

VBA allocates and frees memory "transparently." In C and C++, however, the developer is responsible for most memory management. This makes using strings in VBA even simpler than using the CString classs in C++.

Finally, whereas VBA uses a single equals sign for both comparison and assignment, C and C++ use a single equals sign (=) for assignment and two equals sign (==) for Boolean comparison.

VBA Compared with Windows Script Host

Windows Script Host (WSH) is a useful addition to Windows for doing occasional scripting and automation of Windows tasks. WSH is an out-of-process automation controller that can be used to control CorelDraw Graphics Suite X3. However, because WSH scripts cannot be compiled (and must be interpreted as they are executed) and must be run out of process, they tend to be slow.