

# Scripting

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| <b>See also:</b>                    | <a href="#">Generative Design</a>  |
|                                     | <a href="#">Adobe Creative Suite</a>   |
|                                     | <a href="#">Grasshopper</a>  |
| <b>Link:</b>                        | <a href="#">LEARN, The Catalogue</a><br><a href="#">Post a question to Media Centre</a>  |
| <b>Introduction:</b>                | <p>Scripting is a tool that is used to control and automate certain tasks within a program. A script is a series of statements that tells an application/program to perform a task or set of tasks. You can think of it like the script of a play, which tells the actors what to say and how and when to say it.</p> <p>Scripting is not programming. Scripting statements are usually written by the end-user (i.e. you) as opposed to the program core which is written by specific program developers. The program core is often also written in different language to that in which you script.</p> <p>To write script you need to have a basic (or more) understanding of a certain scripting language, but it's not necessary to have a COMPSCI degree. Within architecture and design related fields scripting has become much more popular, common and productive. Many architecture and design schools are teaching basic scripting and more and more programs are developing scripting capacities.</p> <p>Scripting is written in the same way as one writes something in any lexical language. There are various scripting languages, oriented towards certain tasks and with certain weaknesses and strengths. For a comparison of popular scripting languages (Perl, Python, Rexx, Tcl, C, C++ and Java) try this <a href="#">essay</a>.</p> |
| <b>Languages:</b>                   | <p>There are many scripting languages used. In design and architecture we are primarily using the following languages:</p> <ol style="list-style-type: none"> <li>1. <b>JavaScript:</b> is a very popular scripting language which is <a href="#">object-oriented</a>.</li> <li>2. <b>C++:</b> is a very popular general-purpose language.</li> <li>3. <b>AppleScript:</b> was created by Apple and is used in most of Apple's applications.</li> <li>4. <b>VBScript:</b> is an Active Scripting language developed by Microsoft.</li> </ol> <p>There are also a growing number of program-specific scripting languages, or <math>\zeta</math>sub<math>\zeta</math>-languages. See below for more on these.</p>  |
| <b>Syntax:</b>                      | <p>The syntax in scripting is the set of rules that define how things get written down in that particular script. It is like the grammar rules that we use in non-programming (lexical) languages (i.e. English, Hindi, Vietnamese etc) to produce comprehensible statements and therefore communicate effectively.</p> <p>Most languages will use a different syntax, a different set of rules, to write script. You will have to become familiar with the syntax in question.</p>  |
| <b>Programs-specific languages:</b> | <p>In architecture and design fields scripting is used in a number of different programs. The most popular of which are</p> <ol style="list-style-type: none"> <li>1. <b>3DS Max:</b> which uses <a href="#">MaxScript</a></li> <li>2. <b>Flash:</b> which uses <a href="#">Action Scripting</a></li> <li>3. <b>The Creative Suite:</b> supports scripts written in AppleScript, JavaScript or VBScript.</li> <li>4. <b>Rhino:</b> which uses <a href="#">RhinoScript</a></li> <li>5. <b>Second Life:</b> which uses <a href="#">Linden Scripting</a></li> </ol>   |
| <b>Advantages:</b>                  | <p>The following identifies a few of the advantages and disadvantages of the use of scripting in architecture and design.</p> <p>One of the benefits of scripting is that many menial, repetitive and boring tasks can be taken care of by simply writing a script which can carry them out. This repetitive aspect which is inherent to scripting, is also a reason for why so much contemporary architectural design is highly iterative. Scripting is very good at iterations/repetitions of a component or action with often small successive changes.</p>   |
| <b>Disadvantages:</b>               | <p>One of the disadvantages of scripting is that it can be very time intensive. What perhaps may take an architect/designer 20 hours to write, may take someone with computer science knowledge and training only two hours.</p> <p>There are also those who argue that the result of an over prioritisation of scripting may lead to a lack of spatial and aesthetic comprehensions in architecture and design, and that the scripting architect or designer becomes therefore simply a technician.</p>   |
| <b>Learning support:</b>            | <p>To get you started Media Centre suggest the following tutorials:</p> <p><a href="#">Beginner A: Intro to JavaScript</a><br/> <a href="#">Beginner B: Max Scripting</a><br/> <a href="#">Beginner C: Action Scripting in Flash</a><br/> <a href="#">Beginner D: Official RhinoScript 101</a><br/> <a href="#">Beginner E: Linden Scripting</a><br/> <a href="#">Beginner F: AppleScript</a></p>  |
| <b>Additional:</b>                  | <p>You'll also likely find interesting:</p> <ul style="list-style-type: none"> <li>· <a href="#">RhinoScript Primer (PDF)</a> this primer also downloads with a folder of handy scripts readymade.</li> <li>· <a href="#">Adobe Developer Connection</a> provides a good range of information on using various scripting languages with <a href="#">Photoshop</a>, <a href="#">Illustrator</a>, <a href="#">Flash</a> and other Adobe products.</li> </ul>   |
| <b>References:</b>                  |  |
| <b>External links:</b>              |  |
| <b>Published:</b>                   | First published Mon. 1 Feb. 2010.  |