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What is Lua?

Introduction:

So what is Lua? Lua is simply a programing language, but most so it is a powerful, fast, lightweight, embeddable scripting language. It was developed by a team of three: Roberto Lerusalimschy, Luiz Henrique de Figueiredo, and Waldemar Celes, at the Pontifical University of Rio de Janeiro in Brazil. A well worded introduction to Lua is best put by one of its creators Roberto Lerusalimschy, “Lua is a tiny and simple language, partly because it does not try to do what C is already good for, such as sheer performance, low-level operations, and interface with third-party software. Lua relies on C for these tasks. What Lua does offer is what C Is not good for: a good distance from the hardware, dynamic structures, no redundancies, and ease of testing and debugging. For these goals, Lua has a safe environment, automatic memory management, and good facilities for handling strings and other kinds of data with dynamic size.” So essentially it doesn’t try and be the next best programing language like C instead it builds and focuses on the weakness of it, and relies on C for its strengths. With offering other benefits such as those mentioned above.

Lua was created as a combination of Sol (Simple Object Language) and DEL (Data entry Language). It took the best of both of these in-house created languages to create the simplistic and portability of Lua. The name Lua also came from this combination, as Sol meant sun in Portuguese so it was only fitting to call the next one “moon” (Lua in Portuguese).

Uses of Lua in Games:

One of Lua’s main uses is as a scripting language used alongside other languages to create the games. The use of a scripting language with in games is popular for many reasons but some of the main reasons are, as MJP from GameDev.net:

1. Most scripting languages are much more high-level than C++ (which just about all commercial games use), and can be used much more readily by gameplay or level designers.
2. The portions of a game written in scripting languages can be modified while the game is running, without having to restart or recompile. This is important if the people working on the scripted portions don't have access to the compilation tools, or if compilation takes a long time.
3. C++ has no built-in reflection capabilities.

There are also a number of game engines that uses Lua, these include(but not limited to) AGen, Aleph One and Apocalyx. These engines use Lua as there in game scripting language.

Games which used Lua:

Here is a small list of games that have been made with the help and use of Lua

- Angry Birds – by Rovio Entertainment
- Baldur’s Gate – by BioWare
- World of Warcraft – by Blizzard Entertainment
- Warhammer 40,000: Dawn of War I – by Relic Entertainment
- Warhammer 40,000: Dawn of War II – by Relic Entertainment
- Warhammer 40,000: Age of Reckonging – by Relic Entertainment
- The Witcher – by CD Projekt RED