LOLCODE

LOLCODE is an esoteric programming language inspired by lolspeak, the language expressed in examples of the lolcat Internet meme.[1] The language was created in 2007 by Adam Lindsay, researcher at the Computing Department of Lancaster University.[2][3]

The language is not clearly defined in terms of operator priorities and correct syntax, but several functioning interpreters and compilers exist. One interpretation of the language has been proven Turing-complete.[4]

LOLCODE

Paradigm	esoteric
Designed by	Adam Lindsay
First appeared	2007
Filename extensions	.lol, .lols
Website	lolcode.org (http://lolcode.org)
Influenced by	
Lolcats	

Contents

Language structure and examples
- Example 1
- Example 2
- Example 3
- Example 4

Implementations

Related projects

References

External links

Language structure and examples

LOLCODE's keywords are drawn from the heavily compressed (shortened) patois of the lolcat Internet meme. Here follow a "Hello, World!" program and a simple program to output a file to a monitor.[5] Similar code was printed in the *Houston Chronicle*.[1]

Example 1

```
HAI 1.2
CAN HAS STDIO?
VISIBLE "HAI WORLD!"
KTHXBYE
```

Code	Comment
`HAI [VERSION]`	In all LOLCODE programs, `HAI` ("Hi!") introduces the program and specifies the version (although this isn't actually used yet).
`CAN HAS [LIBRARY]?`	In many programming languages, one of the first statements will be a library inclusion for common functions such as input and output. Typically this is included by a call such as `#include <stdio.h>` (stdio standing for standard input/output library). This command is a tongue-in-cheek corruption of that, asking if a library is obtainable, obtaining it if possible, and raising an exception if not.[6] It is there primarily for verisimilitude—in fact, it is ignored in current implementations of LOLCODE.
`VISIBLE [MESSAGE]`	Prints a message to the screen.
`KTHXBYE`	Just as `HAI` introduces the program, `KTHXBYE` (which is "K," "THX," and "Bye" all strung together, meaning "OK, thanks, bye") terminates it.
`BTW [MESSAGE]`	To write a single line comment in LOLCODE, you use the `BTW` keyword. Comments are ignored by the compiler and are written for better understanding of the program.
`OBTW [MESSAGE]TLDR`	Similar to the `BTW` keyword, the `OBTW` keyword marks a multiline comment, a comment that spans multiple lines. In LOLCODE, the `OBTW` keyword signifies the start of a multiline comment while the `TLDR` keyword ends it.

Example 2

```
HAI 1.2
CAN HAS STDIO?
PLZ OPEN FILE "LOLCATS.TXT"?
    AWSUM THX
        VISIBLE FILE
    O NOES
        INVISIBLE "ERROR!"
KTHXBYE
```

In this example,[5] commands to open a file (`PLZ OPEN FILE "NAME"?`—"Please try to open a file?"), and error handling (`AWSUM THX`—"Awesome, thanks!", and `O NOES`—"Oh no!") are introduced.

Other commands include `I HAS A` *`variable`* for declaring variables, *`variable`* `R` *`value`* ("variable [is/are/being] value") for assigning them, sending error messages to the front end via `INVISIBLE` instead of `VISIBLE`, and `BTW` ("by the way") to denote a comment, making the parser ignore the rest of the line.

Loops are created with `IM IN YR ''label''` (inspired by the "Im in ur *noun*, *verb*ing yr *related noun*" LOLcat meme), and ended with `IM OUTTA YR ''label''`. Loops can be broken with the keyword `ENUF` ("enough"), or in older versions, `GTFO`.[7] Loops can also be ended with the conditional `IZ` command, as demonstrated in the next example.

Example 3

```
HAI 1.0
CAN HAS STDIO?
I HAS A VAR
IM IN YR LOOP
    UP VAR!!1
    VISIBLE VAR
    IZ VAR BIGGER THAN 10? KTHX
IM OUTTA YR LOOP
KTHXBYE
```

[5]

This simple program displays the numbers 1–11 and terminates (as of specification 1.0). The same program as of specification 1.2 is (assuming VAR starts at 0):

```
HAI 1.2
CAN HAS STDIO?
IM IN YR LOOP UPPIN YR VAR TIL BOTH SAEM VAR AN 10
    VISIBLE SUM OF VAR AN 1
IM OUTTA YR LOOP
KTHXBYE
```

Example 4

```
 1  HAI 1.0
 2  CAN HAS STDIO?
 3  VISIBLE "U SEE THIS"
 4
 5  BTW VISIBLE "U SEE NOTHING"
 6
 7  OBTW
 8  VISIBLE "U SEE NOTHIN"
 9  VISIBLE "U STIL SEE NOTHIN"
10  TLDR
11
12  VISIBLE "U SEE THIS"
13  KTHXBYE
```

The above example will return the following:

```
U SEE THIS
U SEE THIS
```

This is because line 3 outputs `U SEE THIS` but line 5 is ignored due to the fact that it is commented out by the `BTW` keyword. Lines 8 and 9 aren't run because they are in a multiline comment that starts in line 7, and ends on line 10. Line 12 outputs `U SEE THIS` and line 13 terminates the program.

Implementations

The most recent and up-to-date interpreter for the LOLCODE language is lci (http://lolcode.org/), written in C by Justin Meza. It interprets LOLCODE efficiently on a variety of platforms.[8]

The first LOLCODE implementation was a PHP parser written by Jeff Jones.[9][10] The parser's website was also the first website using LOLCODE as an actual web scripting language. Being open source with a BSD style licence, it has been forked and used by multiple websites to implement LOLCODE scripting. The winning Pecha Kucha presentation at PHP Works 2008 was about this parser.[11][12]

There is a .NET compiler for LOLCODE written by Nick Johnson,[13] and featured in Microsoft developer training seminars, TechEd 2007 Conference (Australia).[14][15][16]

PL/LOLCODE, a project headed by Josh Tolley, makes LOLCODE available as a server-side programming language inside PostgreSQL.[17]

Microsoft Dynamic Language Runtime has an implementation of LOLCODE for testing purposes.[18]

lolcode-java (A Java grammar / interpreter for the LOLCODE programming language) is a project also available[19] but it appears to not yet be compliant with the version 1.3 specification.

A LOLCODE to JavaScript translator is also available.[20]

There is also a LOLCODE compiler included with the Parrot virtual machine as one of the languages demonstrating the use of Parrot's compiler tools.[21]

A compiler, virtual machine and debugger, created by Piper, for a LoLCode like language, LoLCode 1337, written in C, is here (https://sourceforge.net/projects/lolcode-1337/)[22]

A version for parallel and distributed computing can be found here (https://www.parallella.org/2017/04/01/parallel-and-distributed-computing-with-lolcode/). [23]

Related projects

LOLCODE has also inspired LOLPython, written by Andrew Dalke. LOLPython uses LOL-inspired syntax similar to that of LOLCODE, but with a Python-like style. It operates by translating the LOLPython source into Python code.[24]

ArnoldC is an offshoot of LOLCODE that replaces lolspeak with quotes from different Arnold Schwarzenegger movies.[25]

References

1. Dwight Silverman (2007-06-06). "I'm in ur newspaper writin mah colum" (http://www.chron.com/disp/story.mpl/business/silverman/4862013.html). Chron.com. Retrieved 2007-06-06.
2. "Computing Department at Lancaster University – News" (https://web.archive.org/web/20090528151824/http://www.comp.lancs.ac.uk/department/news.html). Lancaster University, Computing Department. Archived from the original (http://www.comp.lancs.ac.uk/department/news.html) on 2009-05-28. Retrieved 2009-06-09.
3. Hammock, Anne (2008-05-01). "The new fame: Internet celebrity" (https://web.archive.org/web/20090430233014/http://edition.cnn.com/2008/TECH/05/01/roflcon/index.html). *CNN*. Archived from the original (http://edition.cnn.com/2008/TECH/05/01/roflcon/index.html) on 2009-04-30.
4. Arachnid. "Proof that LOLCode is turing complete:BrainF*** interpreter in LOLCode" (https://web.archive.org/web/20070711193759/http://forum.lolcode.com/viewtopic.php?id=51). forum.lolcode.com. Archived from the original (http://forum.lolcode.com/viewtopic.php?id=51) on 2007-07-11. Retrieved 2008-10-05.

5. Adam Lindsay (2007-05-25). "LOLCODE main page" (https://web.archive.org/web/20071002042159/http://lolcode.com/). lolcode.com. Archived from the original (http://www.lolcode.com) on 2007-10-02. Retrieved 2007-10-02.
6. "keywords:can-has · LOLCODE" (https://web.archive.org/web/20080206072830/http://lolcode.com/keywords/can-has). Archived from the original (http://lolcode.com/keywords/can-has) on 2008-02-06. Retrieved 2008-02-10.
7. "SORN.net" (http://www.sorn.net/~sandyd/blog/lolcode-mono-osx.png). Archived (https://web.archive.org/web/20090216203453/http://www.sorn.net/~sandyd/blog/lolcode-mono-osx.png) from the original on February 16, 2009. Retrieved 2007-11-07.
8. "LOLCODE + lci" (http://lolcode.org/).
9. "First Parser Comment" (https://web.archive.org/web/20090519191103/http://lindsay.at/blog/archive/2007/05/21/lolcode.html#comment853). Lindsay.at. Archived from the original (http://lindsay.at/blog/archive/2007/05/21/lolcode.html#comment853) on 2009-05-19. Retrieved 2009-06-09.
10. "Tetraboy's LOLCODE parser" (https://web.archive.org/web/20090227045015/http://www.tetraboy.com/lolcode/). Tetraboy.com. Archived from the original (http://www.tetraboy.com/lolcode/) on 2009-02-27. Retrieved 2009-06-09.
11. " "The Best Web Language: LOLCODE" Slides" (http://www.slideshare.net/Tetraboy/the-best-web-language-lolcode). Slideshare.net. Retrieved 2009-06-09.
12. "PHP Works" (http://phpworks.mtacon.com/). mtacon.com. Retrieved 4 November 2014.
13. LOLCODE .NET compiler (https://code.google.com/p/lolcode-dot-net/) at Google Code
14. TechEd Day 2: Microsoft announces LOLCode support (http://www.istartedsomething.com/20070809/teched-day-2-lolcode/), Long Zheng
15. LOLcode in next Visual Studio? For young and funny cats (http://www.networkworld.com/community/node/18296), NetworkWorld.com
16. "Video of LOLCODE presentation at TechEd 2007" (https://web.archive.org/web/20090205180201/http://blip.tv/file/343052). Blip.tv. 2007-08-17. Archived from the original (http://blip.tv/file/343052) on 2009-02-05. Retrieved 2009-06-09.
17. PL/LOLCODE (http://pgfoundry.org/projects/pllolcode/), pgFoundry
18. Deep DLR (http://channel9.msdn.com/showpost.aspx?postid=392011), John Lam and Martin Maly
19. "lolcode grammar interpreter written in Java" (https://code.google.com/p/lolcode-java/).
20. "LolCode" (http://fullvolume.co.uk/static/lolcode/). Fullvolume.co.uk. Retrieved 2009-06-09.
21. "Lightning-Parrot" (https://web.archive.org/web/20090322004648/http://lolcode.com/news/lightning-parrot). lolcode.com. Archived from the original (http://lolcode.com/news/lightning-parrot) on 2009-03-22. Retrieved 2009-06-20.
22. "LoLCode 1337" (https://sourceforge.net/projects/lolcode-1337/).
23. "Parallel and Distributed Computing with LOLCODE" (https://www.parallella.org/2017/04/01/parallel-and-distributed-computing-with-lolcode//).
24. "LOLPython" (http://www.dalkescientific.com/writings/diary/archive/2007/06/01/lolpython.html). Dalkescientific.com. 2007-06-01. Retrieved 2009-06-09.
25. https://lhartikk.github.io/ArnoldC/

External links

- Official website (http://www.lolcode.org)