Scam

Scam is a nifty little language that looks a lot like Scheme, but is so much more. Scam is:

- an impure functional language with Scheme-like syntax
- a language where writing iterators like while and for is possible purely through function definition
- a language where everything is a function, including define and set! – overloading these functions can be fun!
- a fully object-oriented language with trivial syntax and easy-to-comprehend semantics
- a language with programmer-controlled delayed evaluation
- a language with built-in garbage collection
- a language that optimizes tail-recurion
- a language that supports multi-threading

Scam's homepage is http://beastie.cs.ua.edu/scam.

Scam versus Scheme

For Scheme programmers, here is a list of important differences: quick hits.

Downloads

Latest Scam versions:

- 32-bit Linux tarball (libreadline6) - scam-2.4b6-i386.tgz
- 32-bit Linux tarball (libreadline7) - scam-2.4c-i386.tgz
- 32-bit Linux tarball (no libreadline) - scam-2.4c-nr-i386.tgz
- 64-bit Linux tarball (libreadline7) - scam-2.4c-amd64.tgz
- 64-bit Linux tarball (no libreadline) - scam-2.4c-nr-amd64.tgz
- 64-bit Mac tarball - scam-2.4c-OSX_64.tgz

Installation Notes

To install Scam, perform the following steps (using scam-2.4c-amd64a.tgz as an example - make sure you use the right package for your particular system). Note: Windows 10 users must have the Linux Bash subsystem installed. Other versions of Windows are not supported. To begin:

1. In a bash shell, make a directory named scam that hangs off your home directory. Move into that directory:

   mkdir ~/scam
   cd ~/scam

2. Set your architecture:

   export arch=`dpkg --print-architecture`

3. Retrieve the tarball:

   wget beastie.cs.ua.edu/scam/scam-2.4c-amd64.tgz #change, if necessary

   Mac users may need to use curl -O instead of wget.

4. Extract the files in the tarball:

   tar xvzf scam-2.4c-amd64.tgz

5. Copy the scam executable to a directory in your path:

   cp scam ~/bin # if you have your own bin

   or you can put verb! /scam! in your path. If you don’t know what a path is, then do this instead:

   sudo cp scam /usr/bin

6. It’s unlikely, but you may need to install the readline library. On a Debian system like Ubuntu, you would issue the following command:

   sudo apt-get install libreadline7

   Look to the interwebs for instructions on how to install readline on other systems.

If you have trouble installing Scam, send a message to lusth@cs.ua.edu.
Learning more about Scam

There is an Open Source reference manual that delves into Scam in detail. It is called *The Scam Reference Manual*.

The reference manual gives the nuts and bolts on the syntax and semantics of Scam.

About this website

This website is rendered in the *Old School* style. *Old School* is known for its somewhat spartan, but clean and crisp, no-nonsense, get-down-to-brass-tacks appearance. *Old School* was invented by Tim Berners-Lee during the latter part of the last century. It is made a bit more flashy using a style sheet.

Acknowledgements

This material is based upon work supported by the National Science Foundation, grant numbers #00244269 and #0633290.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.