The Sway Programming Language

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Sway is a nifty little language that seems quite large. It has a C-like syntax (sans types) and is...

- a simple imperative-looking language with (what look like) iterative structures
- a fully object-oriented language with trivial syntax and easy-to-comprehend semantics
- a functional language with programmer-controlled delayed evaluation
- a monolingual language: the Sway debugger uses Sway as its command-language

...all at the same time!

Downloads

Latest Sway versions:

sway_1.0.6e-1_i386.tgz

sway_1.0.6e-1_amd64.tgz

sway_1.0.6e-1_i386.deb

sway_1.0.6e-1_amd64.deb

Here is an experimental Microsoft Windows version: sway.exe. You will also need readline5.dll and history5.dll. Copy all three files to:

```
c:\windows\system32
```

and you should be good to go. You will need to run Sway in a DOS box (command prompt).

If you want to use the set of Sway libraries (useful functions written in Sway) but don't know how to set up a path on Windows, install the libraries in same directory as your program, if you want to use any of them.

Sway versus other languages

For Java, C, and C++ programmers, here is a list of important differences: quick hits.

Installation Notes

To install Sway from a deb package (using `sway_1.0.6e-1_i386.deb` as an example), run the command:

```
sudo dpkg -i sway_1.0.6e-1_i386.deb
```

If you are on a system without *sudo*, run the above command as *root* without the *sudo* prefix.

To install Sway from a tarball, perform the following steps (using `sway_1.0.6e-1_i386.tgz` as an example)...

1. Save the download to a file

2. Untar the download:

   ```
   tar zxvf sway_1.0.6e-1_i386.tgz
   ```

3. Change to the untarred directory:

   ```
   cd sway_1.0.6e-1_i386
   ```

4. Install the Sway executable and library file:

   ```
   make install
   ```

The install command assumes you have admin privileges. On a Linux distribution that uses *sudo*, you would run the comand:

```
sudo make install
```

If you do not have root privileges, then copy *sway* to someplace in your path (usually your personal bin directory) and install the library files in a suitable place. If the library files go somewhere other than */usr/lib/sway* or */usr/local/lib/sway*, you will need to set an environment variable named **SWAY_LIB** to point to the alternate location.

If you have trouble installing Sway, send a message to lusth@cs.ua.edu.

Learning more about Sway

There is an Open Source introductory Computer Science textbook that uses Sway as the teaching language. It is called The Calculus of Programming and teaches about Computer Science using Calculus as the backdrop

for programming examples and exercises. The goal is to give a gentle, but rigorous, introduction to both Computer Science and Calculus, before students take traditional classes on those subjects.

There is also a companion guide, The Sway Reference Manual. The reference manual is more nuts and bolts on the syntax and semantics of Sway.

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.

Acknowledgements

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