λ Lounge

OpenGL in Common Lisp
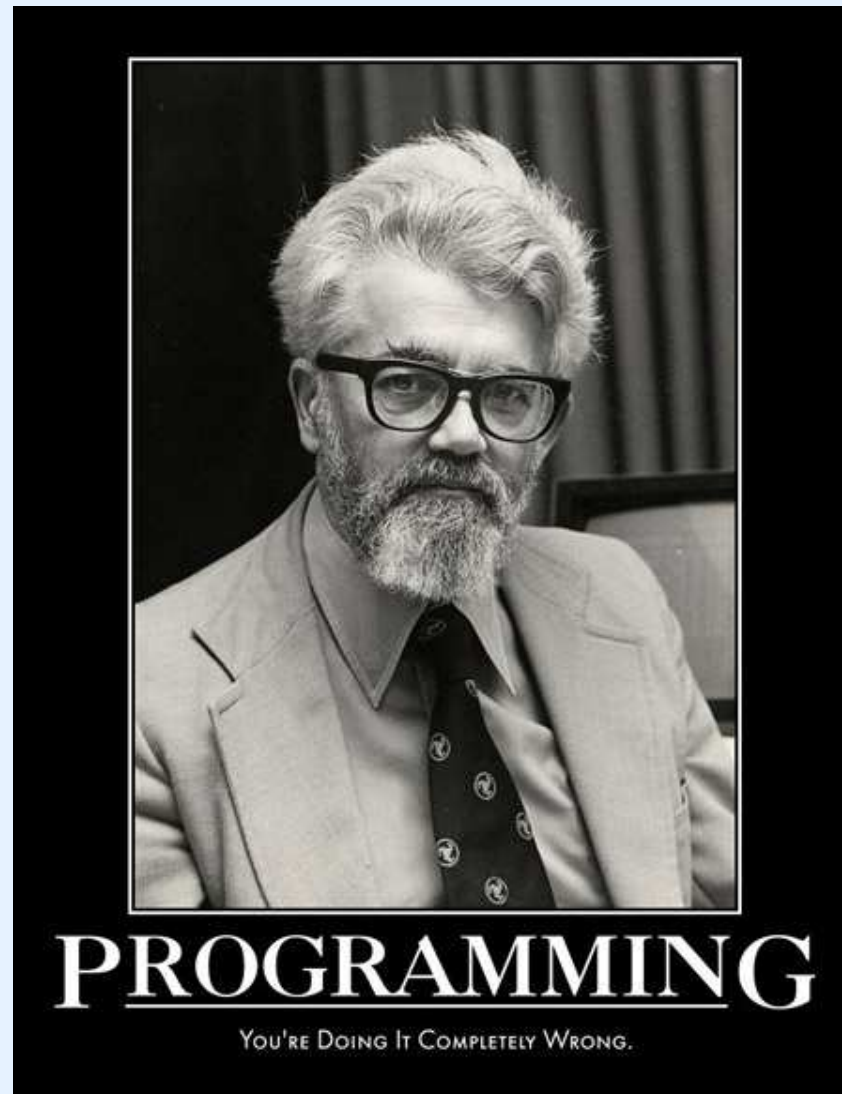
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Lisp is Cool!

3D is Cool!

Except for 3D Pitfall, which looks really lame.

Getting Started

1. Install Linux.

   ```
   http://aptosid.com
   ```

2. Install SBCL and some libraries.

   ```
   apt-get install sbcl{,-doc,-source} \
   cl-{asdf,cffi}
   ```

3. Install Emacs and SLIME *(Not strictly required.)*

   ```
   apt-get install emacs,-goodies-el cl-swank \
   cl-swank slime common-lisp-controller
   ```

4. Install OpenGL.

   ```
   apt-get install libgl1-mesa-dev \
   libglu1-mesa{,-dev} libglut3{,-dev} ...
   ```

Extra Libraries

- Σ, my library of random useful things in Common Lisp.
  `https://github.com/cgore/sigma`
  (Almost completely undocumented.)

- `cl-opengl`, or else we need to do a lot more work.
  `https://github.com/3b/cl-opengl`
  This library provides `cl-glu` and `cl-glut`.

Getting Libraries via Quicklisp

Quicklisp is the least irritating way to get Common Lisp libraries. It is available at `http://www.quicklisp.org`.

- `curl -O http://beta.quicklisp.org/quicklisp.lisp`

- `sbcl --load quicklisp.lisp`

- `(quicklisp-quickstart:install)`

- `(ql:quickload "cl-opengl")`

Now we should have a working OpenGL in Common Lisp.

Hello Cube

The simplest thing to do in 3D is a plain cube. This is a good test to see if the libraries and dependencies are all okay. Cf. `source/hello-cube.lisp`, **run** `(hello-cube)`.

Handling Keypresses

It would be nice if we could quit the program just by pressing
Esc. Cf. `source/quit-button.lisp`, **run** `(quit-button)`.

```
(defmethod glut:keyboard
           ((w quit-button-window) key x y)
  (declare (ignore x y))
  (when (eql key #\Esc)
    (glut:destroy-current-window)))
```

TODO ...

Questions?