

```
1: // $Id: coordinates.cpp,v 1.30 2015-03-06 14:34:38-08 - - $
2:
3: // Draw line from (0,0) to (1,1).
4:
5: #include <iostream>
6: using namespace std;
7:
8: #include <GL/freeglut.h>
9: #include <libgen.h>
10:
11: struct {
12:     size_t width = 256;
13:     size_t height = 256;
14: } window;
15:
16: void show (const char* ctext, GLfloat xpos, GLfloat ypos) {
17:     const GLubyte* utext = (GLubyte*) ctext;
18:     void* font = GLUT_BITMAP_HELVETICA_12;
19:     GLfloat xadjust = glutBitmapLength (font, utext);
20:     GLfloat yadjust = glutBitmapHeight (font);
21:     GLfloat xdelta = xadjust / window.width;
22:     GLfloat ydelta = yadjust / window.height;
23:     glRasterPos2f (xpos * 0.8 - xdelta, ypos * 0.8 - ydelta);
24:     glutBitmapString (font, utext);
25: }
26:
27: void display() {
28:     glClearColor (0.25, 0.25, .0, 0);
29:     glClear (GL_COLOR_BUFFER_BIT);
30:     glColor3ub (0x00, 0xFF, 0x00);
31:     show ("(0,0)", 0, 0);
32:     show ("(+1,+1)", +1, +1);
33:     show ("(-1,+1)", -1, +1);
34:     show ("(+1,-1)", +1, -1);
35:     show ("(-1,-1)", -1, -1);
36:     glutSwapBuffers();
37: }
38:
39: int main (int argc, char** argv) {
40:     glutInit (&argc, argv);
41:     glutInitWindowSize (window.width, window.height);
42:     glutInitWindowPosition (128, 128);
43:     glutCreateWindow (basename (argv[0]));
44:     glutDisplayFunc (display);
45:     glutMainLoop();
46:     return 0;
47: }
48:
```

[illegible]