```
1: // $Id: coordinates.cpp, v 1.42 2019-02-22 19:12:48-08 - - $
 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:
       auto utext = reinterpret_cast<const GLubyte*> (ctext);
       void* font = GLUT_BITMAP_9_BY_15;
18:
19:
       GLfloat xadjust = glutBitmapLength (font, utext);
20:
       GLfloat yadjust = glutBitmapHeight (font);
21:
       GLfloat xdelta = xadjust / window.width;
       GLfloat ydelta = yadjust / window.height;
22:
23:
       glRasterPos2f (xpos * 0.6 - xdelta, ypos * 0.6 - ydelta);
24:
       glutBitmapString (font, utext);
25: }
26:
27: void display() {
28:
       glClearColor (1.0, 1.0, 1.0, 0);
29:
       glClear (GL_COLOR_BUFFER_BIT);
30:
       glColor3ub (0, 0, 0);
31:
       show ("(0,0)", 0, 0);
       show ("(+1,+1)", +1, +1);
32:
       show ("(-1,+1)", -1, +1);
33:
34:
       show ("(+1,-1)", +1, -1);
       show ("(-1,-1)", -1, -1);
35:
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);
       glutCreateWindow (basename (argv[0]));
43:
44:
       glutDisplayFunc (display);
45:
       glutMainLoop();
46:
       return 0;
47: }
48:
49: //TEST// mkpspdf coordinates.ps coordinates.cpp*
50:
```

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\$cmps109-wm/Examples/opengl-examples

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19:12:49 coordinates.cpp.log 1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting coordinates.cpp 2: checksource coordinates.cpp 3: ident coordinates.cpp 4: coordinates.cpp: \$Id: coordinates.cpp, v 1.42 2019-02-22 19:12:48-08 - - \$ 6: cpplint.py.perl coordinates.cpp 7: Done processing coordinates.cpp 8: q++ -q -00 -Wall -Wextra -Werror -Wpedantic -Wshadow -fdiagnostics-color =never -std=gnu++17 -Wold-style-cast coordinates.cpp -o coordinates -lm -lglut -1GLU -1GL -1X11 -1drm -1m 9: rm -f coordinates.o 10: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished coordinates.cpp