

CP2 Exercise 13

05/02/2006

Try out the example OpenGL/GLUT program. have a look at its sourcecode and experiment with it. Create a makefile for compiling an OpenGL/GLUT application.

```
/*      OpenGL / GLUT example program - Eike Anderson, 2006      */
/* compile with > gcc glProg.c -lglut -lGLU -lGL -lm -o glProg */

#include <GL/glut.h>

void myInit(void) /* initialise viewing volume */
{
    /* select the colour for clearing window */
    glClearColor(0.0,0.0,0.0,0.0); /* black */

    /* set matrix mode to define the projection matrix */
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity(); /* identity matrix */

    /* set to orthographic projection */
    glOrtho(0.0,1.0,0.0,1.0,-1.0,1.0);
    /* left, right, bottom, top, near, far */

    /* set matrix mode to define the modelview matrix */
    glMatrixMode(GL_MODELVIEW);
    glLoadIdentity(); /* identity matrix */
}

void display(void) /* display callback */
{
    glClear(GL_COLOR_BUFFER_BIT); /* CLS - clear screen */

    glColor3f(1.0,1.0,1.0);
    /* drawing colour for following vertices set to white */

    glBegin(GL_POLYGON);
    /* draw a polygon (in this case a rectangle) */
    glVertex3f(0.25,0.25,0.0);
    glVertex3f(0.75,0.25,0.0);
    glVertex3f(0.75,0.75,0.0);
    glVertex3f(0.25,0.75,0.0);
    glEnd();

    glFlush();
    /* force buffers to be drawn onto the screen */
}

int main(int argc,char *argv[])
{
    glutInit(&argc,argv); /* initialise GLUT */
    glutInitDisplayMode(GLUT_SINGLE|GLUT_RGB);
    glutInitWindowSize(200,200);
    glutInitWindowPosition(50,50);
    glutCreateWindow("glut program");

    myInit(); /* initialise viewport */

    glutDisplayFunc(display);
    glutMainLoop();
    return 0;
}
```