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/* CS 365 Example Intro. OpenGL program */

/* Notice that glut.h brings in gl.h, glu.h */
#include <GL/glut.h>

/*-----*/
/* Initialization function sets the OpenGL state variables */
/*-----*/

void init() {

/* Foreground and background colors */
    glColor3f(1.0, 1.0, 0.0);
    glClearColor(0.3, 0.3, 0.3, 1.0);

/* Set the synthetic camera: 2-D Orthogonal Projection,
 * real world coordinate size is 4.0 x 4.0
 */
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    gluOrtho2D(-2.0, 2.0, -2.0, 2.0);
    return;
}

/*-----*/
/* Callback function to refresh the display */
/*-----*/

void display() {

    /* Sets the color buffer to the clear color */
    glClear(GL_COLOR_BUFFER_BIT);

    /* Draws a square */
    glBegin(GL_POLYGON);
        glVertex2f(-0.5, -0.5); /* Notice 2D coordinates */
        glVertex2f(-0.5, 0.5); /* using floats */
        glVertex2f( 0.5, 0.5); /* specified individually */
        glVertex2f( 0.5, -0.5);
    glEnd();
    glFlush();
    return;
}

/*-----*/
/* Main Program */
/*-----*/

int main(int argc, char * argv[]){

    /* The Glut package interfaces to our windowing system. */
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_RGB | GLUT_SINGLE);
    glutInitWindowSize(300, 300);
    glutCreateWindow("Simple2");

    glutDisplayFunc(display); /* Declare the display callback */
    init(); /* Set state variables */
    glutMainLoop(); /* Loop handling events */
}

```