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36: */
37:
38: /*
39:  * double.c
40:  * This is a simple double buffered program.
41:  * Pressing the left mouse button rotates the rectangle.
42:  * Pressing the middle or right mouse button stops the rotation.
43:  */
44:
45: #include <GL/glut.h>
46: #include <stdlib.h>
47:
48: static GLfloat spin = 0.0;
49:
50: void display(void)
51: {
52:     glClear(GL_COLOR_BUFFER_BIT);
53:     glPushMatrix();
54:     glRotatef(spin, 0.0, 0.0, 1.0);
55:     glColor3f(1.0, 1.0, 1.0);
56:     glRectf(-25.0, -25.0, 25.0, 25.0);
57:     glPopMatrix();
58:
59:     glutSwapBuffers();
60: }
61:
62: void spinDisplay(void)
63: {
64:     spin = spin + 2.0;
65:     if (spin > 360.0)
66:         spin = spin - 360.0;
67:     glutPostRedisplay();
68: }
69:
70: void init(void)
71: {
72:     glClearColor (0.0, 0.0, 0.0, 0.0);
```

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73:     glShadeModel (GL_FLAT);
74: }
75:
76: void reshape(int w, int h)
77: {
78:     glViewport (0, 0, (GLsizei) w, (GLsizei) h);
79:     glMatrixMode(GL_PROJECTION);
80:     glLoadIdentity();
81:     glOrtho(-50.0, 50.0, -50.0, 50.0, -1.0, 1.0);
82:     glMatrixMode(GL_MODELVIEW);
83:     glLoadIdentity();
84: }
85:
86: void mouse(int button, int state, int x, int y)
87: {
88:     switch (button) {
89:         case GLUT_LEFT_BUTTON:
90:             if (state == GLUT_DOWN)
91:                 glutIdleFunc(spinDisplay);
92:             break;
93:         case GLUT_MIDDLE_BUTTON:
94:         case GLUT_RIGHT_BUTTON:
95:             if (state == GLUT_DOWN)
96:                 glutIdleFunc(NULL);
97:             break;
98:         default:
99:             break;
100:     }
101: }
102:
103: /*
104:  * Request double buffer display mode.
105:  * Register mouse input callback functions
106:  */
107: int main(int argc, char** argv)
108: {
109:     glutInit(&argc, argv);
110:     glutInitDisplayMode (GLUT_DOUBLE | GLUT_RGB);
111:     glutInitWindowSize (250, 250);
112:     glutInitWindowPosition (100, 100);
113:     glutCreateWindow (argv[0]);
114:     init ();
115:     glutDisplayFunc(display);
116:     glutReshapeFunc(reshape);
117:     glutMouseFunc(mouse);
118:     glutMainLoop();
119:     return 0; /* ANSI C requires main to return int. */
120: }
```