2d Object Rotation

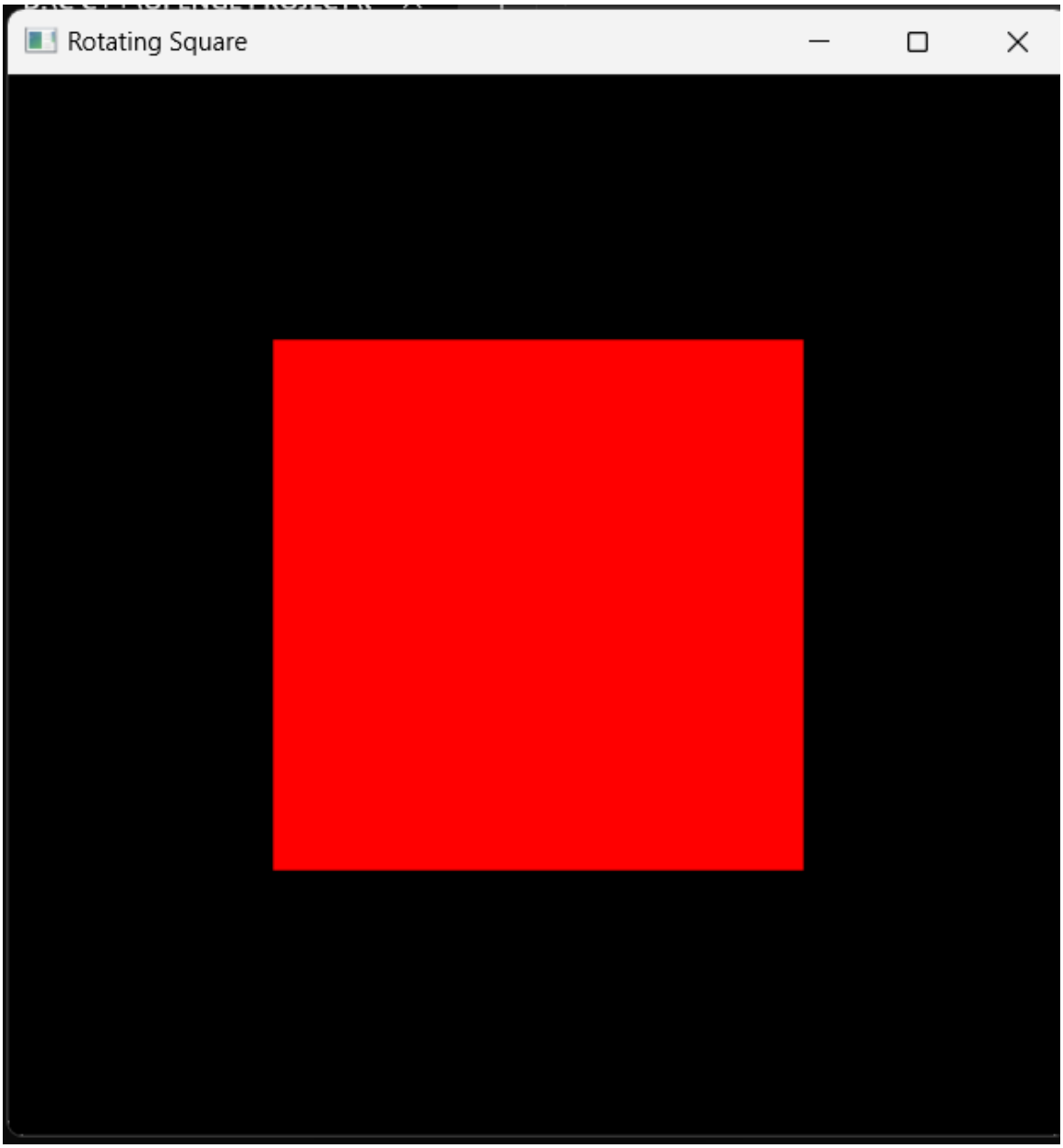
Code:

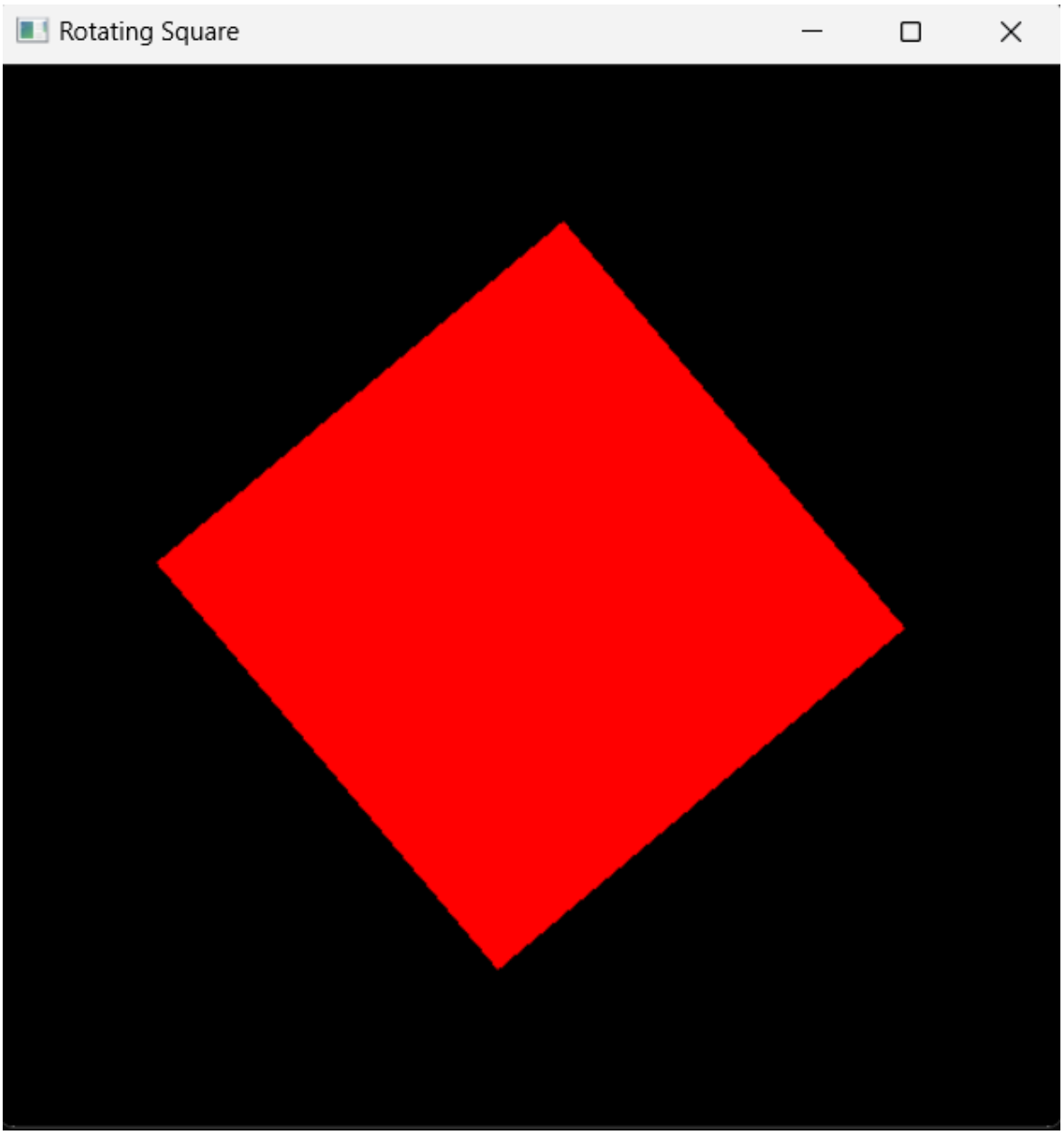
```
#include <GL/glut.h>

float angle = 0.0;

void display() {
   glClear(GL_COLOR_BUFFER_BIT);

   glPushMatrix(); // Save the current state of transformations

   glRotatef(angle, 0.0, 0.0, 1.0); // Rotate about the z-axis

   // Draw a red square
   glBegin(GL_QUADS);
   glColor3f(1.0, 0.0, 0.0);
   glVertex2f(-0.5, -0.5);
   glVertex2f(0.5, -0.5);
```

```
    glVertex2f(0.5, 0.5);
    glVertex2f(-0.5, 0.5);
    glEnd();

    glPopMatrix(); // Undo the move to rotate the square

    glutSwapBuffers();
}

void keyboard(unsigned char key, int x, int y) {
    switch (key) {
    case '+':
        angle += 5.0;
        break;
    case '-':
        angle -= 5.0;
        break;
    }
    glutPostRedisplay();
```

```
}

int main(int argc, char** argv) {
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_RGB | GLUT_DOUBLE);
    glutInitWindowSize(500, 500);
    glutCreateWindow("Rotating Square");
    glutDisplayFunc(display);
    glutKeyboardFunc(keyboard);
    glutMainLoop();
    return 0;
}
```

Output:


Rotating Square


Rotating Square