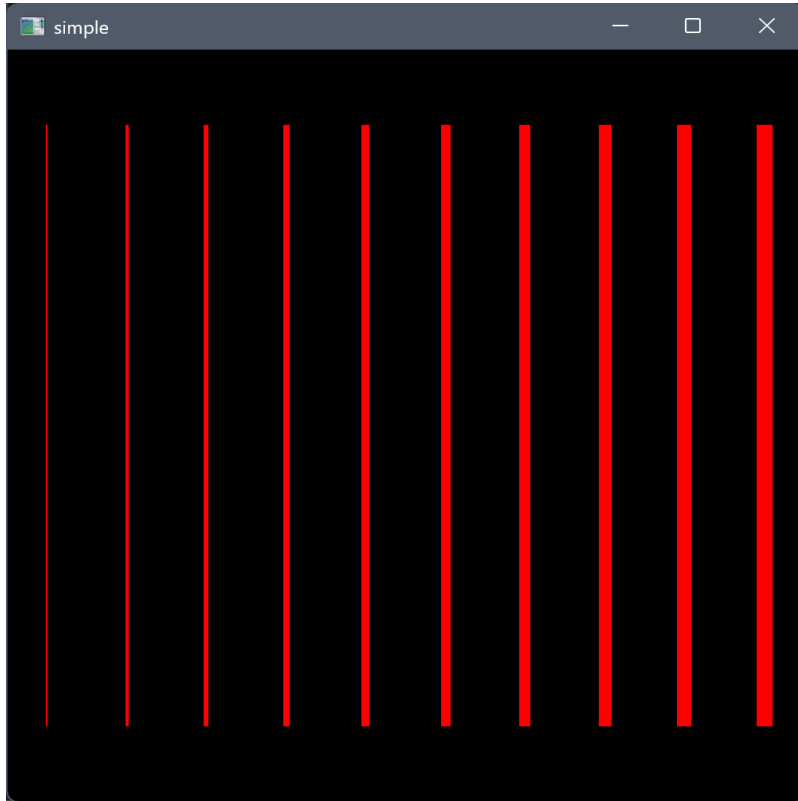


## | 2025-04-19\_CG\_17\_선그리기\_03\_넓어지는 연속 세로선

### | 📁 예제 설명:

### | 📄 목표 출력



### | 📄 조건

### | 📁 해결 코드

### | 📄 핵심 코드

```
glGetFloatv(GL_LINE_WIDTH_RANGE, sizes);
curSize = sizes[0];
for (x = -90.0f; x <= 90.0f; x += 20.0f) {
    glLineWidth(curSize);
    glBegin(GL_LINES);
    glVertex2f(x, -80.0f);
    glVertex2f(x, 80.0f);
    glEnd();
    curSize += 1.0f;
}
```

## I 전체 코드

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

#define GL_PI 3.1415f

void RenderScene(void) {

    GLfloat x, y;
    GLfloat sizes[2];
    GLfloat curSize = 0.0f;

    glClear(GL_COLOR_BUFFER_BIT);
    glColor3f(1.0f, 0.0f, 0.0f);
    glPushMatrix();

    glGetFloatv(GL_LINE_WIDTH_RANGE, sizes);
    curSize = sizes[0];
    for (x = -90.0f; x <= 90.0f; x += 20.0f) {
        glLineWidth(curSize);
        glBegin(GL_LINES);
        glVertex2f(x, -80.0f);
        glVertex2f(x, 80.0f);
        glEnd();
        curSize += 1.0f;
    }

    glPopMatrix();

    glFlush();
}

void ChangeSize(GLsizei w, GLsizei h) {

    GLint wSize = 100.0f;
    GLfloat aspectRatio;

    if (h == 0) h = 1;

    glViewport(0, 0, w, h);

    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();

    aspectRatio = (GLfloat)w / (GLfloat)h;
    if (aspectRatio >= 1.0f) {
        glOrtho(-wSize*aspectRatio, wSize*aspectRatio, -wSize, wSize, -wSize, wSize);
```

```
}  
else {  
    glOrtho(-wSize, wSize, -wSize/aspectRatio, wSize/aspectRatio, -wSize, wSize);  
}  
  
glMatrixMode(GL_MODELVIEW);  
glLoadIdentity();  
}  
  
void SetupRC(void) {  
    glClearColor(0.0f, 0.0f, 0.0f, 1.0f);  
}  
  
int main(int argc, char** argv) {  
  
    glutInit(&argc, argv);  
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);  
    glutInitWindowSize(500, 500);  
    glutInitWindowPosition(100, 100);  
  
    glutCreateWindow("simple");  
  
    SetupRC();  
  
    glutDisplayFunc(RenderScene);  
    glutReshapeFunc(ChangeSize);  
  
    glutMainLoop();  
}
```