

```
/* IT Text CG, Chapter 5, Exercise 1, Color Gradation */  
#include <GL/glut.h>  
#include <stdlib.h>
```

```
void keyboard(unsigned char key, int x, int y)  
{  
    switch(key)  
    {  
        case 27: exit(0); break;  
    }  
}
```

```
void display(void)  
{  
    GLfloat x1, y1, x2, y2;  
    GLfloat colorR1, colorG1, colorB1;  
    int i1;  
  
    glClear(GL_COLOR_BUFFER_BIT);  
    glLoadIdentity();  
    glOrtho(-150.0, 150.0, -150.0, 150.0, -150.0, 150.0);  
  
    colorR1 = 1.0/256.0;  
    colorG1 = 0.5/256.0;  
    colorB1 = 0.3/256.0;  
  
    x1 = -124.0;  
    x2 = -125.0;
```

```

y1 = 80.0;
y2 = 20.0;
for(i1 = 0; i1 <= 255; ++i1)
{
    /* 256段階のカラースケールの表示 */
    glColor3f(colorR1*i1, colorG1*i1, colorB1*i1);
    glBegin(GL_POLYGON);
        glVertex2f(x1, y1);
        glVertex2f(x1, y2);
        glVertex2f(x2, y2);
        glVertex2f(x2, y1);
    glEnd();

    x1 = x1 + 1.0;
    x2 = x2 + 1.0;
} /* for i1 */

glFlush();
}

```

```

int main(int argc, char** argv)
{
    glutInitWindowSize(1000,1000);
    glutInitWindowPosition(0, 0);
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGBA);
    glutCreateWindow(argv[0]);
    glClearColor(1.0, 1.0, 1.0, 0.0);

    glutDisplayFunc(display);
}

```

```
glutKeyboardFunc(keyboard);
```

```
glutMainLoop();
```

```
return 0;
```

```
}
```