

Lab Report

Jitendra Kumar , 1401CS19

Week 1
09/01/2017

■ Title

- ▶ Manual for OpenGL installation in Ubuntu

Installing OpenGL in Ubuntu

The first step is to install the development libraries of OpenGL/Glut in Ubuntu :

- ▶ `sudo apt-get install freeglut3 freeglut3-dev`
- ▶ `sudo apt-get install binutils-gold`

code in OpenGL

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

void init2D(float r, float g, float b)
{
    glClearColor(r,g,b,0.0);
    glMatrixMode (GL_PROJECTION);
    gluOrtho2D (0.0, 200.0, 0.0, 150.0);
}

void display(void)
{
    glClear(GL_COLOR_BUFFER_BIT);
    glColor3f(0.0, 1.0, 1.0);

    //draw two points
    glBegin(GL_POINTS);
    for(int i = 0; i < 10; i++)
    {
        glVertex2i(10+5*i,110);
    }
    glEnd();

    //draw a line
    glBegin(GL_LINES);
        glVertex2i(10,10);
        glVertex2i(100,100);
    glEnd();

    glFlush();
}

void main(int argc,char *argv[])
{
    glutInit(&argc,argv);
    glutInitDisplayMode (GLUT_SINGLE | GLUT_RGB);
    glutInitWindowSize (500, 500);
    glutInitWindowPosition (100, 100);
    glutCreateWindow ("points and lines");
    init2D(0.0,0.0,0.0);
    glutDisplayFunc(display);
    glutMainLoop();
}
```

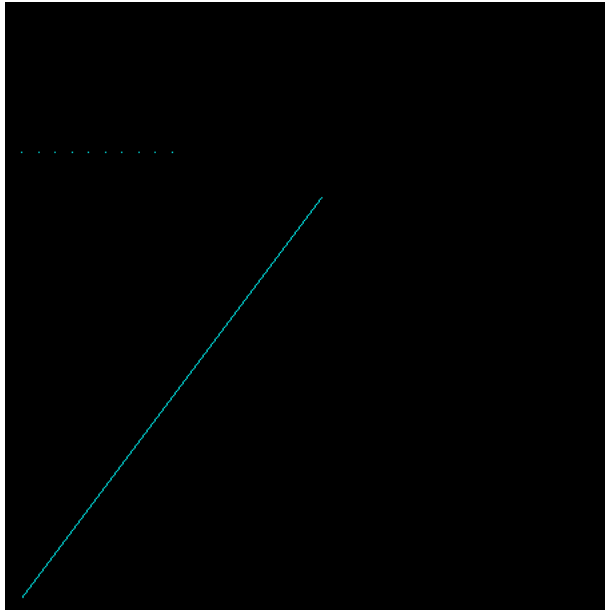


FIGURE 1 – example for OpenGL

code in matlab

```
y1 = sin(x.^2);  
y2 = cos(x.^2);  
plot(x,y1,x,y2)
```

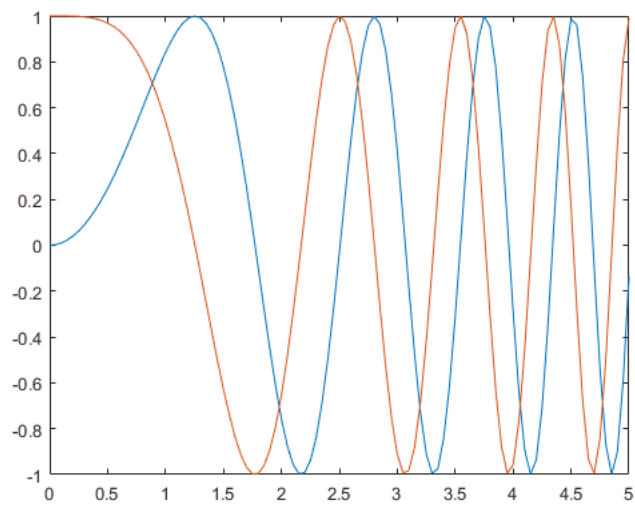


FIGURE 2 – example for matlab