Experiment No 1

Title Install and explore the OpenGL.

Create cpp file and write your code

Run on terminal:

```
g++ MyProg.cpp -lGL -lGLU -lglut (for C++ program)
./a.out
```

Basic Code # Triangle

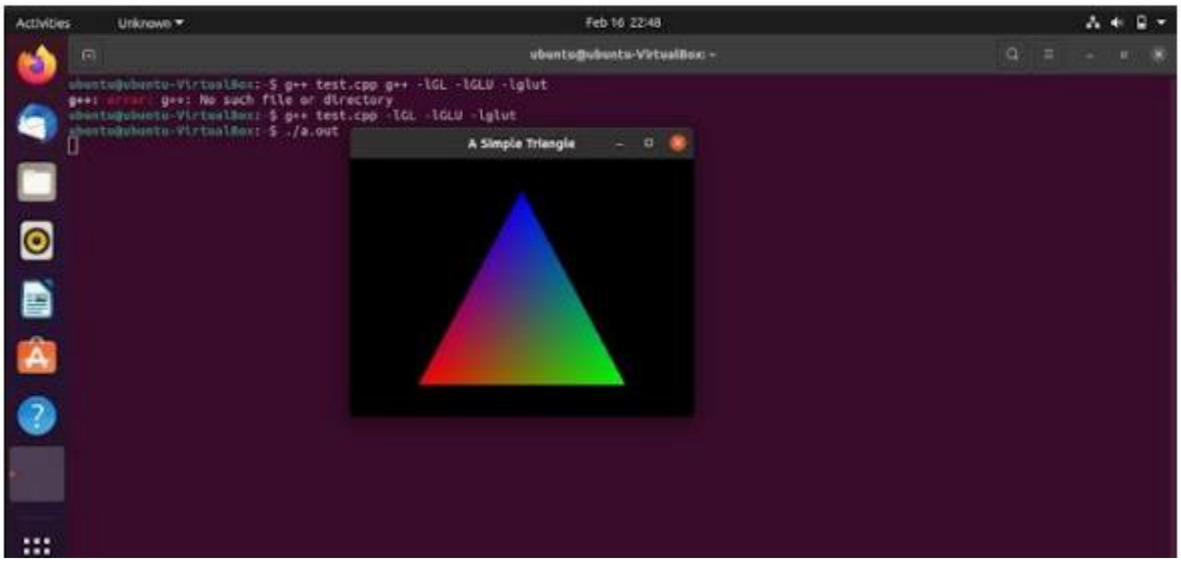
In C++

```
// A simple introductory program; its main window contains a static picture
// of a triangle, whose three vertices are red, green and blue. The program
#include <GL/glut.h>
// Clears the current window and draws a triangle.
void display() {
 // Set every pixel in the frame buffer to the current clear color.
 glClear(GL_COLOR_BUFFER_BIT);
 // Drawing is done by specifying a sequence of vertices. The way these
 // vertices are connected (or not connected) depends on the argument to
 // glBegin. GL_POLYGON constructs a filled polygon.
 glBegin(GL_POLYGON);
 glColor3f(1, 0, 0); glVertex3f(-0.6, -0.75, 0.5);
 glColor3f(0, 1, 0); glVertex3f(0.6, -0.75, 0);
 glColor3f(0, 0, 1); glVertex3f(0, 0.75, 0);
 glEnd();
 // Flush drawing command buffer to make drawing happen as soon as possible.
 glFlush();
}
// Initializes GLUT, the display mode, and main window; registers callbacks;
// enters the main event loop.
int main(int argc, char** argv) {
 // Use a single buffered window in RGB mode (as opposed to a double-buffered
 // window or color-index mode).
 glutInit(&argc, argv);
 glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
 // Position window at (80,80)-(480,380) and give it a title.
 glutInitWindowPosition(80, 80);
 glutInitWindowSize(400, 300);
 glutCreateWindow("A Simple Triangle");
 // Tell GLUT that whenever the main window needs to be repainted that it
 // should call the function display().
 glutDisplayFunc(display);
 // Tell GLUT to start reading and processing events. This function
 // never returns; the program only exits when the user closes the main
 // window or kills the process.
 glutMainLoop();
}
```

How to run glut/ OpenGL in g++ (Ubuntu)

```
g++ MyProg.cpp -lGL -lGLU -lglut
```

OUTPUT



```
ubuntu@ubuntu-VirtualBox:~$ g++ test.cpp g++ -lGL -lGLU -lglut
g++: error: g++: No such file or directory
ubuntu@ubuntu-VirtualBox:~$ g++ test.cpp -lGL -lGLU -lglut
ubuntu@ubuntu-VirtualBox:~$ ./a.out
```