**Lab Report. 01**

**Subject: Computer Graphics Lab**



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**Code**

#include<windows.h>

#include <GL/gl.h>

#include <gl/glut.h>

void myInit()

{

glClearColor(1.0, 1.0, 1.0, 0.0);

glPointSize(10.0);

glMatrixMode(GL\_MODELVIEW);

glLoadIdentity();

gluOrtho2D(0.0, 500.0, 0.0, 500.0);

}

void Display()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glColor3f(1.0, 0.0, 0.0);

glBegin(GL\_POINTS);

glVertex2f(50.0, 100.0);

glEnd();

glFlush();

}

int main(int argc, char\*\* argv)

{

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE);

glutInitWindowSize(500, 500);

glutInitWindowPosition(0, 0);

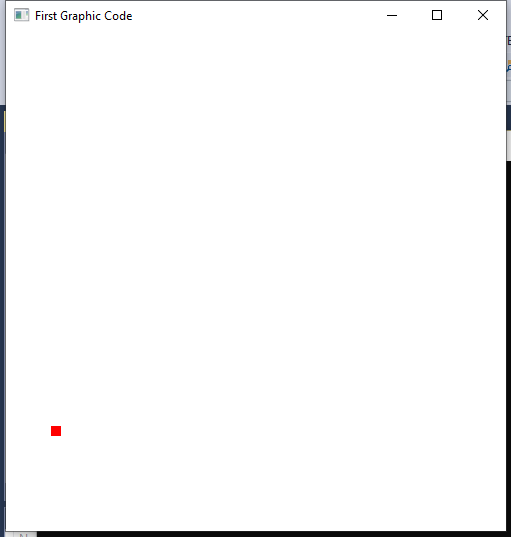
glutCreateWindow("First Graphic Code");

myInit();

glutDisplayFunc(Display);

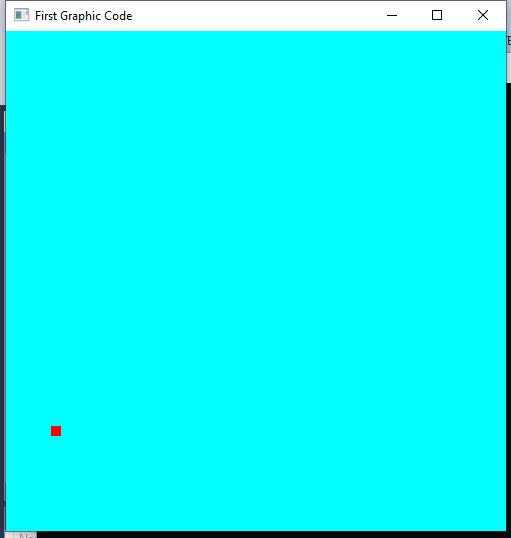
glutMainLoop();

}



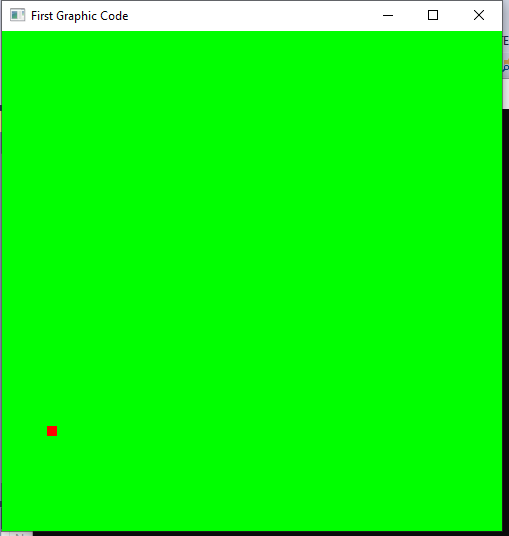
**Task 01:**

Change the background colors (atleast 3 different).



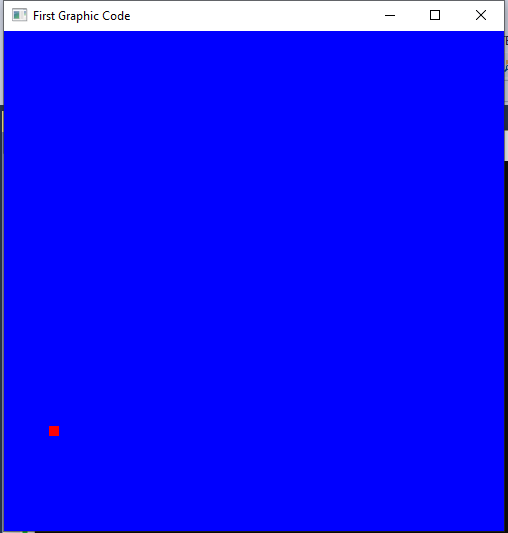
glClearColor(0.0, 1.0, 1.0, 0.0);

The line glClearColor(0.0, 1.0, 1.0, 0.0); sets the background color to cyan (green + blue) in our OpenGL window.



glClearColor(0.0, 1.0, 0.0, 0.0);

The line glClearColor(0.0, 1.0, 0.0, 0.0); sets the background color to green in our OpenGL window.

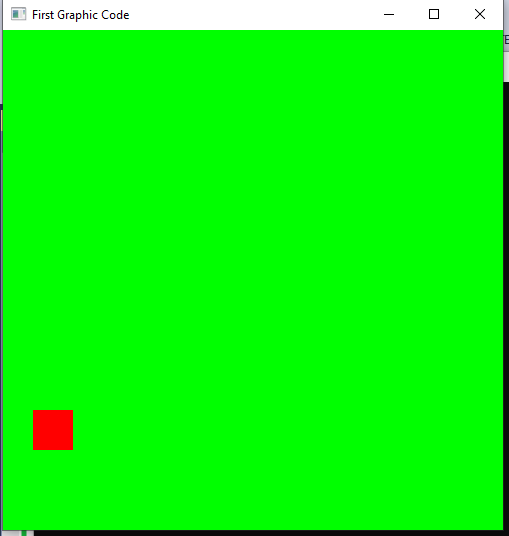


glClearColor(0.0, 0.0, 1.0, 0.0);

The line glClearColor(0.0, 0.0, 1.0, 0.0); sets the background color to cyan (green + blue) in our OpenGL window.

**Task 02:**

Change the point size.

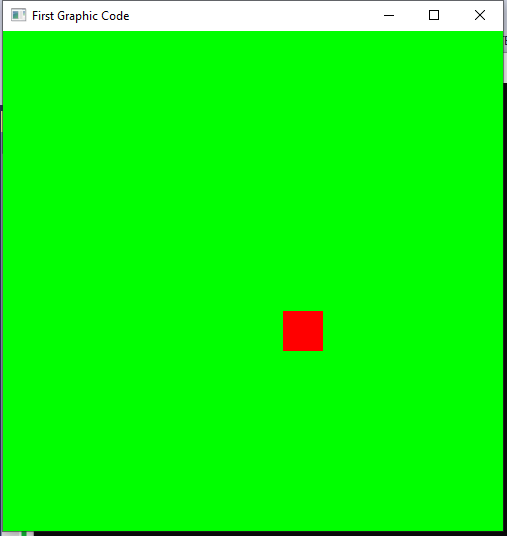


glPointSize(40.0);

The line sets the glPointSize(40.0) point size to 40 in our OpenGL window.

**Task 03:**

Change the point location.



glVertex2f(300.0, 200.0);

The line sets the glVertex2f(300.0, 200.0) point location in our OpenGL window.

**Task 04:**

Create any shape with the help of these dots.

#include<windows.h>

#include <GL/gl.h>

#include <gl/glut.h>

void myInit()

{

glClearColor(1.0, 1.0, 1.0, 0.0);

glPointSize(40.0);

glMatrixMode(GL\_MODELVIEW);

glLoadIdentity();

gluOrtho2D(0.0, 500.0, 0.0, 500.0);

}

void Display()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glLineWidth(5);

glColor3f(1.0, 0.0, 0.0);

glBegin(GL\_LINES);

glVertex2f(50.0, 100.0);

glVertex2f(300.0, 100.0);

glVertex2f(50.0, 100.0);

glVertex2f(50.0, 300.0);

glVertex2f(300.0, 100.0);

glVertex2f(300.0, 300.0);

glVertex2f(300.0, 300.0);

glVertex2f(175.0, 400.0);

glVertex2f(50.0, 300.0);

glVertex2f(175.0, 400.0);

glVertex2f(100.0, 100.0);

glVertex2f(100.0, 200.0);

glVertex2f(100.0, 200.0);

glVertex2f(200.0, 200.0);

glVertex2f(200.0, 100.0);

glVertex2f(200.0, 200.0);

glEnd();

glFlush();

}

int main(int argc, char\*\* argv)

{

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE);

glutInitWindowSize(500, 500);

glutInitWindowPosition(0, 0);

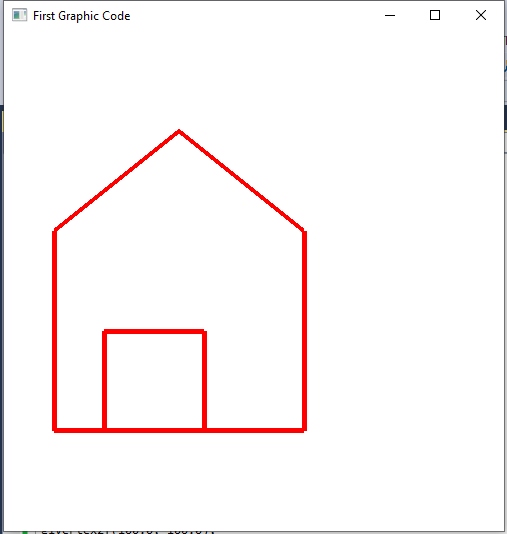
glutCreateWindow("First Graphic Code");

myInit();

glutDisplayFunc(Display);

glutMainLoop();

}



This code creates a graphics window using OpenGL and GLUT. It initializes a white background and sets up the view. The Display function draws a series of red lines to form geometric shapes. The main function initializes GLUT, creates a window, and starts the main event loop.