



Some functions:

* glutInit: initializes GLUT, must be called before other GL/GLUT functions. It takes the same arguments as the main().

void **glutInit**(int \**argc*, char \*\**argv*)

* glutCreateWindow: creates a window with the given title.

int **glutCreateWindow**(char \**title*)

* glutInitWindowSize: specifies the initial window width and height, in pixels.

void **glutInitWindowSize**(int *width*, int *height*)

* glutInitWindowPosition: positions the top-left corner of the initial window at (*x*, *y*). The coordinates (*x*, *y*), in term of pixels, is measured in window coordinates, i.e., origin (0, 0) is at the top-left corner of the screen; x-axis pointing right and y-axis pointing down.

void **glutInitWindowPosition**(int *x*, int *y*)

GL\_POINTS

 GL\_LINES

 GL\_LINE\_STRIP

 GL\_LINE\_LOOP

 GL\_TRIANGLES

 GL\_TRIANGLE\_STRIP

 GL\_TRIANGLE\_FAN

 GL\_QUADS

 GL\_QUAD\_STRIP

 GL\_POLYGON

lab 1:code for Drawing line

#include<windows.h>

#include <GL/glut.h>

void init(void)

{

 glClearColor(0.0, 0.0, 0.0, 0.0); // Set display window colour to white

 glMatrixMode(GL\_PROJECTION); // Set projection parameters

 gluOrtho2D(0.0, 400.0, 0.0, 400.0);

}

void drawShapes(void)

{

 glClear(GL\_COLOR\_BUFFER\_BIT); // Clear display window

 //Set colour to black

 glColor3f(0.0, 0.0, 0.0);

 //Adjust the point size

 glPointSize(10.0);

 // Draw a couple of points

 //Set colour to red

 glColor3f(1.0, 0.0, 0.0);

 // Draw a line

 glBegin(GL\_LINES);

 glVertex2i(20, 250);

 glVertex2i(100, 80);

 glEnd();

 glFlush(); // Process all OpenGL routines

}

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

{

 glutInit(&argc, argv); // Initalise GLUT

 glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB); // Set display mode

 glutInitWindowPosition(100, 100); // Set window position

 glutInitWindowSize(350, 350); // Set window size

 glutCreateWindow("An Example OpenGL Program"); // Create display window

 init(); // Execute initialisation procedure

 glutDisplayFunc(drawShapes); // Send graphics to display window

 glutMainLoop(); // Display everything and wait

 return 0;

}

**Drawing triangle:**

#include<windows.h>

#include <GL/glut.h>

void init(void)

{

 glClearColor(1.0, 1.0, 1.0, 0.0); // Set display window colour to white

 glMatrixMode(GL\_PROJECTION); // Set projection parameters

 gluOrtho2D(0.0, 400.0, 0.0, 400.0);

}

void drawShapes(void)

{

 glClear(GL\_COLOR\_BUFFER\_BIT); // Clear display window

 //Set colour to black

 glColor3f(0.0, 0.0, 0.0);

 //Adjust the point size

 glPointSize(5.0);

 // Draw a couple of points

 //Set colour to blue

 glColor3f(0.0, 0.0, 3.0);

 // Draw a filled triangle

 glBegin(GL\_TRIANGLES);

 glVertex2i(20, 250);

 glVertex2i(100, 380);

 glVertex2i(180, 250);

 glEnd();

glFlush(); // Process all OpenGL routines

}

**Lab 2: home**

#include<windows.h>

#include <GL/glut.h>

void init(void)

{

 glClearColor(1.0, 1.0, 1.0, 0.0); // Set display window colour to white

 glMatrixMode(GL\_PROJECTION); // Set projection parameters

 gluOrtho2D(0.0, 400.0, 0.0, 400.0);

}

void drawShapes(void)

{

 glClear(GL\_COLOR\_BUFFER\_BIT); // Clear display window

 //Set colour to black

 glColor3f(0.0, 0.0, 0.0);

 //Adjust the point size

 glPointSize(5.0);

 // Draw a couple of points

 //Set colour to green

 glColor3f(0.0, 0.0, 3.0);

 // Draw a filled triangle

 glBegin(GL\_TRIANGLES);

 glVertex2i(20, 250);

 glVertex2i(100, 380);

 glVertex2i(180, 250);

 glEnd();

 //Set colour to red

 glColor3f(0.0, 5.0, 0.0);

 // Draw a filled quadrilateral

 glBegin(GL\_QUADS);

 glVertex2i(200, 250);

 glVertex2i(200, 380);

 glVertex2i(380, 380);

 glVertex2i(380, 250);

 glEnd();

 /\*//Set colour to blue

 glColor3f(0.0, 0.0, 1.0);

 // Draw a filled octagon

 glBegin(GL\_POLYGON);

 glVertex2i(90, 30);

 glVertex2i(30, 90);

 glVertex2i(30, 174);

 glVertex2i(90, 234);

 glVertex2i(174, 234);

 glVertex2i(234, 174);

 glVertex2i(234, 90);

 glVertex2i(174, 30);

 glEnd();

 //Set colour to black

 glColor3f(0.0, 1.0, 1.0);

 // Draw an outlined triangle

 glBegin(GL\_LINES);

 glVertex2i(100, 200);

 glVertex2i(100, 50);

 glVertex2i(100, 50);

 glVertex2i(300, 50);

 glVertex2i(300, 50);

 glVertex2i(300, 200);

 glVertex2i(300, 200);

 glVertex2i(100, 200);

 glEnd();

 \*/

 glFlush(); // Process all OpenGL routines

}

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

{

 glutInit(&argc, argv); // Initalise GLUT

 glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB); // Set display mode

 glutInitWindowPosition(50, 100); // Set window position

 glutInitWindowSize(400, 300); // Set window size

 glutCreateWindow("An Example OpenGL Program"); // Create display window

 init(); // Execute initialisation procedure

 glutDisplayFunc(drawShapes); // Send graphics to display window

 glutMainLoop(); // Display everything and wait

 return 0;

}