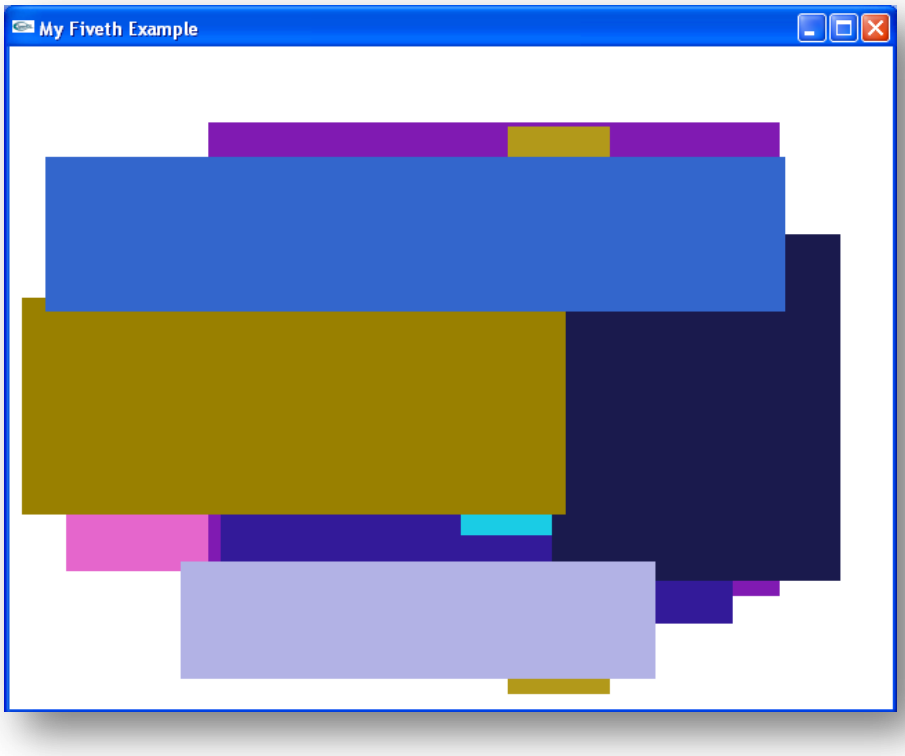
CSC 305 **Computer Graphics**

Lab Exercise

This example is to demonstrate how to draw random number of rectangles with different colors.

Sample Output



Source Code

```
// Example_5.cpp : Defines the entry point for the console application.
//
#include "stdafx.h"
#include <windows.h>   // use as needed for your system
#include <stdlib.h>
#include <gl/Gl.h>
#include <gl/glut.h>

 void myInit(void)
 {
    glClearColor(1.0,1.0,1.0,0.0);       // set white background color
    glColor3f(0.0f, 0.0f, 0.0f);         // set the drawing color
      glPointSize(4.0);                    // a 'dot' is 4 by 4 pixels
      glMatrixMode(GL_PROJECTION);
      glLoadIdentity();
      gluOrtho2D(0.0, 640.0, 0.0, 480.0);
}
void drawFlurry(int num, int numColors, int Width, int Height)
// draw num random rectangles in a Width by Height rectangle
{
      for (int i = 0; i < num; i++)
      {
            GLint x1 = rand()%Width;                  // place corner randomly
            GLint y1 = rand()%Height;
            GLint x2 = rand()%Width;                  // pick the size so it fits
            GLint y2 = rand()%Height;
            GLfloat lev1 = (rand()%10) / 10.0;// random value, in range 0 to 1
            GLfloat lev2 = (rand()%10) / 10.0;// random value, in range 0 to 1
            GLfloat lev3 = (rand()%10) / 10.0;// random value, in range 0 to 1

            glColor3f(lev1,lev2,lev3);                // set the gray level

            glRecti(x1, y1, x2, y2);                  // draw the rectangle
      }

}
void draw()
{
      glClear(GL_COLOR_BUFFER_BIT);       // clear the screen
            drawFlurry(10, 10, 640, 480);
      glFlush();

}

void main(int argc, char** argv)
{
      glutInit(&argc, argv);                          // initialize the toolkit
      glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB); // set display mode
      glutInitWindowSize(640,480);                 // set window size
      glutInitWindowPosition(0, 0);                // set window position on screen
      glutCreateWindow("My Fiveth Example");       // open the screen window
      glutDisplayFunc(draw);                       // register redraw function
      myInit();
      glutMainLoop();                                 // go into a perpetual loop
}
```