Swinburne University of Technology

COS20007 Object Oriented Programming

Drawing Program - A Basic Shape

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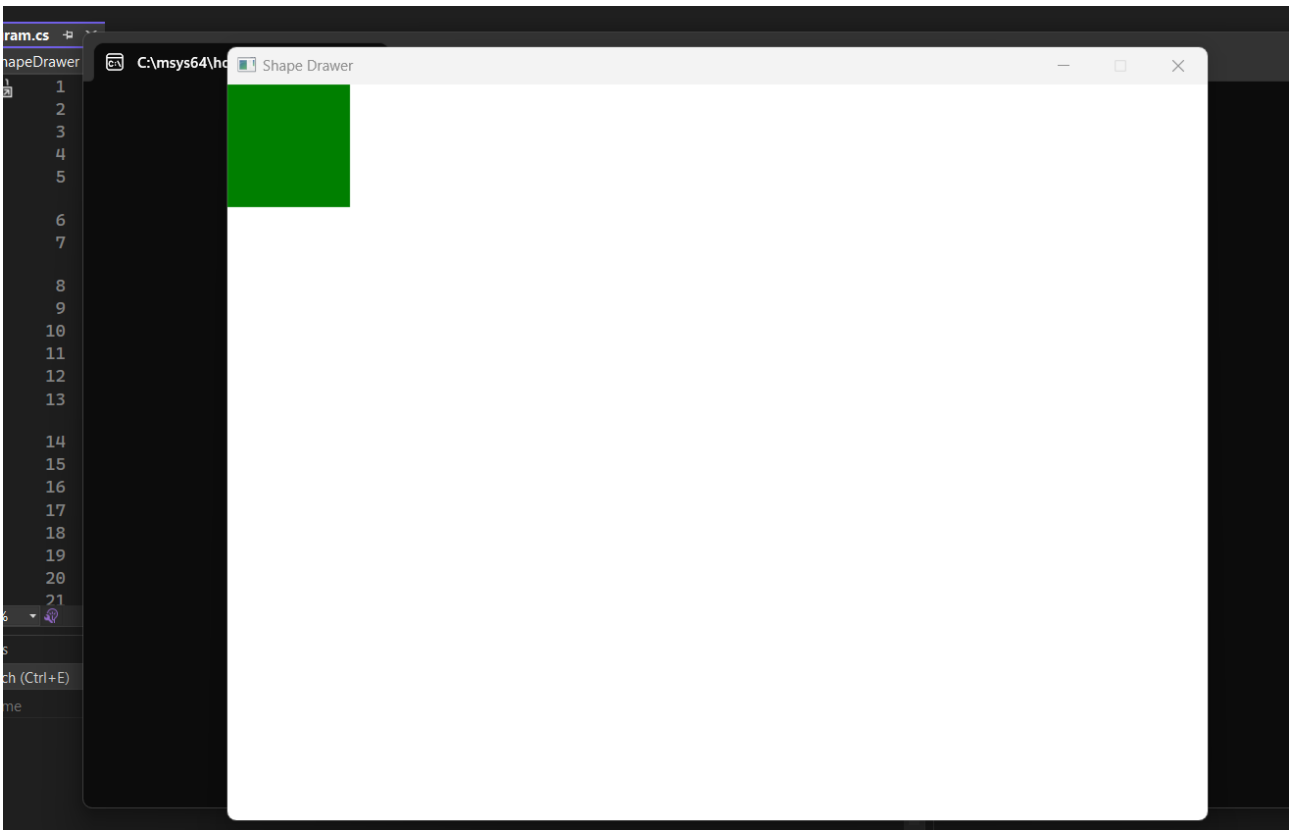
```
using System;
using SplashKitSDK;

namespace ShapeDrawer
{
    public class Program
    {
        public static void Main()
        {
            Window window = new Window("Shape Drawer", 800, 600);
            Shape myShape = new Shape();

            do
            {
                SplashKit.ProcessEvents();
                SplashKit.ClearScreen();

                if (SplashKit.MouseClicked(MouseButton.LeftButton))
                {
                    myShape.X = SplashKit.MouseX();
                    myShape.Y = SplashKit.MouseY();
                }

                if (myShape.IsAt(SplashKit.MousePosition()) &&
    SplashKit.KeyTyped(KeyCode.SpaceKey))
                {
                    myShape.color = SplashKit.RandomRGBColor(255);
                }

                myShape.Draw();
                SplashKit.RefreshScreen();
            } while (!window.CloseRequested);
        }
    }
}
```

```
using SplashKitSDK;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ShapeDrawer
{
    public class Shape
    {
        private Color _color;
        private float _x, _y;
        private int _width, _height;

        public Shape()
        {
            _color = Color.Green;
            _x = 0;
            _y = 0;
            _width = 100;
            _height = 100;
        }

        public Color color
        {
            set { _color = value; }
            get { return _color; }
        }

        public float X
        {
            set { _x = value; }
            get { return _x; }
        }

        public float Y
        {
            set { _y = value; }
            get { return _y; }
        }

        public int Width
        {
            set { _width = value; }
            get { return _width; }
        }

        public int Height
        {
            set { _height = value; }
            get { return _height; }
        }
```

```
54
55          public void Draw()
56          {
57              SplashKit.FillRectangle(_color, _x, _y, _width, _height);
58          }
59
60          public bool IsAt(Point2D pt)
61          {
62
63              if ((X < pt.X) && (X + 100 > pt.X) && (Y < pt.Y) && (Y + 100 > pt.Y))
64              {
65                  return true;
66              }
67              else
68              {
69                  return false;
70              }
71
72          }
73      }
74  }
```


Shape Drawer