Swinburne University of Technology

COS20007 Object Oriented Programming

2.3P - Drawing Program - A Basic Shape

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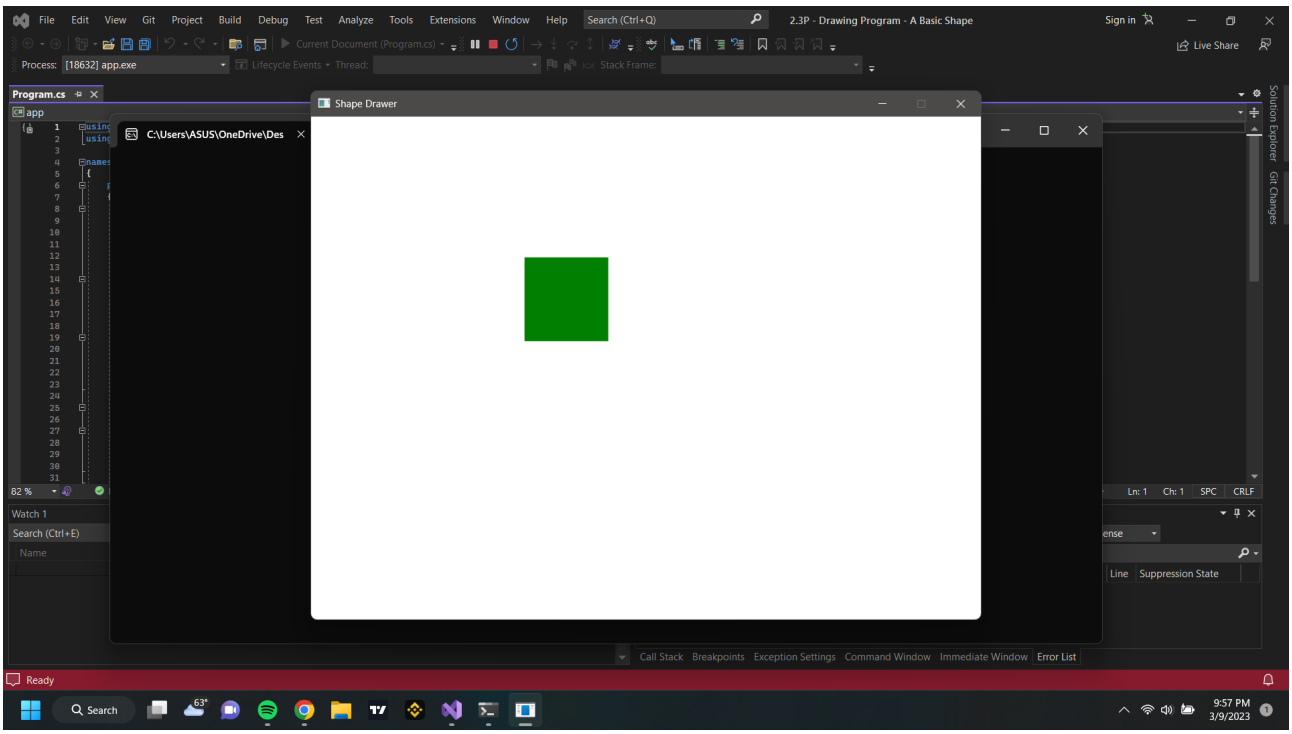
```
using System;
using SplashKitSDK;

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 (SplashKit.KeyTyped(KeyCode.SpaceKey))
                {
                    if (myShape.IsAt(SplashKit.MousePosition()))
                    {
                        myShape.Color = Color.RandomRGB(255);
                    }
                }

                myShape.Draw();

                SplashKit.RefreshScreen();
            } while (!window.CloseRequested);
        }

    }
}
```

```
using SplashKitSDK;

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

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

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

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

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

```
54          }
55
56          public float Width
57          {
58              get
59              {
60                  return _width;
61              }
62              set
63              {
64                  _width = value;
65              }
66          }
67
68          public float Height
69          {
70              get
71              {
72                   return _height;
73              }
74              set
75              {
76                  _height = value;
77              }
78          }
79          public void Draw()
80          {
81              SplashKit.FillRectangle(_color, _x, _y, _width, _height);
82          }
83          public bool IsAt(Point2D pt)
84          {
85              return SplashKit.PointInRectangle(pt, SplashKit.RectangleFrom(X, Y,
    ↪  Width, Height));
86          }
87      }
88  }
```


Shape Drawer
C:\Users\ASUS\OneDrive\Des
Program.cs
Ready