Swinburne University of Technology

COS20007 Object Oriented Programming

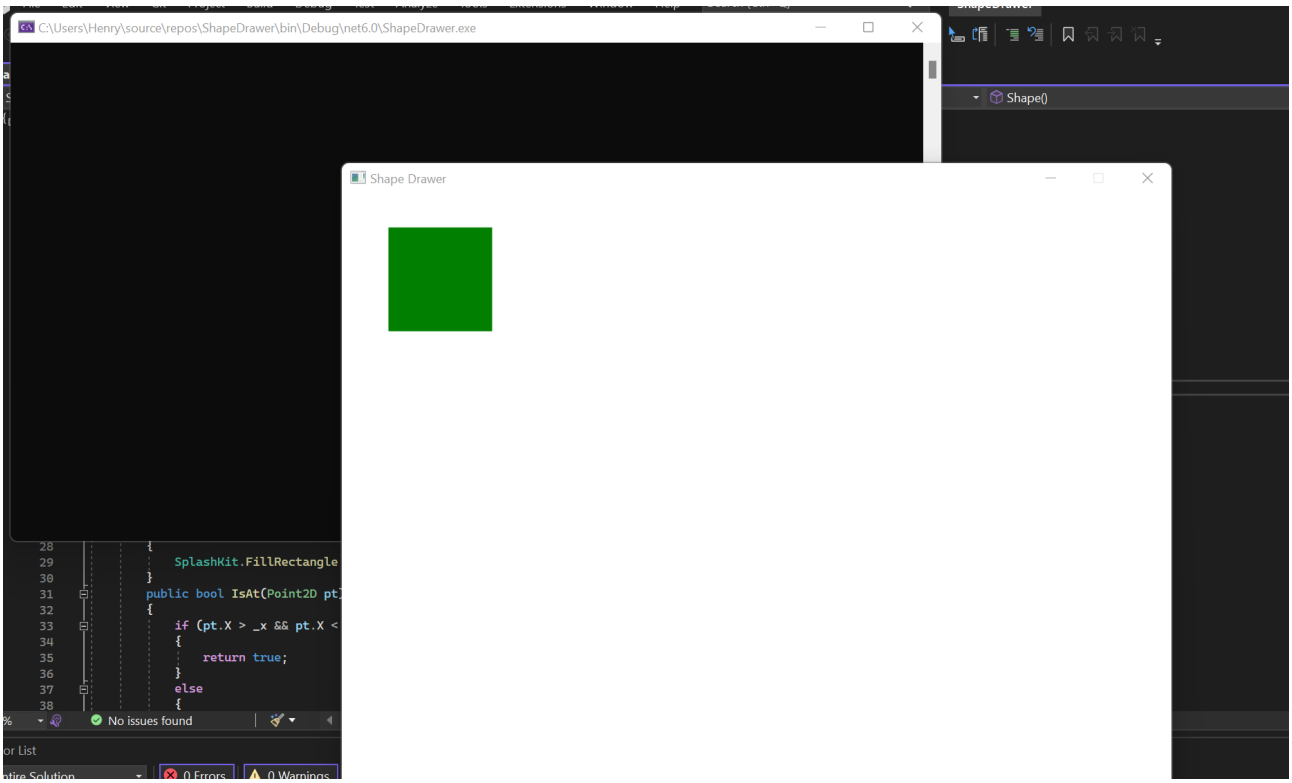
2.3P - Drawing Program - A Basic Shape

PDF generated at 12:16 on Thursday 16th March, 2023

```
using System;
using System.ComponentModel.Design;
using System.Globalization;
using System.Reflection.Metadata.Ecma335;
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();
                myShape.Draw();
                SplashKit.RefreshScreen();

                if (SplashKit.MouseClicked(MouseButton.LeftButton))
                {
                    myShape.X = SplashKit.MouseX();
                    myShape.Y = SplashKit.MouseY();
                }
                if (myShape.IsAt(SplashKit.MousePosition()) &
    (SplashKit.KeyTyped(KeyCode.SpaceKey)))
                {
                    myShape.Color = Color.RandomRGB(255);
                }

            }
            while (!window.CloseRequested);

        }

    }


}
```

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

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

        public Shape()
        {
            _color = Color.Green;
            _x = 0;
            _y = 0;
            _width = 100;
            _height = 100;
        }
        public void Draw()
        {
            SplashKit.FillRectangle (_color, _x, _y, _width, _height);
        }
        public bool IsAt(Point2D pt)
        {

            if (pt.X > _x && pt.X <= _x + _width && pt.Y > _y && pt.Y <= _y +_width)
            {
                return true;
            }
            else
            {
                return false;
            }
        }
        public float X
        {
            get
            {
                return _x;
            }
            set
            {
                _x = value;
            }

```

```
54          }
55          public float Y
56          {
57              get
58              {
59                  return _y;
60              }
61              set
62              {
63                  _y = value;
64              }
65          }
66          public int Width
67          {
68              get
69              {
70                  return _width;
71              }
72              set
73              {
74                  _width = value;
75              }
76          }
77          public int Height
78          {
79              get
80              {
81                  return _height;
82              }
83              set
84              {
85                  _height = value;
86              }
87          }
88          public Color Color
89          {
90              get
91              {
92                  return _color;
93              }
94              set
95              {
96                  _color = value;
97              }
98          }
99
100     }
101
102 }
```


C:\Users\Henry\source\repos\ShapeDrawer\bin\Debug\net6.0\ShapeDrawer.exe
Shape()
Shape Drawer
SplashKit.FillRectangle
public bool IsAt(Point2D pt
if (pt.X > _x && pt.X <
return true;
else
No issues found
0 Errors
0 Warnings