

Program.cs

...COS20007\Week_2\2.3P - Answers\ShapeDrawer\Program.cs

1

```
1 using System;
2 using Microsoft.VisualBasic;
3 using SplashKitSDK;
4
5 namespace ShapeDrawer
6 {
7     public class Program
8     {
9         public static void Main()
10        {
11            Window window = new Window("Shape Drawer", 800, 600);
12            Shape myShape = new Shape();
13
14            do
15            {
16                SplashKit.ProcessEvents();
17                SplashKit.ClearScreen();
18
19                if (SplashKit.MouseClicked(MouseButton.LeftButton))
20                {
21                    myShape.X = SplashKit.MouseX();
22                    myShape.Y = SplashKit.MouseY();
23                }
24
25                Point2D myPoint = new Point2D
26                {
27                    X = SplashKit.MouseX(), Y = SplashKit.MouseY()
28                };
29
30                if (SplashKit.KeyTyped(KeyCode.SpaceKey))
31                {
32                    if (myShape.IsAt(myPoint))
33                    {
34                        myShape.Color = SplashKit.RandomColor();
35                    }
36                }
37                myShape.Draw();
38                SplashKit.RefreshScreen();
39            }
40            while (!window.CloseRequested);
41        }
42    }
43 }
44
```

Shape.cs

...p\COS20007\Week_2\2.3P - Answers\ShapeDrawer\Shape.cs

1

```
1 using SplashKitSDK;
2
3 namespace ShapeDrawer
4 {
5     internal class Shape
6     {
7         private Color _color;
8         private float _x;
9         private float _y;
10        private int _width;
11        private int _height;
12
13        public Shape()
14        {
15            _color = Color.Green;
16            _x = _y = 0.0f;
17            _width = _height = 100;
18        }
19
20        public Color Color
21        {
22            get => _color;
23            set => _color = value;
24        }
25        public float X
26        {
27            get => _x;
28            set => _x = value;
29        }
30        public float Y
31        {
32            get => _y;
33            set => _y = value;
34        }
35        public int Width
36        {
37            get => _width;
38            set => _width = value;
39        }
40        public int Height
41        {
42            get => _height;
43            set => _height = value;
44        }
45        public void Draw()
46        {
47            SplashKit.FillRectangle(_color, _x, _y, _width, _height);
48        }
49
```

```
50     public bool IsAt(Point2D point)
51     {
52         if (point.X >= _x && point.X <= _x + _width)
53         {
54             if (point.Y >= _y && point.Y <= _y + _height)
55             {
56                 return true;
57             }
58         }
59         return false;
60     }
61 }
62 }
63
```

Outputs





