

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 }
```

Shape.cs

..p\CO20007\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





