

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

2.3P - Drawing Program - A Basic Shape

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```
1  using System;
2  using SplashKitSDK;
3
4  namespace ShapeDrawer
5  {
6      public class Program
7      {
8          public static void Main()
9          {
10             Window window = new Window("Shape Drawer", 800, 600);
11             Shape myShape = new Shape();
12             do
13             {
14                 SplashKit.ProcessEvents();
15                 SplashKit.ClearScreen();
16                 if (SplashKit.MouseClicked(MouseButton.LeftButton)) // function to
↪ check if the mouse clicked and which mouse button has been clicked (Left, Right)
17                     {
18                         myShape.X = SplashKit.MouseX();
19                         myShape.Y = SplashKit.MouseY();
20
21                     }
22                     if (myShape.IsAt(SplashKit.MousePosition()) &&
↪ SplashKit.KeyTyped(KeyCode.SpaceKey))
23                     {
24                         myShape.Color = SplashKit.RandomRGBColor(255); //number in the
↪ bracket indicatethe opacity
25                     }
26                     myShape.Draw();
27                     //Draw() must always be the last function before refreshing the
↪ screen, otherwise it'll be 1 frame behind
28                     SplashKit.RefreshScreen();
29
30                 } while (!window.CloseRequested);
31
32             }
33         }
34     }
35 }
```

```

1  using SplashKitSDK;
2  using System;
3  using System.Collections.Generic;
4  using System.Linq;
5  using System.Numerics;
6  using System.Text;
7  using System.Threading.Tasks;
8
9  namespace ShapeDrawer
10 {
11     internal class Shape
12     {
13         private Color _color;
14         private float _x, _y;
15         private int _width, _height;
16
17         public Shape()
18         {
19             _color = Color.Green;
20             _x = 0;
21             _y = 0;
22             _width = 100;
23             _height = 100;
24         }
25         public void Draw() //Drawing a rectangle shape
26         {
27             SplashKit.FillRectangle (_color, _x, _y, _width, _height); //Write
↪ SplashKit. to see more shape to draw
28         }
29         public bool IsAt(Point2D pt) //Checking if the mouse is inside the shape
30         {
31             if ((pt.X - _x < _width) && (pt.Y - _y < _height)) return true;
32             else return false;
33         }
34         public Color Color
35         { get { return _color; } set { _color = value; } }
36         public float X
37         { get { return _x; } set { _x = value; } }
38         public float Y { get { return _y; } set { _y = value; } }
39         public int Width
40         { get { return _width; } set { _width = value; } }
41         public int Height
42         { get { return _height; } set { _height = value; } }
43         /*To create a property, use the following code:
44         * public [TYPE] PropertyName
45         * {
46         *     get
47         *     {
48         *         return....
49         *     }
50         *     set
51         *     {
52         *         .....=value;

```

```
53         *      }
54         * }
55         * Is there is no set, it'll be readonly property*/
56
57     }
58 }
```

