

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Drawing Program - A Basic Shape

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```
1  using System;
2  using SplashKitSDK;
3  namespace ShapeDrawer
4  {
5      public class Program
6      {
7
8          public static void Main()
9          {
10              Window window = new Window("Shape Drawer", 800, 600);
11
12              Shape myShape = new Shape();
13              do
14              {
15                  SplashKit.ProcessEvents();
16                  //SplashKit.ClearScreen();
17                  //SplashKit.RefreshScreen();
18
19                  //myShape.Draw();
20
21                  Point2D mousePt = SplashKit.MousePosition();
22
23                  SplashKit.DrawRectangle(Color.Yellow, myShape.X, myShape.Y,
↪ myShape.Width, myShape.Height);
24                      if (SplashKit.MouseClicked(MouseButton.LeftButton))
25                      {
26
27                          myShape.X = SplashKit.MouseX();
28                          myShape.Y = SplashKit.MouseY();
29                      }
30                      if (myShape.IsAt(SplashKit.MousePosition()))
31                      {
32
33                          if (SplashKit.KeyTyped(KeyCode.SpaceKey))
34                          {
35
36                              myShape.Color = SplashKit.RandomRGBColor(255);
37                          }
38                      }
39                      SplashKit.ClearScreen();
40
41                      myShape.Draw();
42                      SplashKit.RefreshScreen();
43              } while (!window.CloseRequested);
44          }
45      }
46
47  }
```

```
1  using System;
2  using SplashKitSDK;
3
4  namespace ShapeDrawer
5  {
6      public class Shape
7      {
8          private Color _color;
9          private float _x;
10         private float _y;
11         private int _width;
12         private int _height;
13
14         public Shape()
15         {
16             _color = Color.Green;
17             _x = (float)0;
18             _y = (float)0;
19             _width = (int)100;
20             _height = (int)100;
21         }
22         public void Draw()
23         {
24             SplashKit.FillRectangle(_color, _x, _y, _width, _height);
25
26         }
27         public Color Color
28         {
29             get { return _color; }
30             set { _color = value; }
31         }
32
33         public float X
34         {
35             get { return _x; }
36             set { _x = value; }
37         }
38         public float Y
39         {
40             get { return _y; }
41             set { _y = value; }
42
43         }
44         public int Width
45         {
46             get { return _width; }
47             set { _width = value; }
48         }
49
50         public int Height
51         {
52             get { return _height; }
53             set { _height = value; }
```

```
54     }
55     public bool IsAt(Point2D pt)
56     {
57         if (pt.X >= _x && pt.X < (_x + _width) && pt.Y >= _y && pt.Y <= (_y +
↪ _height))
58         {
59
60             return true;
61         }
62         else
63         {
64             return false;
65         }
66     }
67
68 }
69 }
70
71
72
73
74
```

