SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Drawing Program - A Basic Shape

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```
1   using SplashKitSDK;
2
3   namespace ShapeDrawer
4   {
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))
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);
25                  }
26
27                  myShape.Draw();
28                  SplashKit.RefreshScreen();
29              }
30              while (!window.CloseRequested);
31          }
32
33      }
34  }
```

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

```
54            }
55
56            public bool IsAt(Point2D pt)
57            {
58                return pt.X >= _x && pt.X <= _x + _width && pt.Y >= _y && pt.Y <= _y +
     _height;
59            }
60        }
61    }
62
```

Shape Drawer

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