Swinburne University of Technology

COS20007 Object Oriented Programming

Drawing Program - A Basic Shape

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```
using System;
using SplashKitSDK;

namespace ShapeDrawer
{
    public class Program
    {
        public static void Main()
        {
            Window window = new Window("Shape Drawer", 800, 600);
            Shape myShape = new Shape();
            do
            {
                SplashKit.ProcessEvents();
                SplashKit.ClearScreen();
                myShape.Draw();
                if (SplashKit.MouseClicked(MouseButton.LeftButton))
                {
                    myShape.X = SplashKit.MouseX();
                    myShape.Y = SplashKit.MouseY();
                }
                if (SplashKit.KeyTyped(KeyCode.SpaceKey) &&
↪   myShape.IsAt(SplashKit.MousePosition()))
                {
                    myShape.Color = SplashKit.RandomRGBColor(255);
                }

                SplashKit.RefreshScreen();
            }
            while (!window.CloseRequested);
        }
    }
}
```

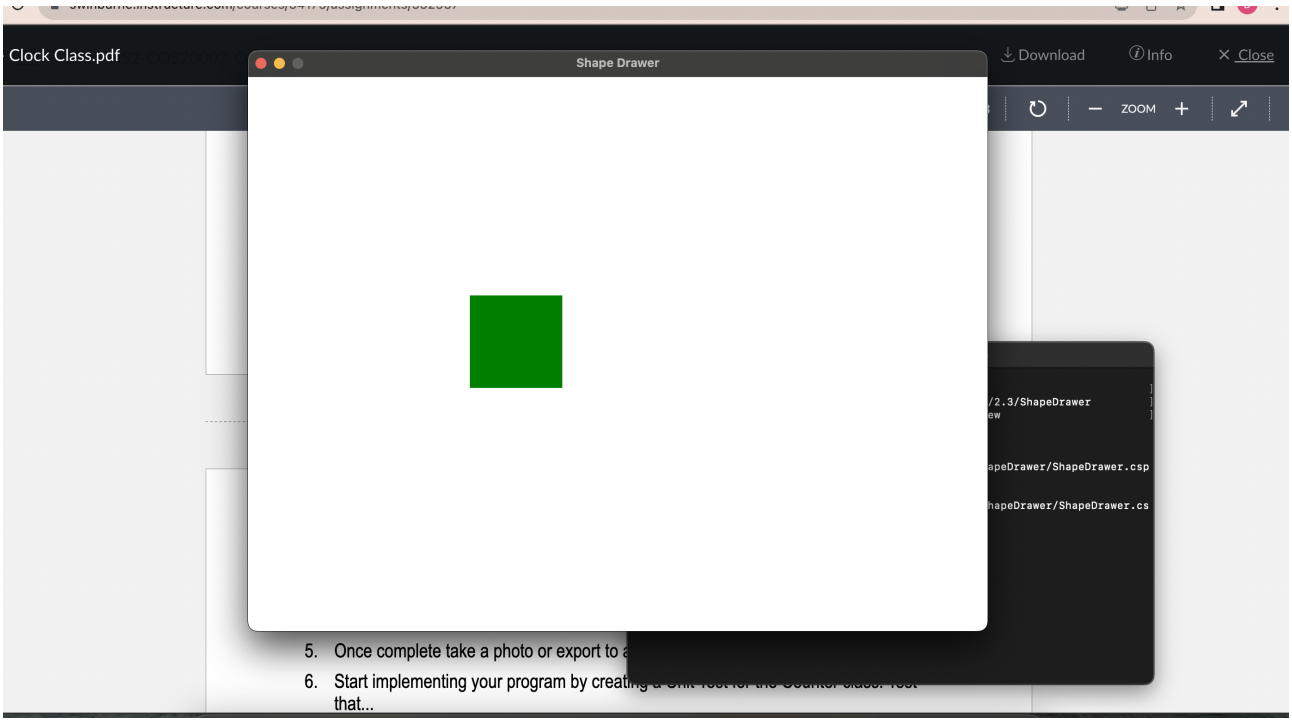
```
using System;
using SplashKitSDK;

namespace ShapeDrawer
{
    public class Shape
    {
        private Color _color;
        private float _x;
        private float _y;
        private int _width;
        private int _height;

        public Shape()
        {
            _color = Color.Green;
            _x = 0;
            _y = 0;
            _width = 100;
            _height = 100;
        }

        public float X
        {
            get
            {
                return _x;
            }
            set
            {
                _x = value;
            }
        }
        public float Y
        {
            get
            {
                return _y;
            }
            set
            {
                _y = value;
            }
        }
        public int Width
        {
            get
            {
                return _width;
            }
            set
            {
                _width = value;
```

```
54              }
55          }
56          public int Height
57          {
58              get
59              {
60                  return _height;
61              }
62              set
63              {
64                  _height = value;
65              }
66          }
67          public Color Color
68          {
69              get
70              {
71                  return _color;
72              }
73              set
74              {
75                  _color = value;
76              }
77          }
78
79          public void Draw()
80          {
81              SplashKit.FillRectangle(_color, _x, _y, _width, _height);
82          }
83          public bool IsAt(Point2D pt)
84          {
85              return (pt.X >= _x && pt.X <= (_x + _width)) && (pt.Y >= _y && pt.Y <=
    ↪  (_y + _height));
86          }
87      }
88  }
89
```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