Swinburne University of Technology

COS20007 Object Oriented Programming

2.3P - Drawing Program - A Basic Shape

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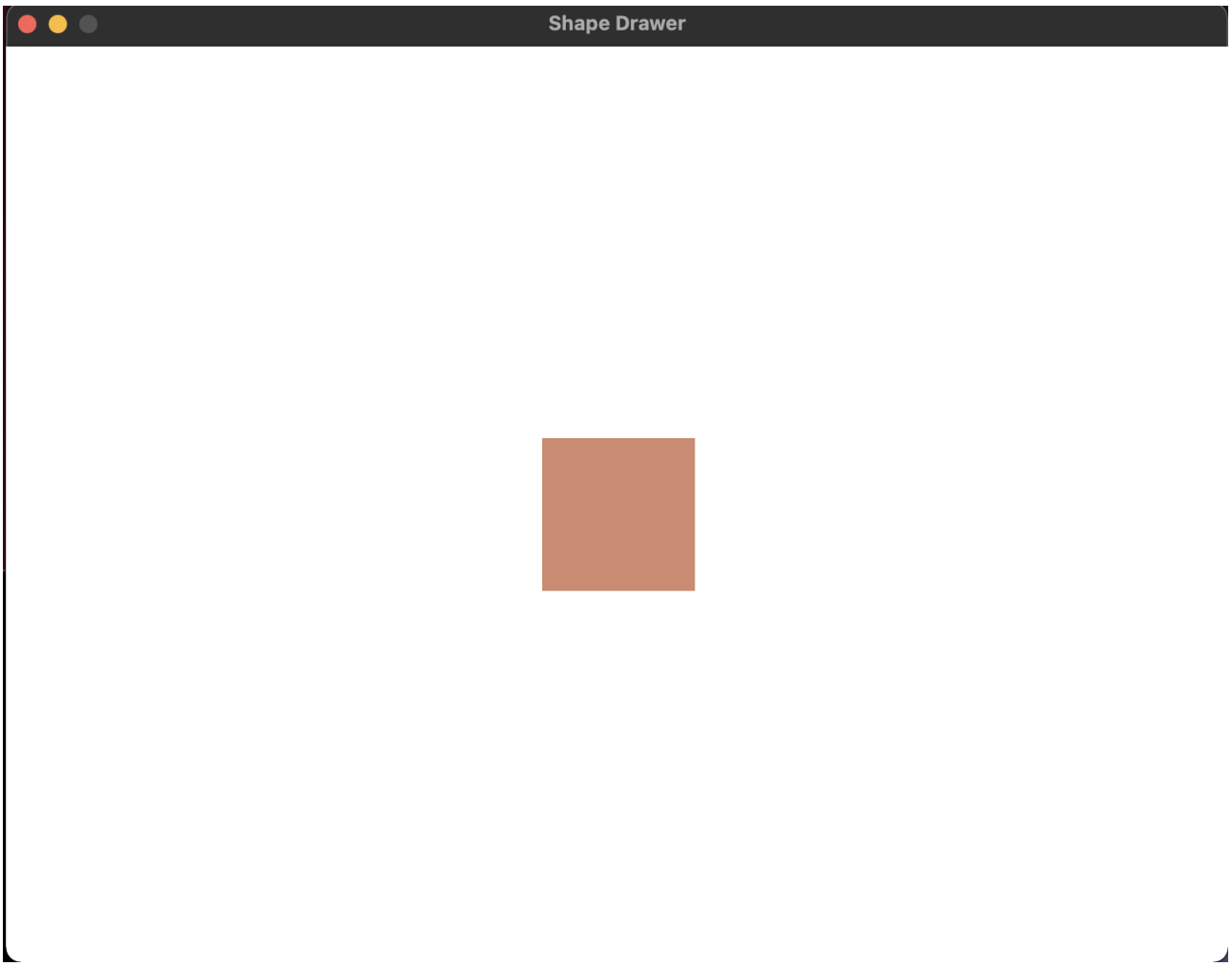
```
using System;
using System.Collections.Generic;
using SplashKitSDK;


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();


                if (SplashKit.MouseClicked(MouseButton.LeftButton))
                {
                    myShape.X = SplashKit.MouseX();
                    myShape.Y = SplashKit.MouseY();
                }

                if (SplashKit.KeyDown(KeyCode.SpaceKey))
                {
                    if (myShape.IsAt(SplashKit.MousePosition()))
                    {
                        myShape.Color = Color.RandomRGB(255);
                    }
                }

                myShape.Draw();


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

        }


    }
}
```

```
using System;
using SplashKitSDK;

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

        public Color Color
        {
            get { return _color; }
            set { _color = value; }
        }

        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; }
        }

        public int Height
        {
            get { return _height; }
            set { _height = value; }
        }

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


        public void Draw()
        {
```

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


Shape Drawer