Swinburne University of Technology

COS20007 Object Oriented Programming

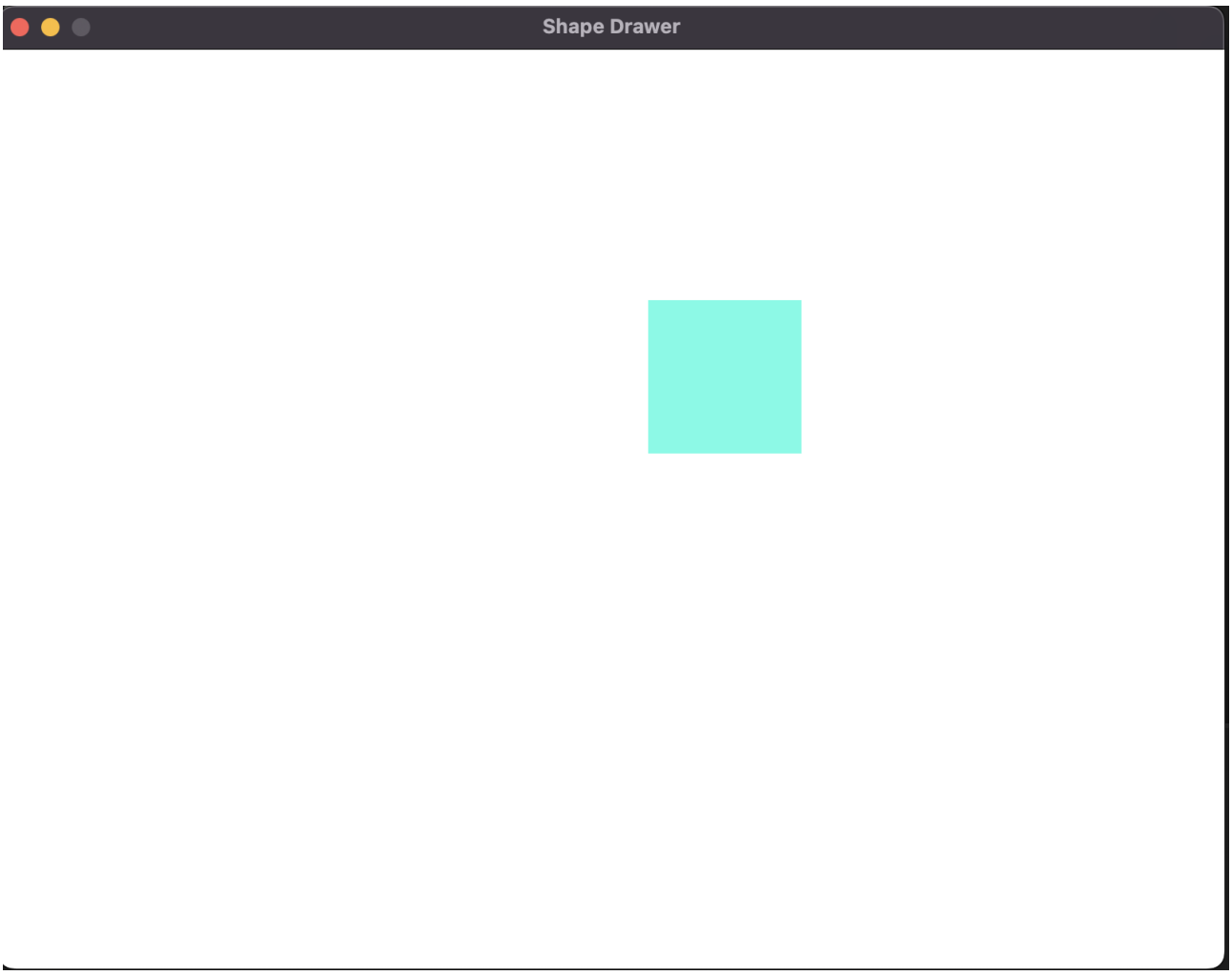
Drawing Program - A Basic Shape

PDF generated at 14:05 on Monday 14th August, 2023

```
using System;
using SplashKitSDK;

namespace ShapeDrawer
{
    public class Program
    {
        public static void Main()
        {
            Shape myShape = new Shape();
            Window window = new Window("Shape Drawer", 800, 600);

            while(!window.CloseRequested)
            {
                SplashKit.ProcessEvents();
                SplashKit.ClearScreen();

                /*The difference between SplashKit.MouseDown and SplashKit.MouseClicked is that, with MouseDown method you can hold left click of the mouse
                 * and drag the object, but MouseClicked method will only allows you to click but not drag the object
                 */

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

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

                myShape.Draw();
                //Refresh The Screen
                SplashKit.RefreshScreen();
            }

            //Console.WriteLine("Program Ended, Thanks!");
        }
    }
}
```

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

        public Shape()
        {
            _color = SplashKit.ColorGreen();
            _x = 0;
            _y = 0;
            _width = 100;
            _height = 100;

        }

        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 void Draw()
        {
            SplashKit.FillRectangle(_color, _x, _y, _width, _height);
        }

        public bool IsAt(Point2D pt)
        {
            return SplashKit.PointInRectangle(pt, SplashKit.RectangleFrom(_x,_y,
↪   _width, _height));
        }
    }
}

```


Shape Drawer