

COS 20007

Task 2.3

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I. Code

1. Shape.cs

```
using System;
using UnityEngine;

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 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 pt.X >= _x && pt.X <= (_x + _width) && pt.Y >= _y && pt.Y <= (_y + _height);
    }
}

```

2. Program.cs

```

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();
            }
            while (true);
        }
    }
}

```

```

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

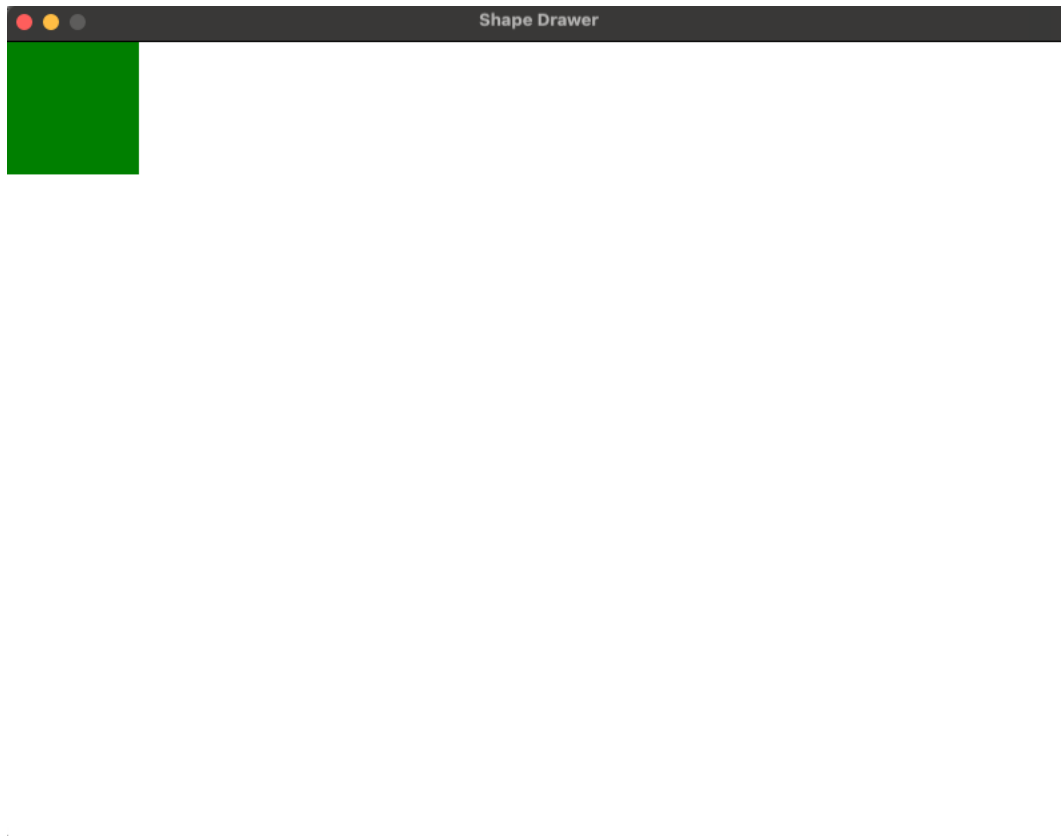
        if (myShape.IsAt(SplashKit.MousePosition()) &&
            SplashKit.KeyTyped(KeyCode.SpaceKey))
        {
            myShape.Color = SplashKit.RandomRGBColor(255);
        }
        myShape.Draw();

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

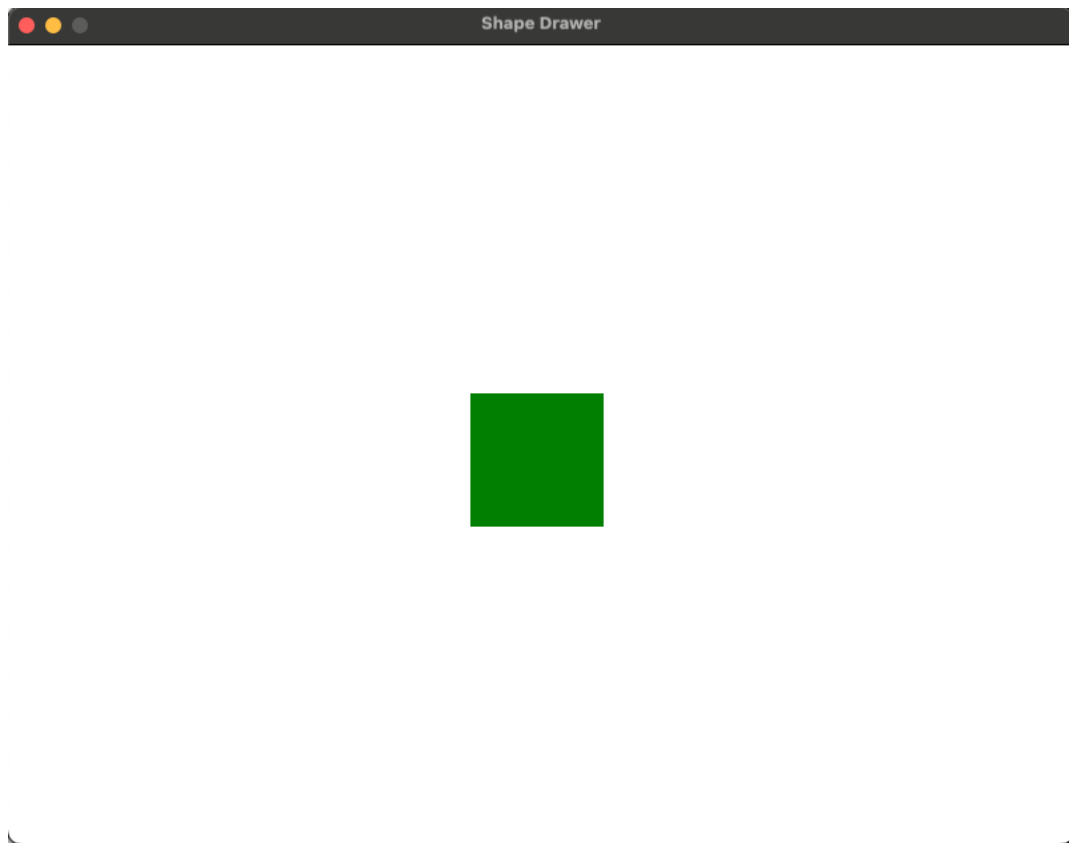
```

II. Image

1. Program's output 1 (original)



2. Program's output 2 (moving to other position)



3. Program's output 3 (changing color)

