Swinburne University of Technology

COS20007 Object Oriented Programming

2.3P - Drawing Program - A Basic Shape

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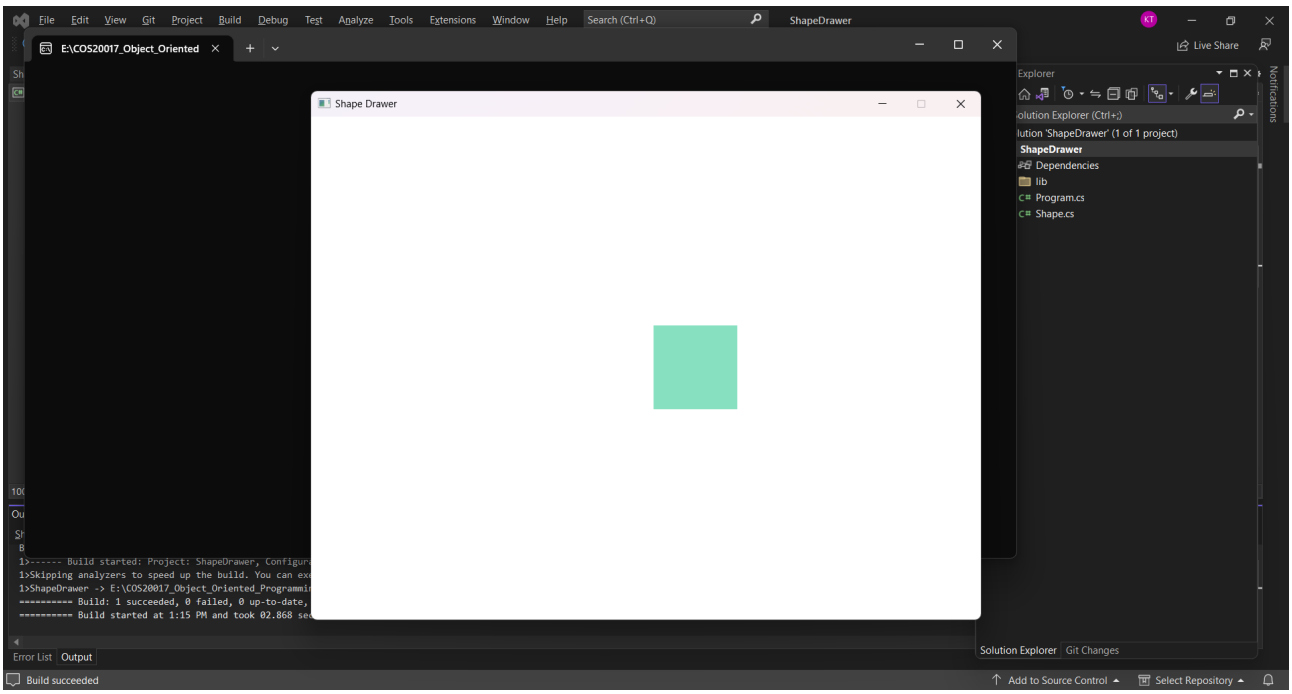
```
using System;
using SplashKitSDK;

namespace ShapeDrawer
{
    public class Program
    {
        public static void Main()
        {
            Window window = new Window("Shape Drawer", 800, 600);
            Shape myShape;
            myShape = new Shape(Color.Green, 0, 0, 100, 100);

            do
            {
                SplashKit.ProcessEvents();
                SplashKit.ClearScreen();

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

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

                SplashKit.RefreshScreen();

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

```
using SplashKitSDK;
using System;
using System.Security.Cryptography.X509Certificates;
using System.Threading.Tasks.Dataflow;

namespace ShapeDrawer
{
    public class Shape
    {
        private Color _color;

        private float _x;
        private float _y;

        private float _width;
        private float _height;

        public Shape(Color color, float x, float y, float width, float height)
        {
            _color = color;

            _x = x;
            _y = y;

            _width = width;
            _height = 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 float Width
        {
            get { return _width; }
            set { _width = value; }
        }
        public float Height
        {
            get { return _height; }
            set { _height = value; }
        }
```

```
54
55          public void Draw()
56          {
57              SplashKit.FillRectangle(_color, _x, _y, _width, _height);
58          }
59
60          public bool IsAt(Point2D point2D)
61          {
62              if (point2D.X >= _x && point2D.X < _x + _width && point2D.Y >= _y &&
    ↪  point2D.Y < _y + _height)
63                  return true;
64              else
65                  return false;
66          }
67      }
68  }
```


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
ShapeDrawer
Live Share
E:\COS20017_Object_Oriented
Shape Drawer
Explorer
olution Explorer (Ctrl+;)
lution 'ShapeDrawer' (1 of 1 project)
ShapeDrawer
Dependencies
lib
Program.cs
Shape.cs
1>------ Build started: Project: ShapeDrawer, Configur
1>Skipping analyzers to speed up the build. You can ex
1>ShapeDrawer -> E:\COS20017_Object_Oriented_Programmi
========== Build: 1 succeeded, 0 failed, 0 up-to-date,
========== Build started at 1:15 PM and took 02.868 se
Error List
Output
Solution Explorer
Git Changes
Build succeeded
Add to Source Control
Select Repository