**COS 20007**

**Task 2.3**

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1. **Code**
2. Shape.cs

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 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);

}

}

}

1. 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();

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);

}

}

}

1. **Image**
2. Program’s output 1 (original)

A screenshot of a computer

Description automatically generated

1. Program’s output 2 (moving to other position)

A green square on a white background

Description automatically generated

1. Program’s output 3 (changing color)

A screenshot of a computer

Description automatically generated