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COP2362

TUTORIAL 2-1: Creating and Managing Classes and Objects

I worked alone.

A picture containing graphical user interface

Description automatically generated

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Program.cs:

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Classes

{

class Program

{

static void doWork()

{

Point origin = new Point();

Point bottomRight = new Point(1366, 768);

double distance = origin.DistanceTo(bottomRight);

Console.WriteLine("Distance is: " + distance);

Console.WriteLine("NUmber of Point objects:" + Point.ObjectCount());

}

static void Main(string[] args)

{

try

{

doWork();

}

catch (Exception ex)

{

Console.WriteLine(ex.Message);

}

}

}

}

Point.cs:

#region Using directives

using System;

using System.Collections.Generic;

using System.Text;

#endregion

namespace Classes

{

class Point

{

private int x, y;

private static int objectCount = 0;

public Point (int x, int y)

{

this.x = x;

this.y = y;

objectCount++;

}

public Point()

{

this.x = -1;

this.y = -1;

objectCount++;

}

public double DistanceTo(Point other)

{

int xDiff = this.x - other.x;

int yDiff = this.y - other.y;

double distance = Math.Sqrt((xDiff \* xDiff) + (yDiff \* yDiff));

return distance;

}

public static int ObjectCount() => objectCount;

}

}