Lab 16 Diamond Drawer

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# Problem

In this lab, we will be using a premade driver to create an interface that will draw a diamond using an input size out offset by the user. The diamond will be drawn using stars and will keep running until the user tells the code to quit.

# Solution

For my solution, I utilized the given driver, as well as ShapeBasics and ShapeInterface. Then I created a class Diamond that extends ShapeBasics and implements the diamond interface. This has the constructor to create the width and call the super class for offset. Then it has a setter that checks for valid values for width. Then I have two voids, one that draws the top and one that draws the bottom. It takes the width and divides it by 2 and subtracts 1 to see how many spaces it needs to skip. It runs a for loop to do the length, subtracting or adding to the start position depending which way it is going. It calls a static void to print out spaces before adding the star to make the diamond. For Diamond interface, it sets up the setWidth it to be called in the Diamond class file.

# Implementation Problems Encountered

There were no problems that I encountered in the code.

# Lab Report Questions

1. You can’t create instances of interfaces, rather only reference it within objects.
2. You can inherit and implement as many classes or interfaces as needed in a code.