Exercise 6: Trigonometry with Floats

Clone your repository

1. Accept the assignment to create your repository for submitting your work: https://classroom.github.com/a/lLzL6-j6

2. In GitHub Desktop, clone the repository to your desktop.

You are now ready to begin the exercise.

Problem – Trigonometry with floats

3. In Visual Studio, create a new C# Console App named **Exercise6** and save it in the repository folder you just created.

    a. If you don't remember where you saved it, go to GitHub Desktop and click the Open in Explorer button or go to Repository menu and select Open in Explorer there.

4. In the **Main** method, do the following:
    a. Prompt for and get an angle in degrees and store it in a **float** variable.
    b. Calculate and display the cosine and sine of the angle.

Hint 1: The **Math** class is very useful for this, so you should look at the documentation for that class; you can find that documentation at https://msdn.microsoft.com/en-us/library/system.math(v=vs.110).aspx

Hint 2: As you read the documentation for the methods that calculate cosine and sine, you'll discover that they expect you to provide an angle in radians, not degrees. To convert the angle from degrees to radians, you can simply multiply the angle by `(float)Math.PI / 180.` Because

`Math.PI` is a **double**, we need a type cast for this conversion.

Suggested Test Case: If you enter 90 for the angle, the cosine should be approximately 0 and the sine should be approximately 1.

These aren't exact because we get a little rounding error (because $2^b = n!$)

5. Commit your changes in GitHub Desktop with commit message: "Completed through step 4"

Submit Your Work

6. Make a final test of your code and copy the output from the terminal window.

7. If you need to make any additional changes to your code, make sure you commit them.

8. By committing and pushing your updates to GitHub you have submitted your assignment on GitHub Classroom.

9. Return to CodeHS. Paste your output into the code window to complete the assignment.