Manim Shape Assignment

Congratulations on making it to this stage of the recruitment process.

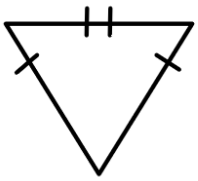
In this stage, you are tasked with a 2-hour assignment. After you have completed this assignment, you should share the GitHub repository and a video demonstration of how the script you wrote works. Please make sure to make the repository public to give us access.

Following this, we will review your code and video demonstration and let you know the outcome within 1-2 days.

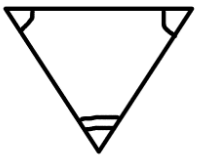
The task

You are tasked with creating a script that can be run to generate a dynamic triangle. When the script is run, the user should be able to input the following parameters to generate the triangle so that the triangle is fully dynamic in every way:

- The side lengths of the triangle
- Whether to include the side lengths in the shape
- Whether to include the angles of the shape
- The unit of each of the angles (radians or degrees)
- The unit of each of the side lengths (e.g. ‘cm’)
- A choice to use notation to indicate similarity of the side lengths. See below.
- A choice to use notation to indicate similarity of the angles. See below.
- The rotation of the triangle

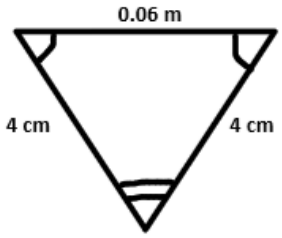


Similar Side Length Notation



Similar Angle Notation

Example of what the final triangle output could look like:



What we are looking for:

- Clean and readable code
- Code that can be reused for shapes you will want to make in the future.
- Demonstrate object-oriented principles for maintainable and modular code

Time Constraints

- If you require more than two hours to complete this task, that is fine. However, if you do go beyond this time, let us know in a comment attached to your assignment.

Thank you very much for taking the time to complete this assignment. We are very excited by the prospect of working with you soon.