CAIS 117: Intro to Programming with Python

Fall 2023

Homework 03: Clunky Calculator

Homework is DUE before class on the day indicated on the course schedule.

***This is a pair assignment**. You should complete it and submit it with a partner.*

Learning Objectives:

- Get input from and return output to a user
- Perform basic mathematical operations

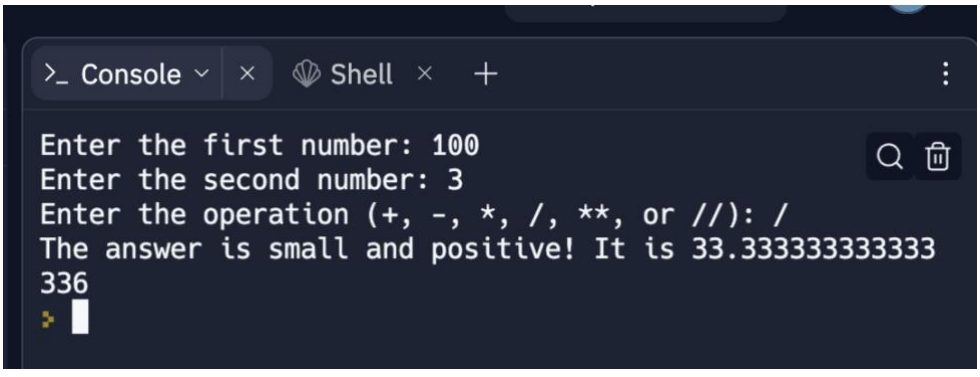
Part 1 – Coding

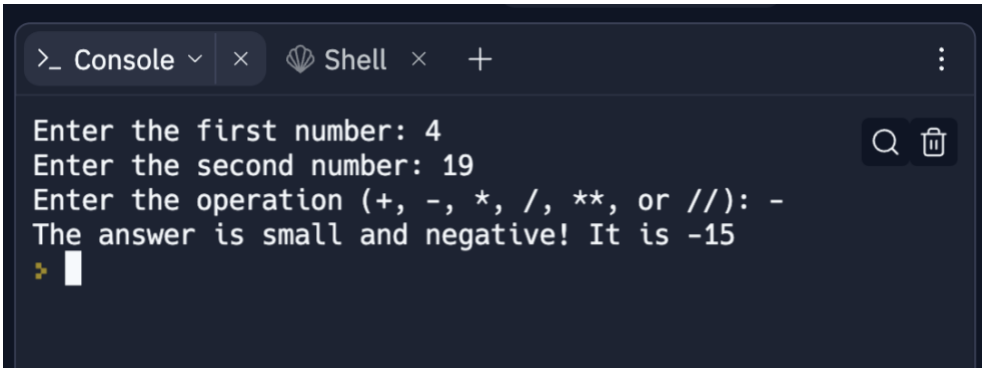
In this assignment, you will write a short python program that simulates basic calculator functionality.

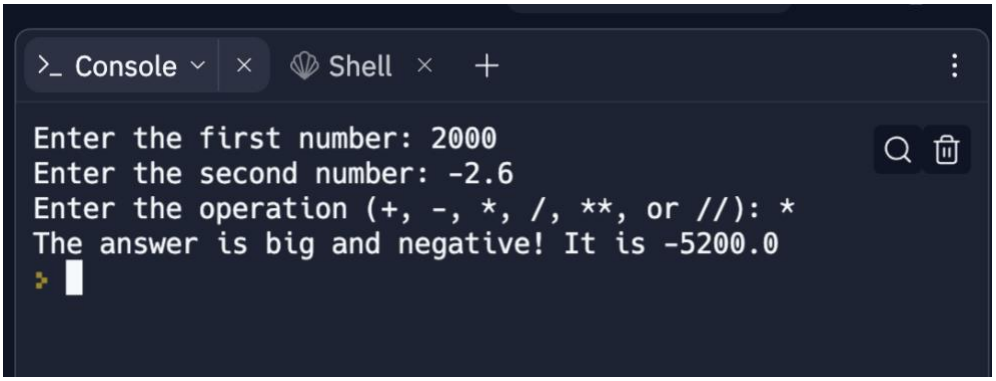
The user interface of your calculator should ask the user to input two numbers, and then a string indicating which mathematical operation to perform. It should print the answer to the requested calculation and some additional information:

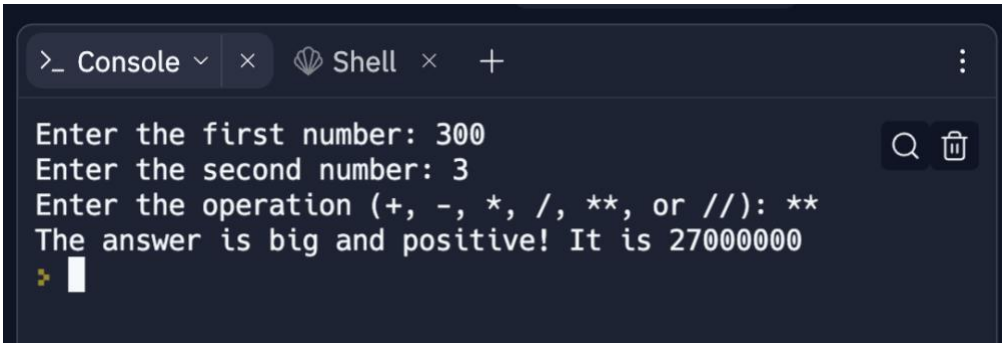
- If the absolute value of the answer to the calculation is less than 100, your calculator should tell the user the answer is small. Otherwise, tell the user the answer is big.
- The calculator should also tell the user if the answer is positive or negative (or neither).

For example:









Your calculator should support add, subtract, multiply, divide (both versions) and power (exponentiation) operations.

Your calculator should be able to handle both integers and floats.

Your submission will be auto graded for correctness and graded by hand for appropriate commenting, structure, etc. (see rubric below). For the auto grader, it's important that your input goes in the prescribed order, and your output is formatted like the examples above.

Reflection

In a word document please answer the following questions:

a) What part of this assignment was trickiest for you and your partner?

b) How did you tackle that tricky part?
c) What did each partner contribute to the final product?

Submission

Submit your assignment on repl.it. In addition, save your reflection as a PDF and submit it on PLATO.

Rubric

Function		
	Passes auto grader tests	0 - 10
Commenting		
	Appropriate header with names, date, program description	0 - 2
	Code is well documented, but not over documented	0 - 2
Structure		
	Problem is broken into reasonable chunks	0 - 2
	Variable names are descriptive	0 - 2
	Functions are used appropriately	0 - 2
Reflection		
	All questions answered thoughtfully	0 - 5