**Calculator**

The calculator is a device or software used for performing mathematical calculations. It is used to perform various mathematical operations, such as addition, subtraction, multiplication, division and more complex calculations.

**Project:**

This Python code defines a class OnlineCalculator that implements a simple calculator capable of performing arithmetic operations on two numbers. The supported arithmetic operators are addition (+), subtraction (-), multiplication (\*) and division (/).

The class has four instance variables: operator, first\_number, second\_number and result. The operator variable holds the arithmetic operator to be used in the calculation. The first\_number and second\_number variables hold the two numbers to be used in the calculation. The result variable holds the result of the calculation.

The class also defines four private instance methods: \_\_add(), \_\_subtract(), \_\_multiply() and \_\_divide(). Each of which performs a different arithmetic operation on the two numbers.

The class defines several instance methods with the following functionalities:

• \_\_init\_\_(): initializes the OnlineCalculator object by setting its instance variables.

• calculating(): performs the calculation based on the provided operator and assigns the result to the result variable.

• \_\_repr\_\_(): returns a string representation of the calculation performed and the result.

The class also defines several instance methods that are used as getters and setters for the instance variables, ensuring that only valid values are assigned to them.

Finally, the code contains some commented out lines that show how the OnlineCalculator class can be used to perform a calculation with user input.

**Unit Testing**

The test cases cover different scenarios for the program's functionality. They test the initialization of the class instance and the behavior of its methods when input parameters are changed. They also test the four basic mathematical operations that can be performed by the calculator.