

Team Members: Kirill Zakharov, Michael Spitz

Principles and Violations

KISS

DRY Code

YAGNI

Bad code:

Principles and Violations

KISS - code is intended for humans, so keep it simple. Overly complicated code is not a flex; it is hard to understand and hard to share.

- Therefore, for the bad code I will make a weird amalgamation of functions and excessive variable use to avoid the implementation of KISS.
- The subtract and add methods use total variables and a flag that does not do anything, both of which are unnecessary.
- In the multiply method, the for loop is used to multiply the numbers instead of just using $x * y$.
- All of the if flag checks are redundant.

DRY Code - Don't repeat yourself. Don't recreate data or a function implementation; do not copy and paste. I will create redundant code that repeats itself.

- The flag checking is repeated in all methods, which can be changed to exception handling where needed.
- The addition and subtraction methods are pretty much the same and can be combined.

YAGNI - You aren't going to need it. Don't program something on the off chance that you need it in the future.

- The starting_value variable is not needed and is not used, but it is initialized.
- The flag variable is added and used in all methods but is unnecessary in that version of the calculator.

Those are only a few examples of problems in the code, and there are lots of things that need to be improved. For example, not all comments are accurate, the program is not optimized well, and the code is challenging to understand because of the use of a starting value variable and other unnecessary things like the flag.