

CODING EXERCISE: Java

The following problem should take approximately 2 hours to complete the full solution.

The submitted code should be of the quality we can expect during a normal working week.

Using gradle/maven/ant is not a requirement; however you are welcome to do so. Providing unit tests is not a requirement too, but it will be very appreciated and will be taken into account in the overall assessment.

Please provide instructions on how to run the application from the command line.

There is no requirement to cater for invalid input. As you will not have the opportunity to clarify requirements, feel free to note any assumptions in your submission.

You are welcome to use any external libraries you want. Include them in your submission.

There are no tricks or gotchas: only implement the functionality described below. It is a simple problem to solve, but code quality is as important as solving the problem itself.

Coding exercise is on the next page.

Problem: Calculator

Write some code to calculate a result from a set of instructions.

Instructions comprise of a keyword and a number that are separated by a space per line. Instructions are loaded from file and results are output to the screen. Any number of Instructions can be specified. Instructions can be any binary operators of your choice (e.g., add, divide, subtract, multiply etc). The instructions will ignore mathematical precedence. The last instruction should be "apply" and a number (e.g., "apply 3"). The calculator is then initialised with that number and the previous instructions are applied to that number.

Examples of the calculator lifecycle might be:

Example 1

Input from file	add 2 multiply 3 apply 10
Output	36
Explanation	$10 + 2 * 3 = 36$

Example 2

Input from file	multiply 3 add 2 apply 10
Output	32
Explanation	$10 * 3 + 2 = 32$

Example 3

Input from file	apply 1
Output	1