

## Coding Exercise

The following problem should take approximately 2 hours to complete the full solution. The submitted code should be of the quality we can expect on daily basis.

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.

You are required to show your ability to provide reasonable production quality code. Complete lack of test coverage will disqualify you immediately. You are free to choose testing framework.

**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 of the problem itself.

### Problem: Calculator

Write some code to calculate a result from a set of instructions. Instructions comprise of an operator and a number. Supported instructions are to be external modules that can be added externally. The only step needed to add a new operation should be just including the `<script src="path/to/operation.js"></script>`. List of instructions for the UI is created in runtime.

Supported instructions are listed in UI in a selectbox along with input field for number. User can enter any number of instructions. Instructions can be any binary operators of your choice (e.g., add, divide, subtract, multiply etc).

Instructions will ignore mathematical precedence. There will also be 'Apply' operator which is always last operator in the list, but is executed first, because it initialises the calculator with the entered value. Please see examples.

## Calculator

add

enter a number

Add step

add

apply

1. Add 2

2. Multiply 3

3. Apply 3

Calculate

Reset

Result: 15

Examples of the calculator lifecycle might be:

**Example 1.**

```
[Input]
add 2
multiply 3
apply 3
[Output to screen]
15
```

```
[Explanation]
(3 + 2) * 3 = 15
```

**Example 2.**

```
[Input]
multiply 9
apply 5
[Output to screen]
45
```

```
[Explanation]
5 * 9 = 45
```

**Example 3.**

```
[Input]
apply 1
[Output to screen]
1
```