

## Problem statement

### Statement: General statement

Write an `.exe` program in assembly language that computes additions and subtractions on numbers between **0 - 255**. The program takes as input from the keyboard a **string** of characters followed by the **enter** key. The string can be either **a+b** or **a-b**, where **a** and **b** are numbers in the interval **[0-255]**. The program will write to the console the result of the operation, **in base 10**.

## Examples

### Addition

INPUT: 45+10[enter]

OUTPUT: 55

### Subtraction

INPUT: 64-23[enter]

OUTPUT: 41

## Requirements

### Requirements: Nonfunctional requirements

- You shall use the data segment provided in the template. You **may not** define additional variables in your program, other than the ones that are already declared in the data segment.
- You shall incorporate in your solution the macros and procedures provided alongside the template.
- The input string will contain only digits (between 0 and 9) and either a **plus** or **minus** sign. Additionally, the input string will always end with the enter key.
- It is encouraged to define your own macros and procedures in order to solve the problem (if possible). In this case, each macro or procedure

should be roughly documented with its intended behaviour.

- You should split the implementation among yourselves and have someone implement a particular functionality (addition, subtraction, reading & processing, printing, and so on).

## General rules

You may use any resources available to solve the problem (except AI generational tools).

You may be asked questions about your implementation. Be prepared to answer them.

You have a total of **75 minutes** to solve the problem and provide a working solution. A working solution is a program that compiles and executes, even if it does not perform the required operation.

The total time should be divided in two parts: a **30 minutes** session, followed by a **10-15 minutes** break and then another **35 minutes** session.

The total time may be extended with an additional **30 minutes**, if less than 2 teams manage to complete the implementation within the initial **75 minutes**.

You should be able to describe the behaviour of the program in an algorithmic manner.

The solution shall be submitted on GitHub, Teams or via email at the address Tudor.Coroian@cs.utcluj.ro. One submission/team is enough. Submission time **is not** included in the **75 minutes** for solving the problem.

You may not ask for help from students in other teams during the two sessions of implementation. You are encouraged to collaborate within your own team.