C++ Advanced – Exam 1 (29 Feb 2020)

Write C++ code for solving the tasks on the following pages.

Code should compile under the C++11 standard.

Submit your solutions here: https://judge.softuni.bg/Contests/1805/

Any code files that are part of the task are provided under the folder **Skeleton**.

Please follow the exact instructions on uploading the solutions for each task.

Task 2 – Array Trouble

Your task is to write a program that represents dynamic array usage.
You are given an implementation of an "**BrokenArray**".
Your task is to fix it by **providing an implementation** for the fixed version '**FixedArray**".

You are given the **`main()`** function, parses and executes different commands.

If your implementation of the FixedArray class is correct – the output to the standard output will be correct.
If your implementation is wrong – the output will be wrong.

The **FixedArray** class should provide implementation for the functionalities that are used in the **FixedArray.h** file.

- Constructor
- Destructor
- Copy constructor
- Copy assignment operator
- addValueToMemory() method – increases the underlying array values in memory
- getMemorySumValue() – sums the value of all underlying element of the array in memory

The input reads integers numbers that represent commands listed in the **Defines.h** file

```
enum InputCommands
{
	CREATE                 = 0,
	COPY_CONSTRUCT         = 1,
	COPY_ASSIGN            = 2,
	SUM_ARRAY_DATA         = 3,
	INCR_ARRAY_DATA_VALUE  = 4
};
```

Your task is to study the code and implement the function so that the code accomplishes the task described.

You should submit a single **`.zip`** file for this task, containing **ONLY** the files you created.

The Judge system has a copy of the other files and will compile them, along with your file, in the same directory.

Restrictions

You should only submit files with **.h** and **.cpp** extensions (in a **.zip** archive).

You should **Not** have folders in your **.zip** submission archive.

Examples

Input	Output
4 0 5 1 0 4 1 2 3 1	CREATE for idx: 0 COPY_CONSTRUCT from idx: 0 INCR_ARRAY_DATA_VALUE for idx: 1, incrValue: 2 SUM_ARRAY_DATA for idx: 1, sum: 10
5 0 5 0 3 2 1 0 4 0 2 3 0	CREATE for idx: 0 CREATE for idx: 1 COPY_ASSIGN from idx: 1, to idx: 0 INCR_ARRAY_DATA_VALUE for idx: 0, incrValue: 2 SUM_ARRAY_DATA for idx: 0, sum: 6
8 0 5 4 0 1 0 3 2 0 1 3 0 4 0 2 2 0 0 3 0	CREATE for idx: 0 INCR_ARRAY_DATA_VALUE for idx: 0, incrValue: 1 CREATE for idx: 1 COPY_ASSIGN from idx: 0, to idx: 1 SUM_ARRAY_DATA for idx: 0, sum: 5 INCR_ARRAY_DATA_VALUE for idx: 0, incrValue: 2 COPY_ASSIGN from idx: 0, to idx: 0 SUM_ARRAY_DATA for idx: 0, sum: 15