# 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 |