# 02. Memory Management – Homework Exercises

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

Code should compile under the C++03 or the C++11 standard.

Submit your solutions here: <https://judge.softuni.bg/Contests/1152/02-Memory-Management-Homework> (select “Compete” when prompted)

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 1 – MinBy

You are given code for a program, which finds the minimum element of a list of strings entered on the console (lowercase English letters, separated by spaces). The program has 3 modes of operation, each with using a different characteristic for finding the minimum:

1. Lexicographical minimum i.e. finds the string that is earliest lexicographically
2. Size minimum i.e. finds the shortest string
3. Reverse size minimum i.e. finds the longest strings

The code is missing the MinBy.h file. Your task is to study the provided code and create a MinBy.h file such that the program compiles successfully and performs the described task.

Your MinBy.h file should resemble the following:

|  |
| --- |
| **MinBy.h** |
| #ifndef MIN\_BY\_H  #define MIN\_BY\_H  // Place your code here  #endif // !MIN\_BY\_H |

You should submit a single .zip file for this task, containing ONLY the MinBy.h file. The Judge system has a copy of the other files and will compile them, along with your file, in the same directory.

### Restrictions

There will always be at least1 string in the list of strings entered from the console. There will be no empty strings.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| hear the rime of the ancient mariner see his eyes as he stops one of  3 | ancient |
| e abc df e  1 | abc |