# 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 2 – Remove Invalid

You are given code for a program, which reads Company objects from the console, allocates dynamic memory for them, adds them to a list, and calls a removeInvalid function multiple times during the read and once after all companies have been read, to **remove companies with invalid ids**. The program then **prints all companies with a valid id**. Valid ids are **non-negative**.

Your task is to implement the removeInvalid function a RemoveInvalid.h file. The function should remove all companies with negative ids (use the getId() getter in Company) from the list.

Your RemoveInvalid.h file should resemble the following:

|  |
| --- |
| **RemoveInvalid.h** |
| #ifndef REMOVE\_INVALID\_H  #define REMOVE\_INVALID\_H  #include "Company.h"  // Place your code here  #endif // !REMOVE\_INVALID\_H |

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

### Additional Requirements

The order of the valid companies in the input must match the order in the output.

Make sure there are no memory leaks.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 123 valid  -123 invalid  321 ancientmarinerinc  end | 123 valid  321 ancientmarinerinc |
| 42 noinvalidhere  end | 42 noinvalidhere |