# 04. Advanced C++ Class Members – 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/1183/04-Advanced-CPlusPlus-Class-Members-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 4 – Resources

You are given code for a program which reads information about Resources (links to Presentations, Demos or Videos) in the SoftUni Learning system *(well, ok, not the real system, but at least this one won’t break the links…)* and then sorts them by their id, and also prints how many of each type of resource there was in the input.

Each Resource has the following properties:

* An integer id
* A ResourceType – one of Presentation, Demo, or Video
* A string representing the link to the resource

The code for the program is in the ResourcesMain.cpp and it uses a Resource class, which it expects to be defined in a file named "Resource.h" in the same directory.

Your task is to study the ResourcesMain.cpp file and the ResourceType.h file, and to create the Resource.h file and implement the Resource class in such a way that the program correctly reads the input, orders it by id, prints it as lines on the output (each Resource output line should have the same format as the matching Resource input line) and then prints the number of Resources of each type.

Your Resource.h file should resemble the following:

|  |
| --- |
| **Resource.h** |
| #ifndef RESOURCE\_H  #define RESOURCE\_H  #include "ResourceType.h"  // Place your code here  #endif // !RESOURCE\_H |

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

### Examples

|  |
| --- |
| **Input** |
| 4  255 Demo http://kottakoa.com  42 Presentation http://theanswertolifetheuniverseandeverything.com  13 Demo http://example.com  69 Video http://yeahyouwish.com |
| **Output** |
| ... by id:  13 Demo http://example.com  42 Presentation http://theanswertolifetheuniverseandeverything.com  69 Video http://yeahyouwish.com  255 Demo http://kottakoa.com  ... by type:  Presentation: 1  Demo: 2  Video: 1 |