

C++ Advanced Exam – 5 September 2020

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

Submit your solutions here: <https://judge.softuni.bg/Contests/2555/CPlusPlus-Advanced-Exam-5-September-2020>

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 – Magic Kingdom

Your task is to write a program which categorises people from a magic kingdom where people with special abilities live. You are given the `main()` function, which reads an integer value that represents a number of command lines. On each command line you receive data. The data about a person consist of **name**, **magic power** and **magic item**.

You should implement a class **MagicKingdom**. The **MagicKingdom** should be able to read from the provided input from the `main()` method and store the data.

The data about all people from the kingdom should be stored in 3 different groups:

- **Commoner** (with magic power from 0 to 99)
- **Magicians** (with magic power 100 and above)
- **AntiMags** (with magic power below 0)

The **Magic Kingdom** class should implement a `printAll()` method that **prints** the information about them every person in every group, sorted by power (from most powerful to least powerful). Anti-magic is more powerful the more negative the number is.

Your task is to study the code and write the functionality 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
9 Nala 55 glass Ross 189 feather Shahzaib -300 staff Syeda 543 sword Zaine 12 cross Spooner -9998 sword Reiss 9876 bow Polly 101 blaknet Lu -16 fan	Anti-Mages: Spooner - sword Shahzaib - staff Lu - fan Commoners: Nala - glass Zaine - cross Mages: Reiss - bow Syeda - sword Ross - feather Polly - blaknet