

C++ Fundamentals – Exam Retake (24 November 2019)

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/1716/CPlusPlus-Fundamentals-Exam-Retake-24-November-2019>

Only source code will be accepted as solution for each task.

Task 2 – Garbage Sorting

As a good citizen of the planet Earth you are assigned a task to help in proper eco-friendly garbage sorting.

You will be working in a special warehouse that only accepts glass, metal and plastic.

if for any reason some other type of garbage is delivered to the warehouse – you should **NOT** process it.

The garbage will be sorted in 3 big industrial lines.

One for “**glass**”, one for “**metal**” and respectively one for “**plastic**”.

Depending on the current instruction - each new piece of garbage should be added in either the **front** of the existing ones in that line or respectively in the **back**.

You should number each item with a **unique counter identifier**(shared for the whole warehouse) starting from 1.

Note: materials that should not be processed by your warehouse should **NOT** be numbered with a unique identifier.

Input

First read a single **integer** (N) representing how many rows of commands will follow.

Then read N rows of data for the commands.

Restrictions

Time limit: 250ms (0.25s)

Memory limit: 16 MB

Examples

Input	Output
3 glass front glass back glass front	glass - 3 1 2 //explanation: //glass with id 1 is added to the front //glass with id 2 is added to the back //glass with id 3 is added to the front
3 glass front metal back metal front	glass - 1 metal - 3 2

7 glass back glass back metal back banana front metal front plastic front plastic back	glass - 1 2 metal - 4 3 plastic - 5 6 //explanation: //there are 7 items, but only unique //identifier counter goes only up to 6, //because the “banana” material should not //be processed
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