

# Problem 164: The Good Ship Input

Difficulty: Easy

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## Problem Background

Enterprise level maintenance applications are prevalent in most industries, and are especially important for all branches of the military. Lockheed Martin provides such applications to military groups around the world. In order to keep aircraft, trucks, ships, and every other sort of vehicle in battle-ready condition, soldiers need to know what parts need to be inspected or maintained at what times. They also need to know when a part might be reaching the end of its operational lifespan so it can be replaced. Keeping track of all of this maintenance work is critical to ensuring missions are successful and accidents are kept to an absolute minimum.

A lot of work goes into building such applications, however. All sorts of files, messaging, and interfaces are being used and sent throughout the layers of logistics application. They can link up to databases to store information and maintain archives. They may need to communicate with other applications to get up-to-date information. Users also need to be able to interface with the application to access all of this data. It's vitally important that users are able to access the information they need, when they need it.

## Problem Description

You're working with Lockheed Martin's Rotary and Mission Systems division to build a new maintenance system for the United States Navy. The Navy wants to automate some of the reporting work that needs to be done when a ship is brought into drydock for maintenance. Specifically, they want the ship itself to be able to report what systems are in working order and can be skipped during inspection.

When the ship is brought into drydock, a computer on board the ship will run several automated diagnostic tests on critical systems on board. Once the tests are finished, the computer will transmit a list of those systems that passed their tests to a computer kept in the shipyard. This computer will compare the list of functional systems with a list of systems onboard the ship, to be retrieved from a database. Any systems that appear in the database, but not in the list reported by the ship's computer, need to be reported to maintenance staff for inspection.

## Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include:

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- A line containing two positive integers, separated by spaces:
  - The first integer, X, represents the number of systems listed in the shipyard database.
  - The second integer, Y, represents the number of systems reported by the ship's computer. Y will be less than or equal to X.
- X lines containing the names of systems listed in the shipyard database. Names are unique within a test case and may contain letters and spaces.
- Y lines containing the names of systems reported by the ship's computer as being in working order. All names in this section will be duplicates of those stored within the shipyard database.

```
1
5 3
Cannon
Engine
Helm
Deck
Anchor
Engine
Helm
Anchor
```

## Sample Output

For each test case, your program must print a list of systems that require inspection, in alphabetical order (case-insensitive), with one system per line.

```
Cannon
Deck
```