# Hero Recruitment

*Greetings, champions of Azeroth. Welcome to the Chapels. Here, we will test your skill and knowledge to decide if you are ready to defend our beloved world. I wish you luck champions. For Honour and Glory!*

Create a program that keeps track of enrolled heroes and their collection of spells (spellbook). You will be receiving the following commands until you receive the command **"End"**:

**"Enroll {HeroName}":**

* Adds the hero to your collection of heroes.
* If the hero is already present in your collection, print: **"{HeroName} is already enrolled."**

**"Learn {HeroName} {SpellName}":**

* Adds the **{SpellName}** to the **{HeroName}**'s spellbook.
* If the **{HeroName}** doesn’t exist in the collection, print: "**{HeroName} doesn't exist."**
* If the hero already has the spell in his spellbook print: **"{HeroName} has already learnt {SpellName}."**

**"Unlearn {HeroName} {SpellName}":**

* Remove the **{SpellName}** from the **{HeroName}**'s spellbook.
* If the **{HeroName}** doesn’t exist in the collection, print: "**{HeroName} doesn't exist."**
* If the **{SpellName}** doesn't exist in the hero's spellbook, print: **"{HeroName} doesn't know {SpellName}."**

After you receive the **"End"** command, print all the heroes sorted by their count of spells in **descending** and then by the hero name **ascending** in the format described below:

**"Heroes:**

**== {name1}: {spell1}, {spell2}, {spelln}**

**== {name2}: {spell1}, {spell2}, {spelln}**

**...**

**== {nameN}: {spell1}, {spell2}, {spelln}**

## Input / Constraints

* You will be receiving **lines** until you receive the **"End"** command.

## Output

* Print the **heroes** in the **format** described above.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Enroll Stefan  Enroll Pesho  Enroll Stefan  Learn Stefan ItShouldWork  Learn Stamat ItShouldNotWork  Unlearn Gosho Dispel  Unlearn Stefan ItShouldWork  End | Stefan is already enrolled.  Stamat doesn't exist.  Gosho doesn't exist.  Heroes:  == Pesho:  == Stefan: |
| **Input** | **Output** |
| Enroll Stefan  Learn Stefan ItShouldWork  Learn Stefan ItShouldWork  Unlearn Stefan NotFound  End | Stefan has already learnt ItShouldWork.  Stefan doesn't know NotFound.  Heroes:  == Stefan: ItShouldWork |

Enroll StefanA

Enroll StefanB

Enroll Pesho

Enroll StamatA

Enroll StamatB

Enroll StamatC

Learn StefanA 1

Learn StefanA 2

Learn StefanA 3

Learn StefanA 4

Learn StefanA 5

Learn StefanB 1

Learn StefanB 2

Learn StefanB 3

Learn StefanB 4

Learn StefanB 5

Learn Pesho 1

Learn Pesho 2

Learn Pesho 3

Learn Pesho 4

Learn StamatA 1

Learn StamatB 1

Learn StamatC 1

End