Problem 3 - Heroes of Code and Logic VII

You got your hands on the most recent update on the best MMORPG of all time – Heroes of Code and Logic. You want to play it all day long! So cancel all other arrangements and create your party!

On the first line of the standard input, you will receive an integer **n** – the number of heroes that you can choose for your party. On the next **n** lines, the heroes themselves will follow with their **hit points** and **mana points** separated by a single space in the following format:

"{hero name} {HP} {MP}"

- **HP** stands for hit points and **MP** for mana points
- a hero can have a **maximum** of **100 HP** and **200 MP**

After you have successfully picked your heroes, you can start playing the game. You will be receiving different commands, each on a new line, separated by **" – "**, until the **"End"** command is given.

There are several actions that the heroes can perform:

"CastSpell – {hero name} – {MP needed} – {spell name}"

- If the hero has the required MP, he casts the spell, thus reducing his MP. Print this message:

  o **"{hero name} has successfully cast {spell name} and now has {mana points left} MP!"**

- If the hero is unable to cast the spell print:
  o **"{hero name} does not have enough MP to cast {spell name}!"**

"TakeDamage – {hero name} – {damage} – {attacker}"

- Reduce the hero HP by the given damage amount. If the hero is still alive (his HP is greater than 0) print:
  o **"{hero name} was hit for {damage} HP by {attacker} and now has {current HP} HP left!"**
- If the hero has died, remove him from your party and print:
  o **"{hero name} has been killed by {attacker}!"**

"Recharge – {hero name} – {amount}"

- The hero increases his MP. If it brings the MP of the hero above the **maximum value** (**200**), MP is increased to **200**. (the MP can't go over the maximum value).
- Print the following message:
  o **"{hero name} recharged for {amount recovered} MP!"**

"Heal – {hero name} – {amount}"

- The hero increases his HP. If a command is given that would bring the HP of the hero above the **maximum value (100)**, HP is increased to **100** (the HP can't go over the maximum value).
- Print the following message:
  o **"{hero name} healed for {amount recovered} HP!"**

Input

- On the first line of the standard input, you will receive an integer **n.**
- On the following n lines, the heroes themselves will follow with their **hit points** and **mana points** separated by a space in the following format.
- You will be receiving different **commands**, each on a new line, separated by **" – "**, until the **"End"** command is given.

Output

- Print all members of your party who are **still alive**, in the following format (their HP/MP need to be indented 2 spaces):

  "{hero name}

```
        HP: {current HP}
        MP: {current MP}"
```

Constraints

- The starting HP/MP of the heroes will be valid, 32-bit integers will never be negative or exceed the respective limits.
- The HP/MP amounts in the commands will never be negative.
- The hero names in the commands will always be valid members of your party. No need to check that explicitly.

Examples

Input	Output

2
 	
Solmyr 85 120
 	
Kyrre 99 50
 	
Heal - Solmyr - 10
 	
Recharge - Solmyr - 50
 	
TakeDamage - Kyrre - 66 - Orc
 	
CastSpell - Kyrre - 15 - ViewEarth
 	
End
	Solmyr healed for 10 HP!
	
	Solmyr recharged for 50 MP!
	
	Kyrre was hit for 66 HP by Orc and now has 33 HP left!
	
	Kyrre has successfully cast ViewEarth and now has 35 MP!
	
	Solmyr
	
	  HP: 95
	
	  MP: 170
	
	Kyrre
	
	  HP: 33
	
	  MP: 35

4
 	
Adela 90 150
 	
SirMullich 70 40
 	
Ivor 1 111
 	
Tyris 94 61
 	
Heal - SirMullich - 50
 	
Recharge - Adela - 100
 	
CastSpell - Tyris - 1000 - Fireball
 	
TakeDamage - Tyris - 99 - Fireball
 	
TakeDamage - Ivor - 3 - Mosquito
 	
End
	SirMullich healed for 30 HP!
	
	Adela recharged for 50 MP!
	
	Tyris does not have enough MP to cast Fireball!
	
	Tyris has been killed by Fireball!
	
	Ivor has been killed by Mosquito!
	
	Adela
	
	  HP: 90
	
	  MP: 200
	
	SirMullich
	
	  HP: 100
	
	  MP: 40

Comments	
Heal – SirMullich healed for 30 HP due to the HP max limit. Recharge – Adela recharged for 50 MP due to the MP max limit.	

CastSpell – Tyris does not have enough MP to cast the spell.

TakeDamage – Tyris's HP is reduced by 99, thus becoming -5, which means he is dead.

TakeDamage – Ivor's HP is now -2, so he is dead too.

After the "End" command, we print the remaining living heroes.

JS Examples

Input	Output

[
 	
"2",
 	
"Solmyr 85 120",
 	
"Kyrre 99 50",
 	
"Heal - Solmyr - 10",
 	
"Recharge - Solmyr - 50",
 	
"TakeDamage - Kyrre - 66 - Orc",
 	
"CastSpell - Kyrre - 15 - ViewEarth",
 	
"End"
 	
]
	Solmyr healed for 10 HP!
	
	Solmyr recharged for 50 MP!
	
	Kyrre was hit for 66 HP by Orc and now has 33 HP left!
	
	Kyrre has successfully cast ViewEarth and now has 35 MP!
	
	Solmyr
	
	  HP: 95
	
	  MP: 170
	
	Kyrre
	
	  HP: 33
	
	  MP: 35

[
 	
"4",
 	
"Adela 90 150",
 	
"SirMullich 70 40",
 	
"Ivor 1 111",
 	
"Tyris 94 61",
 	
"Heal - SirMullich - 50",
 	
"Recharge - Adela - 100",
 	
"CastSpell - Tyris - 1000 - Fireball",
 	
"TakeDamage - Tyris - 99 - Fireball",
 	
"TakeDamage - Ivor - 3 - Mosquito",
 	
"End"
 	
]
	SirMullich healed for 30 HP!
	
	Adela recharged for 50 MP!
	
	Tyris does not have enough MP to cast Fireball!
	
	Tyris has been killed by Fireball!
	
	Ivor has been killed by Mosquito!
	
	Adela
	
	  HP: 90
	
	  MP: 200
	
	SirMullich
	
	  HP: 100
	
	  MP: 40

Comments	

Heal – SirMullich healed for 30 HP due to the HP max limit.

Recharge – Adela recharged for 50 MP due to the MP max limit.

CastSpell – Tyris does not have enough MP to cast the spell.

TakeDamage – Tyris's HP is reduced by 99, thus becoming -5, which means that he is dead.

TakeDamage – Ivor's HP is now -2, so he is dead too.

After the "End" command, we print the remaining living heroes.