Bitcoins accounts

The goal of this practice is that students learn to use hash tables (also known as Hash Maps) in which values are different from basic types (e.g. the value type can be other hash tables)

In this practice, each person (represented as a string with its name) can have several accounts bitcoin (a well-known cryptocurrency). Each account is also identified with a string.

You have to implement the following operations for performing operations in a set of people that can have several Bitcoin accounts:

- Deposit(p, a, m): A person "p" deposits certain amount of money "m" in a certain account "a". If "p" person does not exist, then "p" is added. If "a" doesn't exist, then it is added to this particular person.
- Transfer(p1, a1, p2, a2, m): The person p1 transfers m money from their account 1 to the a2 account of p2 person. In a1 doesn't have enough money for the transfer, then the transfer is ignored. If p2 or a2 did not exist, then these are created.
- Money (p): It returns the money of a person as the sum of all its bitcoin accounts.

Input

The first line will indicate the number of cases. Each case will be represented with n + 1 lines: In each case, the first line will indicate the number of operations referred as n. The next n lines have the operation.

The syntax of the operations will be the following ones:

d <p> <a> <m> : Performs a deposit of "m" money in "a" account of "p" person, without printing anything.

t <p1>, <a1>, <p2>, <a2>, <m> : Performs the transfer of m money from a1 of p1 to a2 of p2, without printing anything

m <p>: It prints the sum of money of person p with a line break.

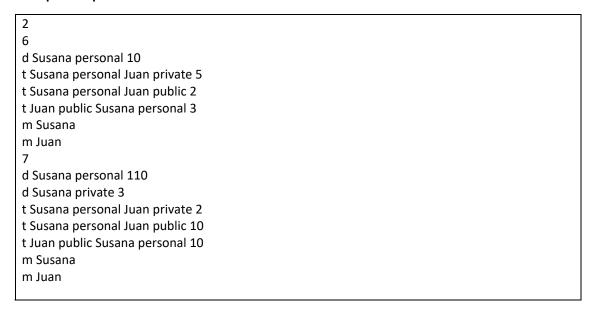For instance you can see here an example:

6
d Susana personal 10
t Susana personal Juan private 5
t Susana personal Juan public 2
t Juan public Susana personal 3
m Susana
m Juan

In this example, Susana starts with 10 bitcoins and transfer 5 and 2 to two different accounts of Juan. Juan tries to transfer back money to Susana, but this operation is ignored, as Juan didn't have so much money in "public" account. The resulting money of Susana and Juan is respectively 3 and 7, so the output should be the following:

3
7

Output

The output of each case will be just printed for the "m" operations without adding new extra line break.

Example of input

```
2
6
d Susana personal 10
t Susana personal Juan private 5
t Susana personal Juan public 2
t Juan public Susana personal 3
m Susana
m Juan
7
d Susana personal 110
d Susana private 3
t Susana personal Juan private 2
t Susana personal Juan public 10
t Juan public Susana personal 10
m Susana
m Juan
```

Example of output

```
3
7
111
2
```