

# **TCenayang Store**

## M2 Binary Search Tree

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Practicum Data Structure IUP  
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TCenayang had continued to have failures in creating businesses. On the midst of desperation, TCenayang unexpectedly got ensnared by an LOL scam in Russia.

There, he found out that members' data will be stored within a BST. A member will have their id **id**, number of successful sales **sales**, and total profit made **profit** stored. Of course the **profit** is for the member above him.

When a member is inserted into the tree, they will be placed based on their **sales** and **profit**. If new member **sales** > current member **sales**, new member will be placed on the right. But if **sales** is equal and new member **profit** > current member **profit**, new member will be placed on the right.

Having enough with the LOL madness, TCenayang wanted out. But to leave the LOL, he needs to contact a member on the leaf of the tree, from where he is currently within the tree. Also, he somehow believes it will be faster if he gets there by going through members with the least **profit** made.

## Input Format

- The first line is M, the amount of LOL members for this particular tree.
- For M lines, id sales profit, as described above.
- Then, T, test cases.
- For T lines, U, TCenayang's id sales profit for Ti-th case.

## Constraints

- id and sales are unsigned integers
- profit is a double
- id is guaranteed to be unique

- no same member is guaranteed to have the exact same sales and profit
- $1 < M < 2^7$
- $1 < T < 10$

## Output Format

For each  $T$ , print out the total profit of other members Bepi had to visit to find the member at the leaf

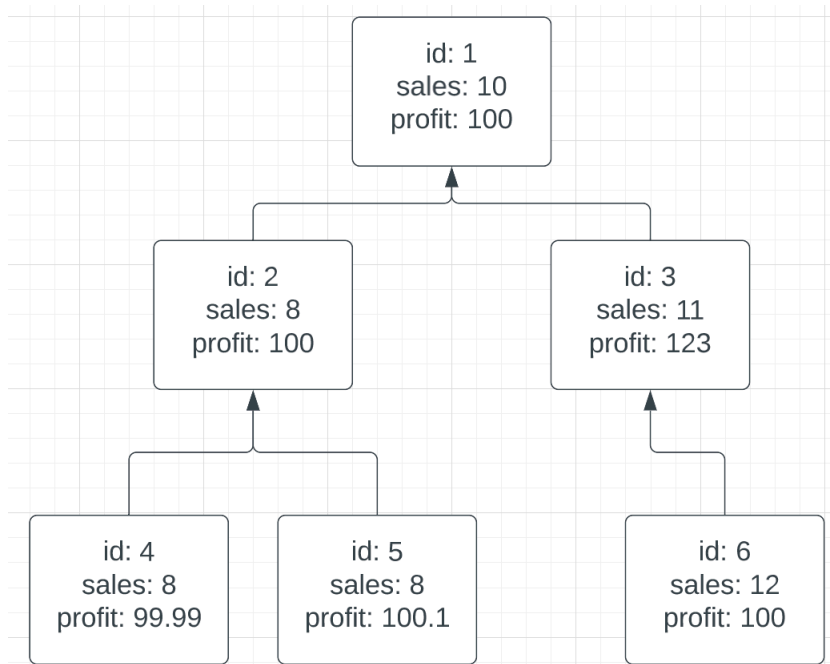
## Sample Input 0

```
6
1 10 100
2 8 100
3 11 123
4 8 99.99
5 8 100.1
6 12 100
6
1 10 100
2 8 100
3 11 123
4 8 99.99
5 8 100.1
6 12 100
```

## Sample Output 0

```
199.990000
99.990000
100.000000
0.000000
0.000000
0.000000
```

## Explanation



- Member 1 will choose to visit member 2 and 4, resulting in 199.99 in total profit
- Member 4,5,6 are already the leaves, no need to visit anyone

**A member own's profit is not counted**