

Swap Coins

Given the ‘m’ coins held by ‘n’ children, write a C++ program to perform ‘k’ swap coins operations. During swap coins operation between two children, all the coins held by one child is swapped with all coins of the other child. After swap operations, print the coins held the children in the order as given in input. For example, when there are five children with five coins as follows:

Name1 5 10 12 45 67

Name2 7 9 11 13 49

Name3 90 21 34 56 67

Name4 22 35 68 91 29

Name5 37 78 93 44 55

After three swaps between the children mentioned below:

Name3 Name5

Name2 Name1

Name5 Name4

Coins with the children left over are:

Name1 7 9 11 13 49

Name2 5 10 12 45 67

Name3 37 78 93 44 55

Name4 90 21 34 56 67

Name5 22 35 68 91 29

Hint:

This problem can be quickly solved using map and vector in STL. Vector has a function swap which will swap elements of two vectors v1 and v2.

For example, v1.swap(v2) – will swap all elements of v1 and v2

Input Format

First line contains the number of children, n

Next ‘n’ lines contain the name of the child and the coins the coins held by the child

Next line contains the value of k

Next ‘k’ lines contain the name of the two children whose coins are to be swapped

Output Format

Print ‘n’ lines

In ith line, print name of the ith child and the coins in the hand of the ith child

Note: A space is there at the end of each line

Problem Statistics

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Solved By: 5

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Theme: Terminal Language C++ Font size: 18

```
1
2 #include <iostream>
3 #include <vector>
4 #include <map>
5 using namespace std;
6 int main()
7 {
8     int n,m; cin>>n>>m;
9     map<string,vector<int>> coins;
10    vector<string> insertion_order;
11    int i,j;
12    for(i = 0; i < n; i++)
13    {
14        string name; cin>>name;
15        insertion_order.push_back(name);
16        vector<int> v;
17        for(j = 0; j < m; j++)
18    {
```

☐ Use custom I/O

Run Code

Save Code

Pause Test

Status:

Success your code has passed all test cases!!