



Lesson 16 CPP set of pair vector

In the previous lesson, we made a program that arranges the names in alphabetical order and they are **related to the phone numbers**.

In this lesson, we want to add a new feature, which is to have **many phone numbers with one name**

It will be as follows:

```
#include <iostream>
#include <set>
#include <string>
#include <utility>
#include <vector>
using namespace std;
int main() {
    set<pair<string, vector<int> > >s;
    for (int i = 0; i < 2; i++) {
        pair<string, vector<int> >p;
        cout << "Enter name: ";
        cin >> p.first;
        more:
        int t;
```



```
cout << "Enter number: ";
cin >> t;

if (t) {
    p.second.push_back(t);
    //get the name
    goto more;
}
s.insert(p);
//get the name and phone numbers
}

set<pair<string,vector< int> > >::iterator it;
for (it = s.begin(); it != s.end(); it++) {
    cout << (*it).first << endl;
    //printing the name
    for (int j = 0; j < (*it).second.size(); j++)
        cout << "\t" << (*it).second[j] << endl;
    //printing phone numbers
}
}
```

input:

zaki 5236 4152

ahmed 48569 635241

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output:

ahmed

48569

635241

zaki

5236

4152