#include<algorithm>

#include<vector>

#include<iostream>

using namespace std;

bool compare(pair<int,int> p1, pair<int,int> p2){

int d1=p1.first\*p1.first+p1.second\*p1.second;

int d2=p2.first\*p2.first+p2.second\*p2.second;

//sort according to x coordinate

if(d1==d2){

return d1<d2;

}

return d1<d2;

}

int main(){

int n;

cin>>n;

vector<pair<int,int>> v;

for(int i=0;i<n;i++){

int x,y;

cin>>x>>y;

v.push\_back(make\_pair(x,y));

}

sort(v.begin(),v.end(),compare);

for(auto x:v){

cout<<"Car "<<x.first<<","<<x.second<<endl;

}

}

Input-

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1 2

2 2

1 0

0 1

Output-

Car 1,0

Car 0,1

Car 0,1

Car 1,2

Car 2,2