using System;

using System.Collections.Generic;

using System.Linq;

class Program

{

static void Main(string[] args)

{

List<IBuyer> buyers = new List<IBuyer>();

int count = int.Parse(Console.ReadLine());

for(int i=0; i<count; i++)

{

var tokens = Console.ReadLine().Split();

if(tokens.Length == 4)

{

buyers.Add(new Citizen(tokens[0], int.Parse(tokens[1]), tokens[2], tokens[3]));

}

else if(tokens.Length == 3)

{

buyers.Add(new Rebel(tokens[0], int.Parse(tokens[1]), tokens[2]));

}

}

string command;

while((command = Console.ReadLine()) != "End")

{

var buyer = buyers.SingleOrDefault(b => b.Name == command);

if(buyer != null)

{

buyer.BuyFood();

}

}

Console.WriteLine(buyers.Sum(b => b.Food));

}

}