

Hacking

A company wants to build a program to track unauthorized sales of its products. The products information is stored in two files. A first file, named “*products.txt*”, contains, one per line, a list of products and the single official reseller authorized to sell that product. Each line has the following format:

```
<product id> <seller id>
```

where <product id> and <seller id> are alphanumeric codes that identify a product and a reseller.

A second file “*transactions.txt*” contains the list of all acquired products as registered by the buyers. Each row corresponds to a single transaction, and contains the product code and the code of the reseller that sold the product.

The program must read the two files and identify suspect transactions. In particular, for each product that was sold at least by a non-authorized seller, the program must print the product code, the official reseller code and the code of the resellers that sold the product, with the same format as in the example below. The products and the reseller codes may be printed in any order.

Example

Given the following “*products.txt*” file

```
P234HF22222 r1011
P234HF22223 r1112
P234HF22225 r1114
P111TG11115 r1216
P331LS00110 r1017
P331LS00120 r1318
P331LS00130 r1019
```

and the following “*transactions.txt*” file

```
P234HF22223 r1112
P111TG11115 r1015
P111TG11115 r1216
P234HF22222 r1011
P331LS00110 r1014
P331LS00120 r1318
P331LS00130 r1019
P234HF22225 r1114
P234HF22223 r1114
```

the program should produce as output (in no particular order):

Suspect transactions

```
Product code: P111TG11115
Official seller: r1216
Sellers list: r1015 r1216
```

```
Product code: P234HF22223
Official seller: r1112
Sellers list: r1112 r1114
```

```
Product code: P331LS00110
Official seller: r1017
Sellers list: r1014
```