JAVA TECHNICAL TEST

Abstract

We have a public leak file that we need to process to be able to ingest that information into our system. To solve this problem, you need to develop a program that will ingest a text file and return output as specified bellow, and write that output to STDOUT.

The input file represents a list of places and people at different times. There are two distinct formats mixed in the same file.

Disclaimer: names and ID's are completely randomly generated with an online tool. Any possible match it's just a coincidence.

Important notes

- We expect good quality, maintainable code, with re-usability in mind.
- Provide a production-ready solution, both in terms of functionality, and in terms of source code quality.
- Presence of any kind of tests is a big plus. TDD/BDD is welcome.
- Your program will be tested with huge, multi-gigabyte files.
- Code-style and project structure is as important as the code itself. Use static analysis.
- Use of a build system is expected (one of Gradle, Bazel, Maven, Ant, etc).
- This should not take more than 2-3 hours to implement.

Format details

1. Each line starts with F or D.
2. If F, this is a "format" line and two formats can be provided (1 or 2).
3. If D, this is a "data" line whose format is defined by the closest above format line.
4. If "F1" is specified, you can expect these fields separated with a comma:
    a. D defining a data line
    b. Name and surname
    c. City
    d. ID formatted as "12345678Z"
5. If "F2" is specified, you can expect these fields separated with space-semicolon-space:
    a. D defining a data line
    b. Name and surname
    c. City
    d. ID formatted as "12345678-Z"

Commands to support

1. java -jar application.jar {FILE} CITY {CITY_NAME} → Will print the list of names and ID's belonging to people that have been in that city
2. java -jar application.jar {FILE} ID {ID_VALUE} (ID format example for input: 12345678Z) → Will print the list of cities that this person has been to.

Output examples

1. java -jar application.jar input.txt CITY CARTAGENA must output an unordered unrepeated list of people and IDs that have been to CARTAGENA.

```
Mitchell Newton,25384390A
Rhonda Hopkins,54315871Z
Alexander Arnold,21743514G
Susan Holland,04810023X
Jake Salazar,38399984N
```

2. java -jar application.jar ID 54808168L must output an unordered unrepeated list of cities that Shelley Payne have been to.

```
MADRID
BARCELONA
OVIEDO
```

Input data

```
F1
D Erica Burns,BARCELONA,93654902Y
D Lucy Mcgee,LONDON,51011156P
D Mitchell Newton,SAN FRANCISCO,25384390A
D Margarita Richards,LAS VEGAS,09877359D
D Rhonda Hopkins,SAN FRANCISCO,54315871Z
D Antonia Harper,LAS VEGAS,27466628M
D Hilda Caldwell,LONDON,61682270L
D Alexander Arnold,SAN FRANCISCO,21743514G
D Cheryl Hawkins,LAS VEGAS,76878166E
D Renee Anderson,BARCELONA,44340637H
F2
D Mitchell Newton ; LAS VEGAS ; 25384390-A
D Margarita Richards ; NEW YORK ; 09877359-D
D Rhonda Hopkins ; BARCELONA ; 54315871-Z
D Taylor Matthews ; LISBOA ; 58202263-G
D Shelley Payne ; MADRID ; 54808168-L
D Johnathan Cooper ; PARIS ; 10863096-N
F1
D Lowell Miles,BARCELONA,04217040J
D Russell Pope,BARCELONA,69429384C
D Shelley Payne,BARCELONA,54808168L
D Johnathan Cooper,BARCELONA,10863096N
D Myra Maldonado,LAS VEGAS,32445934H
D Irene Owen,LONDON,15015516N
D Susan Holland,SAN FRANCISCO,04810023X
D Rodolfo West,LAS VEGAS,74176315G
D Peter Daniel,BARCELONA,58204706D
F2
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D Russell Pope ; CARTAGENA ; 69429384-C
D Shelley Payne ; OVIEDO ; 54808168-L
D Johnathan Cooper ; SANTANDER ; 10863096-N
D Myra Maldonado ; MARSELLA ; 32445934-H
D Glenn Bryan ; LISBON ; 90844421-X
D Neal Love ; SEVILLA ; 52498689-Q
D Taylor Matthews ; LONDRES ; 58202263-G
F1
D Marta Mendez,LAS VEGAS,17200667W
D Glenn Bryan,LAS VEGAS,90844421X
D Neal Love,LAS VEGAS,52498689Q
D Taylor Matthews,LAS VEGAS,58202263G
D Tommie Lindsey,LAS VEGAS,12020245P
D Ruben Daniels,BARCELONA,84604786E
D Emilio Warner,BARCELONA,23803975X
D Mark Quinn,LAS VEGAS,82098573G
D Dwight Roy,LONDON,87179151C
D Jake Salazar,SAN FRANCISCO,38399984N
D Edna Soto,LAS VEGAS,66991455E
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