



B2 - Stumpers

B-CPE-210

DataBase

Duo Stumper



1.00



DataBase

binary name: mydb
repository name: CPE_duostumper_\$STUMPERNUMBER_\$ACADEMICYEAR
repository rights: ramassage-tek
language: C
compilation: via Makefile, including re, clean and fclean rules



- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).



The \$STUMPERNUMBER is always on one digit: 1, 2, ...



For this project, the **only** authorized functions are those of the standard `libc`.

Write a program that allows to query a mini database.

The database is provided and is in a CSV format. It's a database that contains a list of movies.

The entries are to be placed in the file one after the other (one line each).

Each line is composed, in order: the movie id (int), movie title (char[32]), synopsis (char[128]), the director id (int), director name (char[16]), the type id (int), type (char[16]).

If ever you don't want to put a value in one of the int fields, it will be a -1.

Strings are enclosed by double quote (see the output in the example).

The program should take two parameters: the database filename and the command to be executed on it.

Once it's started up, the program should read the commands on the standard input.

Here is a list of possible fields:

- id_movie
- title
- synopsis
- id_director
- director
- id_type
- type



Here is a list of possible commands:

- **get *field value***
displays all of the movies' fields in which the given field contains the passed value (whether text or number).
For example, `get title "star"`.
- **show *pos nb***
displays all of the movies' fields for the `nb` movies starting from the one at the rank `pos` (the first movie's rank is 1).
For example, `show 3 12`.
- **sort *field***
displays all of the movie's fields from the movies, sorted by their value of the given field (for string, the comparison function is `strcmp`).
For example, `sort type`.



You must handle command combinations, via the **AND**, **OR** and **WHERE** operators!



Movies must be displayed in CSV format and, by default, must be in the order of appearance in the database file.

```
Terminal
~/B-CPE-210> ./mydb movies.db "show 1 4 WHERE get type 'comedy' " | cat -e
1;"My Title";"Just a bad movie";42;"Unknown";2;"comedy"$
7;"My Title 2";"Just a bad movie";13;"Roberto Benigni";2;"comedy"$
8;"My Title 3";"Just a bad movie";42;"Unknown";2;"comedy"$
54;"My Title 4";"Just a bad movie";5;"Charles Chaplin";2;"comedy"$
~/B-CPE-210> ./mydb movies.db "sort id_movie WHERE get title 'poney' AND get
director 'Cronenberg' " | cat -e
2;"I love poneys";"A very good movie about mini horses";3;"Cronenberg";3;"drama"
27;"poney for life";"Cronenberg explores his inner self";3;"Cronenberg";4;"docu"
```