CS151 Project: Movie Q&A Chatbot

What is inside this folder?

Prolog code

`run.sh` : script loading and running the interactive prolog program
`simple.pl` : top level code providing entry/exit point, dedicated to control flow of the program
`token.pl` : main file containing the core part of our project(parsing, pattern matching, etc)
`stringops.pl` : utility code realizing some string operations that are useful for parsing
`query.pl` : code defining query interface interacting with the database
`db.pl` : database containing entries in the form `star(MovieTitle, StarList, Director)`
`db_generation/gen_db.py` : python code reading from the csv file and outputting entries in the form mentioned above
`db_generation/movie_metadata.csv` : source data

Epilog code

`epilog_code` : epilog code with some comments for ease of examination
`epilog_code_without_comments` : epilog code without comments, which can be directly pasted into Sierra and interacted with

How to run the Prolog program

If you like web interfaces

Our code is in the cloud! Go to https://swish.swi-prolog.org/p/movie_chatbot.pl and play with it.

If you prefer to run it locally

Install `swi-prolog` , (you might need to do `chmod +x run.sh` to make it runnable) and run

```
$ ./run.sh
```

Which will load `simple.pl` , and you can interact with it like

```
?- hi.
Question: Who directs Titanic
The director you're looking for is James Cameron
Enter another question or 'bye' to quit.

Question: Show me stars in Titanic
You might be looking for these stars: Leonardo DiCaprio, Kate Winslet and Gloria Stuart
Enter another question or 'bye' to quit.

Question: Give me all movies by Jackson
Did you know there are 2 directors you might have meant?
Which of these directors did you mean: Mick and Peter?  Peter
Thanks! Showing results for
Peter Jackson: You might be looking for the movies King Kong, The Hobbit: An Unexpected Journey, The
Hobbit: The Battle of the Five Armies, The Hobbit: The Desolation of Smaug, The Lord of the Rings: The
Fellowship of the Ring, The Lord of the Rings: The Return of the King, The Lord of the Rings: The Two
Towers and The Lovely Bones
You might be looking for the movies King Kong, The Hobbit: An Unexpected Journey, The Hobbit: The Battle
of the Five Armies, The Hobbit: The Desolation of Smaug, The Lord of the Rings: The Fellowship of the
```

```
Ring, The Lord of the Rings: The Return of the King, The Lord of the Rings: The Two Towers and The
Lovely Bones
Enter another question or 'bye' to quit.

Question: What is a movie with Quentin Tarantino
Quentin Tarantino has served as both a star and director. Are you looking for movies with him as (a)
star, (b) as a director or (c) all movies he was involved in in any capacity? Enter your preference: c
You might be looking for the movie The Hateful Eight
Enter another question or 'bye' to quit.

Question: What is a movie with Quentin Tarantino
Quentin Tarantino has served as both a star and director. Are you looking for movies with him as (a)
star, (b) as a director or (c) all movies he was involved in in any capacity? Enter your preference: a
You might be looking for the movie Grindhouse
Enter another question or 'bye' to quit.

Question: bye
Have a nice day!
true .
```

What about the Epilog Program

Our epilog program provides a more limited interface compared to the Prolog program in the following ways:

1. Only alphanumeric characters and words starting with lower case letters are permitted in the database.
2. You can only ask about movies directed by a certain director or acted by a certain star.
3. No disambiguation is supported.

Start by pasting all the code in `epilog_code_without_comments` into Sierra.
The main query function provided is `answer(+Query, -Answer)`. You can query the following in Sierra:

```
Pattern: Answer
Query: answer("show me movies acted by emma z", Answer)
Result: "You might be looking for the movies awesome movie one and awesome movie three"

Pattern: Answer
Query: answer("what are movies lara b is in", Answer)
Result: "You might be looking for the movies awesome movie two and awesome movie one"

Pattern: Answer
Query: answer("give me movies whose director is some one else", Answer)
Result: "You might be looking for the movies awesome movie three"

Pattern: Answer
Query: answer("show me all movies abhijeet m was a star for", Answer)
"You might be looking for the movies awesome movie one"
```