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Assignment 10

```
/* =====
   MOVIE DATABASE
   ===== */
% --- Facts ---
movie(anna, 1987).
director(anna, yurek_bogayevicz).
actress(anna, sally_kirkland, anna).
actor(anna, robert_fields, daniel).
actress(anna, paulina_porizkova, krystyna).

movie(barton_fink, 1991).
director(barton_fink, ethan_coen).
director(barton_fink, joel_coen).
actor(barton_fink, martin_azarow, barton_fink).
actor(barton_fink, john_goodman, charlie_meadows).
actor(barton_fink, harry_bugin, pete).

movie(the_big_lebowski, 1998).
director(the_big_lebowski, joel_coen).
actor(the_big_lebowski, jeff_bridges, jeffrey_lebowski__the_dude).
actor(the_big_lebowski, john_goodman, walter_sobchak).
actor(the_big_lebowski, jack_kehler, marty).
actor(the_big_lebowski, harry_bugin, arthur_digby_sellers).
actor(the_big_lebowski, jesse_flanagan, little_larry_sellers).
actress(the_big_lebowski, irene.olga.l_pez, pilar_sellers_housekeeper).
actor(the_big_lebowski, luis_colina, corvette_owner).
actor(the_big_lebowski, ben_gazzara, jackie_treehorn).
actor(the_big_lebowski, leon_russom, malibu_police_chief).
actress(the_big_lebowski, robin_jones, checker_at_ralph_s).
```

```
movie(blade_runner, 1997).
director(blade_runner, joseph_d_kucan).
actor(blade_runner, martin_azarow, dino_klein).
actor(blade_runner, lloyd_bell, additional_VOICES).
actor(blade_runner, mark_benninghoffen, ray_mccoy).
actress(blade_runner, robin_jones, runciter).
actress(blade_runner, gwen_castaldi, dispatcher_and_newscaster).
actress(blade_runner, signy_coleman, dektora).
```

```
movie(blood_simple, 1984).
director(blood_simple, ethan_coen).
director(blood_simple, joel_coen).
actor(blood_simple, john_getz, ray).
actress(blood_simple, frances_mcdormand, abby).
actress(blood_simple, raquel_gavia, landlady).
```

```
/* =====RULES (Question #1)=====*/
*/
```

```
% a. Movie released after a given year
released_after(M, Y) :-
    movie(M, Y1),
    Y1 > Y.
```

```
% b. Movie released before a given year
released_before(M, Y) :-
    movie(M, Y1),
    Y1 < Y.
```

```
% c. Movies released in the same year
same_year(M1, M2) :-
    movie(M1, Y),
    movie(M2, Y),
    M1 \= M2.
```

```
% d. Two actors/actresses are co-stars if they appear in the same movie
co_star(A1, A2) :-
(
    actor(M, A1, _);
    actress(M, A1, _)
```

```
),
(
    actor(M, A2, _);
    actress(M, A2, _)
),
A1 \= A2.
```

## =====Queries And Answers=====

### Question #2:

- a. In which year was the movie **blood\_simple** released?

```
?- movie(blood_simple, Y).  
Y = 1984.
```

- b. Find the movies released in the year **1997**.

```
?- movie(M,1997).  
M = blade_runner.
```

- c. Find the movies released before **1997**.

```
?- released_before(M,1997).  
M = anna ;  
M = barton_fink ;  
M = blood_simple.
```

- d. Find the movies released after **1990**.

```
?- released_after(M,1990).  
M = barton_fink ;  
M = the_big_lebowski ;  
M = blade_runner ;  
false.
```

- e. Find an actor who has appeared in more than one movie.

```

?- actor(M1,A,_), actor(M2, A, _), M1\=M2.
M1 = barton_fink,
A = martin_azarow,
M2 = blade_runner ;
M1 = barton_fink,
A = john_goodman,
M2 = the_big_lebowski ;
M1 = barton_fink,
A = harry_bugin,
M2 = the_big_lebowski ;
M1 = the_big_lebowski,
A = john_goodman,
M2 = barton_fink ;
M1 = the_big_lebowski,
A = harry_bugin,
M2 = barton_fink ;
M1 = blade_runner,
A = martin_azarow,
M2 = barton_fink ;
false.

```

f. Find the director of a movie in which **Martin Azarow** appeared.

```

?- actor(M, martin_azarow, _), director(M,D).
M = barton_fink,
D = ethan_coen ;
M = barton_fink,
D = joel_coen ;
M = blade_runner,
D = joseph_d_kucan.

```

g. Find an actor/actress who has also directed a movie.

```

?- (actor(M,A,_); actress(M,A,_)), director(M2,A).
false.

```

h. Find the movie in which **Martin Azarow** and **Robin Jones** were co-stars.

```

?- co_star(martin_azarow, robin_jones), (actor(M,martin_azarow,_);actre
ss(M,martin_azarow,_); actress(M, martin_azarow, _)),(actor(M,robin_jo
nes,_);actress(M,robin_jones,_)).
M = blade_runner ;
false.

```

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