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Section:A2

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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.
```
