

AIML Mini Project: Implement any expert system using prolog

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```
go :- hypothesize(Movie),  
      write('I guess that movie is '),  
      write(Movie), nl, undo.
```

```
/* hypotheses to be tested */
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```
hypothesize(chak_de_india) :- chak_de_india, !.  
hypothesize(hum_aapke_hai_kaun) :- hum_aapke_hai_kaun, !.  
hypothesize(three_idiots) :- three_idiots, !.  
hypothesize(happy_new_year) :- happy_new_year, !.  
hypothesize(golmaal) :- golmaal, !.  
hypothesize(hum_sath_sath_hai) :- hum_sath_sath_hai, !.  
hypothesize(eighty_three) :- eighty_three, !.  
hypothesize(ms_dhoni) :- ms_dhoni, !.  
hypothesize(student_of_the_year) :- student_of_the_year, !.  
hypothesize(zindagi_na_melegi_dobara) :- zindagi_na_melegi_dobara, !.  
hypothesize(not_in_my_memory).
```

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/* no diagnosis */
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```
/* movie:) identification rules */
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```
chak_de_india :- year, sports,  
                  verify(related_to_India),  
                  verify(has_moral).  
hum_aapke_hai_kaun :- year, comedy,  
                       verify(has_various_actors),  
                       verify(must_cry).  
three_idiots :- friends,  
                verify(no_fights),  
                verify(suitable_for_kids).  
happy_new_year :- friends,  
                  verify(dance_related).  
golmaal :- comedy,  
            verify(has_actor_who_cannot_speak),  
            verify(contain_fights).
```

```

hum_sath_sath_hai :- comedy,year,
    verify(must_cry),
    verify(has_dog),
    verify(for_grandparents).
eighty_three :- sports,
    verify(is_biography),
    verify(kapil_dev).
ms_dhoni :- sports,
    verify(love_story),
    verify(car_accident).
student_of_the_year :- friends,multiple,
    verify(college_life).
zindagi_na_melegi_dobara :- friends,
    verify(foreign_trip),
    verify(must_watch).
/* classification rules */
year :- verify(old), !.
year :- verify(latest).
comdey :- verify(emotional), !.
comedy :- verify(comedy_yes),
    verify(not_old).
multiple :- verify(next_part), !.
multiple :- verify(no_next_part),
    verify(two_version),
    verify(happy).
friends :- year, verify(has_love_triangle), !.
friends :- year, verify(is_good_Example_of_friendship).
sports :- verify(cricket).
sports :- verify(hockey).

```

```

/* how to ask questions */
ask(Question) :-
    write('Does the movie have the following attribute: '),
    write(Question), write('? '),
    read(Response), nl,
    ( (Response == yes ; Response == y)
    -> assert(yes(Question)) ;
    assert(no(Question)), fail).
:- dynamic yes/1,no/1.
/* How to verify something */
verify(S) :- (yes(S) -> true ; (no(S) -> fail ; ask(S))).

/* undo all yes/no assertions */

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```
undo :- retract(yes(_)),fail.
undo :- retract(no(_)),fail.
undo.
```

```
%to run:
%type swipl
```

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?-
|
|   go
|
Does the movie have the following attribute: old? yes.
Does the movie have the following attribute: cricket? |: no.
Does the movie have the following attribute: hockey? |: no.
Does the movie have the following attribute: comedy_yes? |: yes.
Does the movie have the following attribute: not_old? |: yes.
Does the movie have the following attribute: has_various_actors? |: yes.
Does the movie have the following attribute: must_cry? |: no.
Does the movie have the following attribute: has_love_triangle? |: yes.
Does the movie have the following attribute: no_fights? |: yes.
Does the movie have the following attribute: suitable_for_kids? |: no.
Does the movie have the following attribute: dance_related? |: no.
Does the movie have the following attribute: has_actor_who_cannot_speak? |: no.
Does the movie have the following attribute: next_part? |: no.
Does the movie have the following attribute: no_next_part? |: yes.
Does the movie have the following attribute: two_version? |: no.
Does the movie have the following attribute: foreign_trip? |: yes.
Does the movie have the following attribute: must_watch? |: yes.
I guess that movie is zindagi_na_melegi_dobara
true.
?-
```

```

?-
|   go.
Does the movie have the following attribute: old? yes.
Does the movie have the following attribute: cricket? |: no.
Does the movie have the following attribute: hockey? |: no.
Does the movie have the following attribute: comedy_yes? |: no.
Does the movie have the following attribute: has_love_triangle? |: no.
Does the movie have the following attribute: is_good_Example_of_friendship? |: no.
I guess that movie is not_in_my_memory
true.
?- ■

```

```

?-
|   go
Does the movie have the following attribute: old? no.
Does the movie have the following attribute: latest? |: yes.
Does the movie have the following attribute: cricket? |: no.
Does the movie have the following attribute: hockey? |: no.
Does the movie have the following attribute: comedy_yes? |: yes.
Does the movie have the following attribute: not_old? |: yes.
Does the movie have the following attribute: has_various_actors? |: yes.
Does the movie have the following attribute: must_cry? |: no.
Does the movie have the following attribute: has_love_triangle? |: yes.
Does the movie have the following attribute: no_fights? |: yes.
Does the movie have the following attribute: suitable_for_kids? |: no.
Does the movie have the following attribute: dance_related? |: yes
|: .
I guess that movie is happy_new_year
true.
?- ■

```