

ARTIFICIAL INTELLIGENCE

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Aim

Write a PROLOG program on lists . i. Reversing a list. ii. Finding the position of given element in the list a) from beginning. b) from end.

Code

```
/* reverse a list */

reverse(L):- find_reverse(L,[],L2),write("Reversed List: "),write(L2),nl.

find_reverse([],L1,L1).
find_reverse([X|TAIL],L1,L2):- find_reverse(TAIL,[X|L1],L2).

/* Position from beginning */

find_pos_beg(X,[X|_],0):-!.
find_pos_beg(X,[_|T],N):-find_pos_beg(X,T,M),N is M+1.

/* Position from end */

find_pos_end(X, L, N) :- find_reverse(L, [], L2),
                        find_pos_beg(X, L2, N).
```

Output

```
(base) rajat@rajat-VivoBook-S14-X430UA:/Rajat1/Books/Artificial Intelligence/Practicals$ swipl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
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For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- compile('Prac7.pl').
true.

?- reverse([1,2,3,4]).
Reversed List: [4,3,2,1]
true.

?- find_pos_beg(2,[10,1,3,2,6,4],X).
X = 3.

?- find_pos_end(X,[10,1,3,2,6,4],X).
false.

?- find_pos_end(2,[10,1,3,2,6,4],X).
X = 2.

?-
```