ARTIFICIAL INTELLIGENCE

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Aim

Write a PROLOG program on lists . i. To find whether given element is a member of list ii Inserting an element at a) beginning b) end c) desired position

Code

```
list_member(X,[X|_]).
list_member(X,[_|TAIL]) :- list_member(X,TAIL).

list_insert_begin(X,LIST,[X|LIST]).

list_insert_end(X,[],[X]).
list_insert_end(X,[H|T],[H|T2]):- list_insert_end(X,T,T2).

list_insert_pos(X,0,L,[X|L]).
list_insert_pos(X,Pos,[E|L],ZL):-
   Pos1 is Pos-1, list_insert_pos(X,Pos1,L,ZL1),
   list_insert_begin(E,ZL1,ZL).
```

Output

```
(base) rajat@rajat-VivoBook-S14-X430UA:/Rajat1/Books/Artificial Intelligence/Practicals$ swipl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- compile('Prac6.pl').
true.

?- list_insert_begin(1,[2,3,4],X).
X = [1, 2, 3, 4].

?- list_insert_end(4,[1,2,3],X).
X = [1, 2, 3, 4] .

?- list_insert_pos(2,1,[8,7,9,10,32]).
ERROR: Undefined procedure: list_insert_pos/3
ERROR:     However, there are definitions for:
ERROR:         list_insert_pos/4
false.

?- list_insert_pos(2,1,[8,7,9,10,32],X).
X = [8, 2, 7, 9, 10, 32] .

?- list_member(3,[1,2,3]).
true .

?- list_member(0,[1,2,3]).
false.

?-
```