**PRACTICAL-7**

**AIM:** Write a prolog program to perform the following operations of the list.

1. To display the elements of given list
2. To check given element is in the list or not
3. To print the last item of the list
4. To print the sum of elements of given list

**Source Code:**

display\_list([]).

display\_list([H|T]) :-

write(H), write(' '),

display\_list(T).

is\_element\_in\_list(Element, [Element|\_]).

is\_element\_in\_list(Element, [\_|T]) :-

is\_element\_in\_list(Element, T).

last\_element([X], X).

last\_element([\_|T], X) :-

last\_element(T, X).

sum\_list([], 0).

sum\_list([H|T], Sum) :-

sum\_list(T, RestSum),

Sum is H + RestSum.

list\_operations\_example :-

List = [1, 2, 3, 4, 5],

write('Here are the things in the list: '),

display\_list(List),

nl,

ElementToCheck = 3,

(is\_element\_in\_list(ElementToCheck, List) ->

write(ElementToCheck), write(' is in the list');

write(ElementToCheck), write(' is not in the list')

),

nl,

last\_element(List, Last),

write('The last thing in the list is: '), write(Last), nl,

sum\_list(List, Sum),

write('The total of all the things in the list is: '), write(Sum), nl.

**Output:**

