List Processing Owners Manual

Introduction: lp.pro is a program written in prolog with many different functions to manipulate lists.

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Guides:

DFN1: writelist()

-This function takes a list of elements and writes it to the console.

Example:

?- writelist([1,3,4,5]).
1
3
4
5
true.

DFN2: member()

-This function checks to see if a given element is in a list of elements.

Example:

?- member(a,[a,b,c,d]).
true .

DFN13: size()

-This function returns the size/length of a list of elements.

Example:

?- size([a,b,c,d],X).
X = 4.

DFN4: item()

-This function returns the item at a certain position or index in the list of elements.

Example:

?- item(0,[1,2,3],X).
X = 1 .

DFN5: append()

-This function appends two given lists of elements.

Example:

?- append([a,b],[f],X).
X = [a, b, f].

DFN6: last()

-This function takes the last element in a given list and displays it to the console.

Example:

?- last([q,f,g],X).

X = g .

DFN7: remove()

-This function removes an element from a list.

Example:

?- remove(a,[a,b,c,d],X).

X = [b, c, d] .

DFN8: replace()

-This function replaces an element in a list.

Example:

?- replace(0,b,[a,2,3],X).

X = [b, 2, 3] .

DFN9: makelist()

-This function makes a list.

Example:

?- makelist(9,bacon,X).

X = [bacon, bacon, bacon, bacon, bacon, bacon, bacon, bacon, bacon] .

DFN10: reverse()

-This function reverses the elements in a given list.

Example:

?- reverse([a,b,c,d,e], X).

X = [e, d, c, b, a] .

DFN11: lastput()

-This function takes a given element and puts it at the end of a list of elements.

Example:

?- lastput(x,[a,b,c,d],X).
X = [a, b, c, d, x] .

DFN12: pick()

-This function picks a random element from within a list.

Example:

?- pick([a,b,c,d,mar],X).
X = b .

DFN13: take()

-This function takes a random element from within a list and removes it.

Example:

?- take([a,b,c,d],X,Y).
X = d,
Y = [a, b, c] .

DFN14: iota()

-This function asks for a number and it counts from 1 to the given number and returns a list.

Example:

?- iota(9,X).
X = [1, 2, 3, 4, 5, 6, 7, 8, 9] .

DFN15: sum()

-This function adds the elements in a list.

Example:

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

DFN16: min()

-This function finds the minimum element in a given list.

Example:

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

DFN17: max()

-This function finds the maximum element in a given list.

Example:

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

X = 4 .

DFN18: sort_inc()

-This function sorts a list in ascending order.

Example:

?- sort_inc([2,5,6,1],X).

X = [1, 2, 5, 6] .

DFN19: sort_dec()

-This function sorts a list in descending order.

Example:

?- sort_dec([2,5,6,1],X).

X = [6, 5, 2, 1] .

DFN20: alist()

-This function pairs elements within the same index in two given lists.

Example:

?- alist([1,2,3],[a,b,c],X).

X = [pair(1, a), pair(2, b), pair(3, c)].

DFN21: assoc()

-This function asks for an X in a pair (X,Y) and displays the Y

Example:

?- assoc([pair(1,a),pair(2,b),pair(3,c)],3,X).

X = c .

DFN22: flatten()

-This function inputs a list containing two lists and creates a single list.

Example:

?- flatten([[bacon, eggs, beef],[onion, potato, tomato]],X).

X = [bacon, eggs, beef, onion, potato, tomato] .

[FIN]