Prolog – 2: List

A list is either empty or it is composed of a first element (head) and a tail, which is a list itself. In Prolog we represent the empty list by the atom [] and a non-empty list by a term [H|T] where H denotes the head and T denotes the tail.

Q.1   Find the last element of a list.

Q.2   Find the K'th element of a list.

Q.3   Find the number of elements in list.

Q.4   Find out whether a list is a palindrome.

Q.5   Eliminate consecutive duplicates of list elements.

Q.6   Duplicate the elements of a list a given number of times.

Q.7   Drop every N'th element from a list.

Q.8   Rotate a list N places to the left.

Q.9   Extract a given number of randomly selected elements from a list.

Q.10   Generate a random permutation of the elements of a list.