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1. Write Prolog programs for :
   a) To find the last element of a list.
   b) To determine whether an element is a member of a list.
   c) To determine whether 2 elements are next to each other in a list.
   d) To append 2 lists into a 3rd list.
   e) To merge 2 lists into a 3rd list.
   f) Use append predicate to determine last element of a list.
   g) Use append predicate to determine whether an element is a member of a list.
   h) Use append predicate to determine whether 2 elements are next to each other in a list.
   i) To determine whether a list is a Palindrome.

2. Write Prolog programs :
   a) To determine maximum of 2 numbers.
   b) To determine maximum number in a list.
   c) To determine gcd of 2 numbers.
   d) To determine whether a list is ordered.
   e) To determine sum of all numbers in a list.

3. Write recursive programs in Prolog to :
   a) add two integers.
   b) subtract two integers.
   c) multiply two integers.
   d) divide two integers.

4. Write Prolog programs to :
   a) split a list of integers such that one contains positive integers and other contains negative integers.
   b) count number of integers > 100 in a list of given integers.

5. Let L and L1 denote two lists of terms. Write Prolog programs to realize the following:
   a) To add an element X in L to give L1 provided X is not in L.
   b) To delete the first occurrence of X from L to give L1.
   c) To delete all occurrences of X from L to give L1.
   d) To replace the first occurrence of X in L with Y, giving the result in L1.
   e) To replace all occurrences of X in L with Y, giving the result in L1.
   f) To delete nth element in L, leaving the rest in L1.
   g) To replace nth element in L by X, giving the result in L1.

6. Let L be a list of terms. Write Prolog program for the following definitions :
   a) cutlast(L, L1) that defines L1 to be obtained from L with last element removed.
   b) trim(N, L, L1) that defines L1 to be obtained from L with first N elements removed.
   c) trimlast(N, L, L1) defines that L1 to be obtained from L with last N elements removed.

7. Write Prolog programs to:
    a) calculate factorial(N)
        1. without using accumulator
        2. using accumulator.
    b) reverse a list
        1. without using accumulator
        2. using accumulator.
    c) Calculate the length of a list
        1. without using accumulator
        2. using accumulator.
    d) remove duplicate elements from a list
        1. without using accumulator
        2. using accumulator.
    e) perform Quick sort
        1. without using accumulator
        2. using accumulator.