ARRAYS

In computer programming, a group of homogeneous elements of a specific data type is known as an array. Arrays hold a series of data elements, usually of the same size and data type. Individual elements are accessed by their position in the array. The position is given by an index, which is also called a subscript. The index uses a consecutive range of integers.

LINEAR ARRAY TRAVERSAL

This algorithm traverses a linear array LA with lower bound LB and upper bound UB.It traverses LA applying an operation PROCESS to each element of LA.
Step1. Repeat for K = LB to UB
Apply PROCESS to LA[K].
{End of loop}.
Step2. Exit.

INSERTION

Here LA is a liner array with N elements and K is a positive integer such that k<=N.
This algorithm inserts an element ITEM into the Kth position in LA.
Step1. [Initialize counter] Set J := N
Step2.Repeat Steps 3 and 4 while J>=K.
Step3. Set LA[J+1] := LA[J]. [Move Jth element downward.]
Step4. Set J := J-1. [Decrease counter.]
[End of step 2 loop.]
Step5. Set LA[K] := ITEM. [Insert element.]
Step6. Set N := N+1. [Reset N.]
Step7. EXIT.

DELETION FROM A LINEAR ARRAY

Here LA is a linear array with N elements and k is a positive integer such that k<=N.
This algorithm deletes the Kth element from LA.
Step1. Set ITEM := LA[K].
Step2. Repeat for J = K to N-1:
Set LA[J] := LA[J+1]. [Move J+1st element upward.]
[End of Loop]
Step3. Set N := N-1; [Reset the number N of elements in LA.]
Step4. Exit.