

Data Structure

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Traverse operation of an Array

Traverse - It is an operation which displays/visits/prints every element from start to end one by one.

Traverse (Algorithm)

Take Array $AT[N]$, Where N is size of an Array

Counter Variable “ i ”

1. Initialize counter variable with starting position of an Array (i.e $i=1/0$)
2. While $i < N / i \leq N$ repeat step 3 & 4
3. Process $AT[N]$
4. Increment the counter $i=i+1$
5. exit

Insertion operation of an Array

Insertion - To insert an element at the selected position.

Insertion (Algorithm)

Take, Counter variable j

Array $AI[N]$, Where N is size of an array

Loc variable to store location of an new element

New_Item variable to store value of new element

(Hint: Perform right shifting for an element)

Insertion (Algorithm-Cont..)

1. Initialize counter variable j with size of an array/last index of an array

$j=N$

2. While $j \geq \text{Loc}$ repeat step 3 & 4

3. Move counter array position one step backwards

$A[j+1]=A[j]$

4. Decrement counter j

$j=j-1$

Insertion (Algorithm-Cont..)

5. Insert new element at the assigned location $AI[Loc]=New_Item$

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6. Update the size of an array

$N=N+1$

7. Exit