DSA LAB

Lab Assignment number 16

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AIM: To implement Binary Search

ALGORITHM:

Step 1: READ n and elements of list
Step 2: [INITIALIZE] first = 0
Step 3: [INITIALIZE] last = n - 1
Step 4: [INITIALIZE] middle = (first+last)/2
Step 5:Repeat the following while first <= last
IF array[middle] < search
SET first = middle + 1
ELSE IF array[middle] == search
PRINT “Found”
break
ELSE
SET last = middle - 1
SET middle = (first + last)/2
Step 6: IF first > last
PRINT "Not found”
Step 7:EXIT

EXAMPLE:

array[5] = { 11, 12,13,14,15}
Search : 14
Stage 0 :
First :0
Last :4
Middle : 2

Search > array[middle]
Stage 1:
First : 3
Last :4
Middle : 3

Search found at location 3