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Subject :- Data Structures Lab.

Lab - Write Up (Que - Ans)
Practical - 10

Q.1) What is Searching?

→ The process of finding the desired information from set of items stored in the for of elements in computer memory. These set can be of several types such as :- array, tree, graph or Linked list etc.

Q.2) Write algorithm for linear search?

→ Algorithm

Step 1 - Start
Step 2 - For i = 0 to (n-1) by 1 do
Step 3 - if (a[i] = item) then
Step 4 - set loc = i
Step 5 - display loc.
Step 6 - Exit
Step 7 - end if
Step 8 - end for
Step 9 - set loc = -1
Step 10 - Stop.

Q. 3) Write an algorithm for binary search?

→ Algorithm –

Step 1 — Start

Step 2 - [Initialise] SET BEG = lower bound
END = upper - bound - pos = -1

Step 3 - Set MID = (BEG + END)/2

Step 4 - IF A[MID] = VAL
SET POS = MID
PRINT POS
Go to Step 6
ELSE IF A[MID] > VAL
SET END = MID - 1
ELSE
SET BEG = MID + 1
(END OF IF)
(END OF LOOP)

Step 5 - IF Pos = -1
print "Value is not present in the array"
(End of IF)

Step 6 - Exit