

## Searching techniques

Searching is checking given element is existing in set of data or not. If it is existing then search will be successful otherwise search will be failure. Commonly used searching techniques are

- ① Linear search or (Sequential search)
- \* ② Binary search

## Binary Search

To conduct a binary search given array elements must be sorted in some order. Ascending order or in Descending order. Assuming ascending array elements,

To conduct a binary search given array will be divided into two halves by calculating the position of the mid element.

i.e.  $mid = (lb + ub) / 2$  ( $lb$  = lower bound when is initial zero).  $ub$  stands for upper bound which will be  $(n-1)^{th}$  element) then compare the given key value with mid element such that if the key value is less than a of mid then continue the search in the first half of the array by changing  $ub = mid - 1$ . If the key value is greater