Searching Algorithm Tutorial

1. Define term "Search Algorithm".
2. What is a sequential search?
3. Write a pseudo code for Sequential Search algorithm.
4. Write C++ implementation for Sequential Search method using below array and find the values 65 and 50.

         Array elements: 20,18,32,54,65,10,8

5. What is a binary search?
6. Write a recursive pseudo code for Binary Search algorithm.
7. Write C++ implementation for iterative Binary Search method.
8. Mention the advantages and disadvantages, if any, of binary search over sequential search.
9. Consider the following array of sorted integers:

         8,12,18,25,32,45,56,67,85

   Using binary search algorithm,
   a. Search for 12.
   b. Search for 56.
   c. Search for 90.

   Illustrate the sequence of array elements that are compared, and for each comparison, indicate the values of left, right and middle.

10. Consider the following array of sorted integers:

          10, 15, 25, 30, 33, 34, 46, 55, 78, 84, 96, 99

    Using binary search algorithm,
    a. Search for 15.
    b. Search for 96.
    c. Search for 23.

    Illustrate the sequence of array elements that are compared, and for each comparison, indicate the values of left, right and middle.