LAB 3
Searching and Sorting

Note: Write all programs in c using function and pointer concept.

1. WAP to check whether matrix is symmetric or not.
2. WAP to implement the linear search.
3. WAP to implement the binary search.
4. WAP to implement the bubble sort and show each pass with each step output.
5. WAP to implement a function Rdm(n) which returns an array of random numbers{between 0 to 99}, where n is the size of array.

   NOTE: Use this function by putting it into separate header file for following questions

6. WAP to implement the selection sort and show each pass with each step output and number of comparisons.
7. WAP to implement the insertion sort and show each pass with each step output and number of comparisons.
8. WAP to implement the quick sort and show each pass with each step output and number of comparisons.
9. WAP to implement the merge sort and show each pass with each step output and number of comparisons.
10. WAP to sort a character array using insertion sort in alphabetic order and print number of swaps.
11. WAP to sort a character array using selection sort in alphabetic order and print number of swaps.
12. WAP to partition the array in two parts by finalizing the position of last element and leave first sub array with smaller value elements and second sub array with greater value elements.

13. WAP to insert an element in sorted array and after insertion order should not change.