

## LAB 6

### Sorting

1. 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. (Hint: use dynamic memory allocation concept)

**NOTE: Use Rdm function by putting it into separate header file for questions number 2 through 6.**

2. WAP to implement the bubble sort and show the output of each pass.
3. WAP to implement the selection sort and show the output of each pass.
4. WAP to implement the insertion sort and show the output of each pass.
5. WAP to implement the quick sort and show the output of each pass.
6. WAP to implement the merge sort and show the output of each pass.

### **Advanced Problems**

7. WAP to sort a character array using insertion sort in alphabetic order and print number of shifts.
8. WAP to insert an element in sorted array and after insertion order should not change.  
*Sample input : 2, 4, 5, 6, 8, 9, 10, 13, 15 and 7*  
*Sample output : 2, 4, 5, 6, 7, 8, 9, 10, 13, 15*
9. WAP to implement stable selection sort.
10. WAP to implement online insertion sort such that it can sort the numbers entered during the execution of the program.