OOP Lab
Assignment-5

1. You are required to model simple digital lock with integer digit combination of three security keys. The combination is set into unlock when it is created security keys. To open the lock user must give correct combination given in term of single digit at a time. The lock explicitly remember last three digits entered.
2. You are required to model simple digital lock with integer digit combination of three security keys. The combination is set into unlock when it is created security keys. To open the lock user must give correct combination given in term of single digit at a time. The lock instead of remembering last three digits entered to make the lock open. The lock remembers if last digit entered was first security key and if last two digits were first two security keys.
3. The program receives 6 numbers from the user, finds the largest number and counts the occurrence of the largest number entered.
4. Convert integer decimal number to binary number
5. Convert floating point decimal number to binary number
6. Convert binary number to floating point decimal number
7. Count the number of 1's in binary number using shift (left or right) operators.
8. You are required to generate a four bit cyclic binary counter that starts counting in upward direction from given value and on reaching to the highest value of counting starts counting in reverse direction up to the given value for upward counting. It repeat the cycle. Your program get binary input from user and display each output as four binary digits starting from most significant digit to the least significant digit. Further, you are required to add a delay of 10000 iteration using for loop between two consecutive outputs displayed. The display must be sufficient for distinguishing two consecutive displays.
9. Sort an integer array in ascending order using bubble sort.
10. Merge two ascending order sorted integer array into ascending order sorted array.
11. Merge two ascending order sorted integer array into descending order sorted array.
12. Merge two sorted integer array where first one is in ascending order while second one in descending order into ascending order sorted array.
13. Sort an integer array in ascending order using merge sort.
14. You are required to compute the following activities on two dimensional integer array.
    a. Transpose the array.
    b. Sum the diagonal elements.
    c. Print the upper triangular of the array.
    d. Add the two arrays.
    e. Multiply two arrays.