1. Implement binary search using recursion.
2. Implement merge sort.
3. Write a program to count all the possible paths from top left to bottom right of a MXN matrix with the constraints that from each cell you can either move only to right or down
4. Remove consecutive duplicates from a string recursively. For example, convert "aabccba" to "abcba".
5. A child is running up a staircase with n steps, and can hop either 1 step, 2 steps or 3 steps at a time. Implement a method to count how many possible ways the child can run up to the stairs.
6. Read an integer N from user and create a matrix of alternate rectangles of O and X. Use Recursion this time.

   For e.g: N = 5;

   ooooo
   oxxxo
   oxoxo
   oxxxo
   ooooo
7. Given an array and a number N, find all subsets which sum up to N. (pairs, triplets, etc.)
8. Write a program to print all permutations of the given string.
9. Implement Quick Sort Algorithm
10. Lets assume A is 1, B is 2…and Z is 26. Given a number N, print all possible strings based on above. E.g: 123 -> ABC, LC, AW