**1.** Array - Dup Element

Find dup character In a given string, there is one character which appears twice. Find a function to find the character and return it.

Input: "hello"

Output : 'l'

Input: "asdfghja"

Output: 'a'

2. Array - Insert Element

Given a string (array of characters) insert a given character at the specified location Input: Input String: "Hello" Location: 3 (if the location is beyond string length, ignore) CharacterToInsert: 'm' Output: "Hemllo"

3. Array - Intersection Element

Find the intersection of two given string. Return the string which has character which appears in both string (same sequence order as string1).

Input:

String1: "Hello"

String2: "world"

Output: "lo"

Input:

String 1: "hi"

String2: "bye"

Output: null

**4.** Array - Jumper sequence

Find if the given number in a string, fund if it is jumper number, where the absolute difference consecutive digits is 1

Input: 2345434321

Output: true

Input: 234534

Output: false

5. Array - Least Surpasser

Given integer array, replace every element with least greatest element on the right. If there are no greater number, then place the same number.

Input: [10, 12, 5, 40, 21, 70, 1, 49, 37]

Output: [12, 21, 21, 49, 37, 70, 37, 49, 37]

**6.** Array - Majority Element

Find the character which appeared the maximum time. If you have multiple character as result return the first character in that list.

Input: "hello world"

Output : 'l'

Input: "ye haha"

Output: 'h'

**7.** Array - Number Addition

Given two numbers, which are given as Strings, return us a string which is the sum of these two numbers. Please DO NOT convert to integers using inbuilt string functions.

Input:

String 1: "145"

String: "39"

Output: "184"

**8.** Array - pair sum count

Count the number of pairs in integer array whose sum equals given sum (all elements are unique)

Input: [0, 2, 5, 7, 4, 6, 10, 20, -10]

Sum: 10

Output : 3 [(0, 10), (4, 6), (20, -10)]

**9.** Array - Remove Dup Chars

Given a string remove duplicates characters and maintain the same order

Input: "Hello world hi"

Output String: "Helo wrdhi"

**10.** Array - Remove Given Char

Given a string (array of characters) remove the given character Input:

Input String: "Hello"

CharacterToRemove: 'l'

Output: "Heo"

11. Array - Remove String char

Given a input string (inputStr1) and reference string (inputStr2), remove all the occurrence of character of reference string in the input string

Input String: "Hello world hi"

Deletion String: "lhe"

Output String: "Ho word i"

**12.** Given a string (array of character), reverse the string Input:

Input String: "Mike"

Output: "ekiM"

Input String: "break"

Output: "kaerb"

13. Array - Reverse Group

Reverse array in a group of given size. Every group of string of given size should be reversed.

Input: "hello master"

Size: 3

Output: "leh olsamret"

Input: "thank you bye"

Size: 2

Output: "htna koy uybe"

**14.** Array - Rotation

Given a String rotate the array by given number 'n'

Input: "abcdefgh"

n: 4

Output: "efghabcd"

**15.** Array - Run Length Decoding

For a given string, which has character and the number of times the character appeared, decode to the full string. During encoding if the character appear only once, then no number will be next to that character.

Input: "a5br3"

Output: "aaaaabrrr"

Input: "a10br3a3"

Output: "aaaaaaaaaabrrraaa"

16. Array - Run Length Encoding

For a given input string, count the contiguous characters and represent them in integers. If the contiguous count is 1, you need not add the integer.

Input: "aaaaabrrr"

Output: "a5br3"

Input: "aaaaaaaaaabrrraaa"

Output: "a10br3a3"

**17.** Array - Second Largest number

Given an integer array find the second largest element (where array has only distinct elements)

Input: [2, 10, 11, 20, -5, 40, 60, 90, 1, 100]

Output: 90

18. Array - Shuffle merge

Given a input two string (inputStr1) and (inputStr2), merge these two string by combining elements of same index

Input String: "Hello"

Deletion String: "123"

Output String: "H1e2l3lo"

**19.** Array - Split reverse

Given a string (array of character), split the string to half and reverse each half Input:

Input String: "Mike"

Output: "iMek"

Input String: "break"

Output: "rbeka"

**20.** Array - Surpasser Count

Given integer array, return new array where each element is replaced with the count of number of elements which are greater towards it right

Input: [10, 12, 5, 40, 21, 70, 1, 49, 37]

Output: [6, 5, 5, 3, 3, 0, 2, 0, 0]

**21.** Array - Exponential form

Given a String which has a number, return a string which is a exponential representation of that number using prime factors (only using 2,3,5,7). '^' and 'X' are used in the representation.

Input:

Input string: "24"

Output: "2^3X3^1"

Input: "32"

Output: "2^5"

Input: "245"

Output: "5^1X7^2"