Data Structures Lab - Fall 2020

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Recursion Task
Section B

Note:
Zip file is uploaded on **Google Classroom.**

Q. 1

Part A:

Write a recursive function which takes a string and an integer named **leave and one default index variable**(which will act as index), and that function will print elements at that index, then **0+leave**, then **0+leave+leave** and so on until it reaches the end of the string. BUT the output should be in reverse.

Example:

Input: *string* = "abcdie$5^3i@2#", *leave* = 2, index=0

Output: 2i^$ic
(normal output would have been ci$^i2 but we want it in reverse)

How did this output come about? Let's explain

a	b	c	d	i	e	$	5	^	3	i	@	2	#
0	1	2	3	4	5	6	7	8	9	10	11	12	13

If we go with +2 jump so we will get the following at each jump
1st = 0+ 2 = 2 = At 2 index we had **c**
2nd = 0+2+2 = 4 = At 4 index we had **i**
3rd = 0+2+2+2 = 6 = At 6 index we had **$**
4th = 0+2+2+2+2 = 8 = At 8 index we had **^**
5th = 0+2+2+2+2+2 = 10 = At 10 index we had **i**
6th = 0+2+2+2+2+2+2 = 12 = At 12 index we had **2**
We can not take 7th jump as 12+2 > 13(length of string)

But as requirement the string should be returned in reverse order like this
2i^$iC

Part B

In this part you need to find the immediate after particular number in a string and return count.
input string: “2333340000”, 2, 4
Output: 0
Reason: Because 4 never come after 2 immediately.

Input string: “122333232323”, 2,3
Output: 4
Reason: Because 3 comes 4 times after 2