75 Days of Code Day 26 Problem no:394. Decode String
(leetcode)
Type : Stacks

Given an encoded string, return its decoded string.

The encoding rule is: k[encoded_string], where the encoded_string inside the square brackets is being repeated exactly k times. Note that k is guaranteed to be a positive integer.

You may assume that the input string is always valid; there are no extra white spaces, square brackets are well-formed, etc. Furthermore, you may assume that the original data does not contain any digits and that digits are only for those repeat numbers, k. For example, there will not be input like 3a or 2[4].

The test cases are generated so that the length of the output will never exceed 105.

Example 1:

Input: s = "3[a]2[bc]"
Output: "aaabcbc"
Example 2:

Input: s = "3[a2[c]]"
Output: "accaccacc"
Example 3:

Input: s = "2[abc]3[cd]ef"

Output: "abcabccdcdcdef"

Solution using Stack

- Create two stacks number stack and string stack and iterate a loop
- Push all the number in the number stack
- Push all the string in string stack
- If top element === ‘]‘ pop all the element until top element === ‘[’
- Multiply all the popped element with number of time the the top element of number stack and pop the top element

Shubham Agrahari

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Shubham Agrahari