

Ex 7. -- Decode String

Given an encoded string, return its decoded string.

The encoding rule is: $k[\text{encoded_string}]$, 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; 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 won't be input like 3a or 2[4].

Example 1:

```
Input: s = "3[a]2[bc]"
```

Output: "aaabcbcb"

Example 2:

```
Input: s = "3[a2[c]]"
```

Output: "accaccacc"

Example 3:

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

Output: "abcabccdcdcdef"

Example 4:

```
Input: s = "abc3[cd]xyz"
```

Output: "abccdcddxyz"

Constraints:

- `1 <= s.length <= 30`
- `s` consists of lowercase English letters, digits, and square brackets '['].
- `s` is guaranteed to be a valid input.
- All the integers in `s` are in the range `[1, 300]`.