

Decode String

```
1 class Solution(object):
2     def decodeString(self, input):
3         """
4         input: string input
5         return: string
6         """
7         # write your solution here
8         ret_stack = []
9         cnt_stack = []
10        string = ""
11        i = 0
12        while i < len(input):
13            if input[i].isdigit():
14                cnt = 0
15                while input[i].isdigit():
16                    cnt = cnt*10 + int(input[i])
17                    i += 1
18            elif input[i].isalpha():
19                string += input[i]
20                i += 1
21            elif input[i] == '[':
22                ret_stack.append(string)
23                cnt_stack.append(cnt)
24                string = ""
25                i += 1
26            else:
27                cnt = cnt_stack.pop()
28                last_ret = ret_stack.pop()
29                string = last_ret + cnt*string
30                i += 1
31        return string
```