

## 一、题目说明

题目394. Decode String, 给定一个编码后字符串, 解码字符串。难度是Medium!

## 二、我的解答

解析字符串, 这个题目是栈的典型应用。唯一的复杂度在于嵌套的处理。

```
class Solution{
public:
    string decodeString(string s){
        stack<char> st;
        stack<int> st_r;
        int repeat = 0, index=0;
        string res;
        int toStack = 0;
        while(index < s.size()){
            char c = s[index];

            if(c>='0' && c<='9'){
                repeat = repeat * 10 + (c - '0');
            }else if(c=='['){
                st.push(c);
                st_r.push(repeat);
                repeat = 0;
                toStack++;
            }else if(c==']'){
                string cur;
                repeat = st_r.top();
                st_r.pop();

                while(!st.empty() && st.top()!='['){
                    cur.push_back(st.top());
                    st.pop();
                }
                st.pop();
                reverse(cur.begin(), cur.end());
                if(toStack > 1){
                    while(repeat>0){
                        for(int i=0; i<cur.size(); i++){
                            st.push(cur[i]);
                        }
                        repeat--;
                    }
                }else{
                    while(repeat>0){
                        res.append(cur);
                        repeat--;
                    }
                }
                toStack--;
            }else if(toStack>0){
                st.push(c);
            }else{
                res.push_back(c);
            }
            index++;
        }
        return res;
    }
};
```

```
        index++;  
    }  
    return res;  
}  
};
```

性能如下:

Runtime: 0 ms, faster than 100.00% of C++ online submissions for Decode String.  
Memory Usage: 9 MB, less than 58.82% of C++ online submissions for Decode String.

三、优化措施

无