

# 71. Simplify Path

---

解题思路: <https://leetcode.com/problems/simplify-path/>

unix的路径简化:

例如:

```
path = "/home/", => "/home"  
path = "/a/./b/../../../../c/", => "/c"  
path = "/a/b/../../../../", => "/"  
path = "/a/b/../../../../e/f/.." => "/e"
```

解题思路:

用栈结构

1. 遇到 /./ 就pop
2. 遇到正常的 /abc/ 就push
3. 遇到 /./ 就不动

注意特殊处理什么都没有的情况

代码:

```

class Solution {
public:
    string simplifyPath(string path) {
        stack<string> s;
        int k = 0;
        while(k < path.size() && path.at(k) == '/') {
            k++;
        }
        int start = k, end = 0;
        for(int i = k; i <= path.size(); i++){
            if(i == path.size() || path.at(i) == '/'){
                end = i;
                string t = path.substr(start, end-start);
                if(!s.empty() && t == "..")
                    s.pop();
                else if(t.size() > 0 && t != ".." && t != ".")
                    s.push(t);
                while(i+1 < path.size() && path.at(i+1) == '/') i++;
                start = i+1;
            }
            else{
                end++;
            }
        }
        if(s.empty()){
            return "/";
        }
        string res;
        while(!s.empty()){
            res = "/" + s.top() + res;
            s.pop();
        }
        return res;
    }
};

```