

## 一、题目说明

题目739. Daily Temperatures, 返回一列数, 改天要等多少天才能升温。难度是Medium!

## 二、我的解答

这个题目, 用dp解决非常方便:

```
class Solution{
public:
    vector<int> dailyTemperatures(vector<int>& T){
        int len = T.size();
        vector<int> dp(len,0);
        dp[len-1] = 0;
        for(int i=len-2;i>=0;i--){
            if(T[i]<T[i+1]){
                dp[i] = 1;
            }else if(T[i]==T[i+1]){
                if(dp[i+1]==0){
                    dp[i] = 0;
                } else{
                    dp[i] = dp[i+1] + 1;
                }
            }else{
                for(int j=i+2;j<len;j++){
                    if(T[i]<T[j]){
                        dp[i] = j-i;
                        break;
                    }
                }
            }
        }
        return dp;
    }
};
```

性能如下:

```
Runtime: 664 ms, faster than 5.08% of C++ online submissions for Daily
Temperatures.
Memory Usage: 14.7 MB, less than 100.00% of C++ online submissions for Daily
Temperatures.
```

## 三、优化措施

用一个单调递增栈, 可以减少比较的次数:

```
class Solution{
public:
    //promte by stack
    vector<int> dailyTemperatures(vector<int>& T){
        int len = T.size();
        vector<int> res(len,0);
```

```
        stack<int> st;
        for(int i=0;i<len;i++){
            while(! st.empty() && T[st.top()]<T[i]){
                res[st.top()] = i - st.top();
                st.pop();
            }
            st.push(i);
        }
        return res;
    }
};
```

性能如下:

Runtime: 188 ms, faster than 90.99% of C++ online submissions for Daily Temperatures.  
Memory Usage: 16.1 MB, less than 68.00% of C++ online submissions for Daily Temperatures.