

## 标签 权值线段树 下的文章

🏠 首页 (<https://blog.orzsiyuan.com/>) / 权值线段树

「Codeforces 1073G」Yet Another LCP Problem  
(<https://blog.orzsiyuan.com/archives/Codeforces-1073G-Yet-Another-LCP-Problem/>)

题目链接: Codeforces 1073G (<https://codeforces.com/contest/1073/problem/G>)

定义  $LCP(s, t)$  字符串  $s$  和  $t$  的最长公共前缀, 再定义  $s[x...y]$  为字符串  $s$  从位置  $x$  到  $y$  的子串。

给定一个长度为  $n$  的字符串  $s$  和  $q$  个询问。每次询问给出两个长度分别为  $k_i, l_i$  的序列  $a, b$ 。你需要计算  $\sum_{i=1}^k \sum_{j=1}^l LCP(s[a_i...n], s[b_j...n])$  的值。

数据范围:  $1 \leq n, q, \sum k_i, \sum l_i \leq 2 \times 10^5, 1 \leq k_i, l_i \leq n$ 。

👤 Siyuan (<https://blog.orzsiyuan.com/author/1/>) © 2019 年 04 月 16 日

「CodeChef GERALD07」Chef and Graph Queries  
(<https://blog.orzsiyuan.com/archives/CodeChef-GERALD07-Chef-and-Graph-Queries/>)

题目链接: CodeChef GERALD07 (<https://www.codechef.com/problems/GERALD07>)

大厨有一个无向图  $G$ 。顶点从 1 到  $n$  标号, 边从 1 到  $m$  标号。

大厨有  $q$  对询问  $L_i, R_i$ 。对于每对询问, 大厨想知道当仅保留编号  $X$  满足  $L_i \leq X \leq R_i$  所在的边时, 图  $G$  中有多少连通块。

**注意数据可能包含自环和重边!**

本题有  $T$  组数据。

数据范围:  $1 \leq T \leq 10^3, 1 \leq n, m, q \leq 2 \times 10^5, 1 \leq L_i \leq R_i \leq M$ , 所有的  $n, m, q$  的和均不超过  $2 \times 10^5$ 。

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## 「SPOJ 10628」 COT - Count on a Tree (<https://blog.orzsiyuan.com/archives/SPOJ-10628-COT/>)

题目链接: SPOJ 10628 (<https://www.spoj.com/problems/COT/>)

你有一棵  $n$  个节点的树, 节点从 1 到  $n$  编号。每个点都有一个权值  $a_i$ 。现在有  $m$  个询问, 每个询问形如:

- $u\ v\ k$ : 求节点  $u, v$  之间的路径上的第  $k$  小权值。

数据范围:  $1 \leq n, m \leq 10^5$ 。

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## 「Codeforces 813E」 Army Creation (<https://blog.orzsiyuan.com/archives/Codeforces-813E-Army-Creation/>)

题目链接: Codeforces 813E (<https://codeforces.com/contest/813/problem/E>)

Vova 非常喜欢玩电脑游戏, 现在他正在玩一款叫做 Rage of Empires 的策略游戏。

在这个游戏里, Vova 可以雇佣  $n$  个不同的战士, 第  $i$  个战士的类型为  $a_i$ 。Vova 想要雇佣其中一些战士, 从而建立一支平衡的军队。如果对于任何一种类型, 军队中这种类型的战士都不超过  $k$ , 那么这支军队就被称为平衡的。当然 Vova 想让这支军队的人数尽量多。

现在 Vova 有  $q$  个计划, 第  $i$  个计划他只能雇佣区间  $[l_i, r_i]$  之间的战士。对于每个计划, 你需要求出可以组建的平衡军队的最多人数。

本题强制在线, 对于给定的  $l_i, r_i$ , 我们设上一个计划的答案为  $lastans$  (初始值为 0), 实际的  $l_i, r_i$  通过如下方式生成:

1.  $l_i \leftarrow ((l_i + lastans) \bmod n) + 1$ 。
2.  $r_i \leftarrow ((r_i + lastans) \bmod n) + 1$ 。
3. 如果  $l_i > r_i$ , 交换  $l_i$  和  $r_i$ 。

数据范围:  $1 \leq n, k, q, a_i \leq 10^5$ 。

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## 「Luogu 2617」 Dynamic Rankings (<https://blog.orzsiyuan.com/archives/Luogu-2617-Dynamic-Rankings/>)


题目链接: Luogu 2617 (<https://www.luogu.org/problemnew/show/P2617>)

给定一个含有  $n$  个数的序列  $a_i$ ，接下来有  $m$  个询问，询问分为以下 2 种：

- $Q\ i\ j\ k$ ：询问区间  $[i,j]$  排序后的第  $k$  个数。
- $C\ i\ t$ ：将  $a_i$  修改为  $t$ 。


数据范围：  $1 \leq n, m \leq 10^5, 0 \leq a_i \leq 10^9$ 。


 Siyuan (<https://blog.orzsiyuan.com/author/1/>)

 2019 年 03 月 15 日

## 「算法笔记」可持久化线段树 (<https://blog.orzsiyuan.com/archives/Persistent-Segment-Tree/>)


✓ 线段树这种数据结构可以可持久化。所谓可持久化，就是可以访问某一个历史版本，我们需要运用不同版本之间的共同性质来降低复杂度。其中主席树是一种可持久化权值线段树，常用于求区间第  $k$  小值。


 Siyuan (<https://blog.orzsiyuan.com/author/1/>)

 2019 年 01 月 02 日





### 热门文章

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### 博客信息

📄 文章数目	187
💬 评论数目	243
📅 运行天数	1年25天
🔄 最后活动	4 个月前

## 标签云

- Codeforces (<https://blog.orzsiyuan.com/tag/Codeforces/>)
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- CDQ 分治 (<https://blog.orzsiyuan.com/tag/CDQ-Divide-and-Conquer/>)
- UOJ (<https://blog.orzsiyuan.com/tag/UOJ/>) 主席树 (<https://blog.orzsiyuan.com/tag/Chairman-Tree/>)
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