



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

C. Little Girl and Maximum Sum

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

The little girl loves the problems on array queries very much.

One day she came across a rather well-known problem: you've got an array of n elements (the elements of the array are indexed starting from 1); also, there are q queries, each one is defined by a pair of integers l_i , r_i $(1 \le l_i \le r_i \le n)$. You need to find for each query the sum of elements of the array with indexes from l_i to r_i , inclusive.

The little girl found the problem rather boring. She decided to reorder the array elements before replying to the queries in a way that makes the sum of query replies maximum possible. Your task is to find the value of this maximum sum.

Input

The first line contains two space-separated integers n ($1 \le n \le 2 \cdot 10^5$) and q ($1 \le q \le 2 \cdot 10^5$) — the number of elements in the array and the number of gueries, correspondingly.

The next line contains n space-separated integers a_i ($1 \le a_i \le 2 \cdot 10^5$) — the array elements.

Each of the following q lines contains two space-separated integers l_i and r_i ($1 \le l_i \le r_i \le n$) — the i-th query.

Output

In a single line print, a single integer — the maximum sum of query replies after the array elements

Codeforces Round 169 (Div. 2)

Finished

Practice



→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

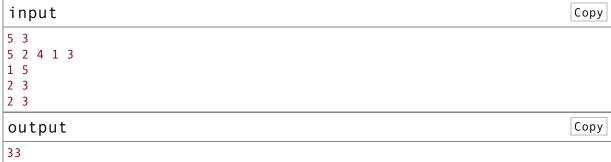
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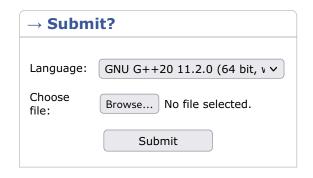
are reordered.

Please, do not use the %11d specifier to read or write 64-bit integers in C++. It is preferred to use the cin, cout streams or the %164d specifier.

Examples











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Desktop version, switch to mobile version.

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