CODEFORCES
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Ahmed_Essam_Yassin | Logout

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H. Heliopolis

time limit per test: 1 second

memory limit per test: 256 megabytes

Long ago, the city of Heliopolis stood tall in what is now Cairo. It had big stone pillars that reached for the sky, showing people's interest in the stars and the sun. It was a place full of learning and big ideas. Heliopolis still leaves a mark on history, inviting us all to dig deeper and learn more about the past.

As you reflect on the legacy of Heliopolis, you are faced with a new challenge.

You have N empty cups, where the $i-th$ cup has a maximum capacity of C_i. You are required to perform M given queries. Each query is one of the following three types:

- "1 i X": Add X liters to the i-th cup. If X is greater than the remaining capacity, do nothing.
- "2 i X": Remove X liters from the i-th cup. If X is greater than the current amount inside the cup, do nothing.
- "3 K": Print the number of cups that contain at least K liters of water.

Input
The first line contains two integers N and M ($1 \leq N, M \leq 10^5$) — the number of cups, and the number of queries, respectively.

The second line contains N integers $C_1, C_2, \ldots, C_N$ ($1 \leq C_i \leq 10^5$) — C_i represents the maximum capacity of the $i-th$ cup.

The next M lines contain the description of the queries:

- "1 i X" ($1 \leq i \leq N; 1 \leq X \leq 10^5$).
- "2 i X" ($1 \leq i \leq N; 1 \leq X \leq 10^5$).
- "3 K" ($1 \leq K \leq 10^5$).

Output
For each query of type 3, print the number of cups that contain at least K liters.

Example

input
```
5 10
2 3 6 5 4
1 1 2
1 3 5
1 1 3
3 2
2 1 3
3 2
1 5 4
1 4 3
1 2 3
3 3
```

output
```
2
2
4
```

→ **About Group**

https://www.youtube.com/@MoamenAhmed98/play

Group website

→ **Group Contests**   ⌄

- LCPC 2024 (Mirror)
- JCPC 2024 (Mirror)
- EthCPC (Mirror)
- PCPC 2024
- LyCPC 2024
- AOCPC 2024
- AOCPC 2023
- QCPC 2024 (Mirror)
- TCPC 2024 (Mirror)
- AICPC 2023
- SCPC 2024 (Mirror)
- SCPC 2024 For Teens (Mirror)
- ECPC 2024 (Mirror)
- ECPC Qualifications 2024 Day 6 (Mirror)
- ECPC Qualifications 2024 Day 5 (Mirror)
- ECPC Qualifications 2024 Day 4 (Mirror)
- ECPC Qualifications 2024 Day 3 (Mirror)
- ECPC Qualifications 2024 Day 2 (Mirror)
- ECPC Qualifications 2024 Day 1 (Mirror)
- International Collegiate Programming Contest, Damascus University Collegiate Programming Contest(2018)
- International Collegiate Programming Contest, Al-Baath, Tishreen, Aleppo and Damascus Collegiate Programming Contest (2021)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 2)
- ACPC Girls 2024
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 6)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 1)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 3)
- ACPC KickOff 2024