Cherry Blossom

Cryptoverse CTF 2022

1 Description

Japan is known around the world for its cherry blossom festival. Known as *Hanami*, it is an important custom and held all over Japan during the spring.

I am now on a beautiful street of Cherry Blossom in Okinawa. n Sakura are lined-up from North to South, each having a **Blossom Value** of A_i. I want to take a picture of Sakura and post it on Twitter. The picture will contain a number of Sakura in series. Unfortunately, due to the photo size limit, at most m Sakura can be included in a single picture.

Please help me determine the maximum total Blossom Value in a single picture.

2 Input

The first line contains 2 integers n, m ($1 \le n, m \le 1,000,000$), where n is the total number of Sakura and any photo cannot contain more than m of them. The second line has n integers $A_1, A_2, ..., A_n$ ($-10^9 \le A_i \le 10^9$) denoting the **Blossom Value** of each tree.

3 Output

An integer representing the maximum **Blossom Value** in a picture. Note: The picture can contain no Sakura.

4 Samples

Sample Input 1

5 2

1 -2 9 -3 5

Sample Output 1

9

Sample Input 2

5 2

-1 -2 -9 -3 -5

Sample Output 2

0

Sample Input 3

8 3

1 2 -3 1 2 3 0 1

Sample Output 2

6