

# Internet Spamming

*Two Years from now,*

*Spam will be solved.*

- *Bill Gates(2004)*

Let's imagine...

The World has evolved so much. Nowadays, the anger of rivalries is being extinguished by the help of Internet. You're the Mr. Despicable of the Underworld and you have invented a new Cyber virus, which acts like a SPAM.

As people are getting more and more virtual, the count of Social sites are being raised on the peak rate. You want to deal damage to some Social Sites. Remember, "Suffering is more painful than Death". So, your goal is to *deal damage to as many Sites as possible, rather totally destroying a site.*

Each of the viruses will send some Spam mails. If a user receives a Spam, the account of the user will be removed forever from the Site that the user is using and the site will lose one of its users.

Now, being a Programmer, you know a virus is nothing but a set of instructions. You have coded everything a virus has to follow except one thing, "On which site a certain virus should attack?"

Now, you have to write a program that will tell each virus on which site it should attack. There is also a bug on your viruses. *A virus cannot attack a site, unless the count of users on that site is more than or equal to the count of spams the virus can produce. Moreover, the viruses will start attacking maintaining the order in which they are given in the input. The first virus will start sending Spams first, then the second one, and so on...*

Now, write a program that will tell a virus, on which site it should attack.

## **INPUT FORMAT:**

Line 1:  $N$  ( $\leq 2e5$ ),  $M$  ( $\leq 2e5$ ) [Number of Sites and Number of Viruses]

Line 2:  $U_1, U_2, U_3, \dots, U_n$  ( $U_i \leq 1e9$ ) [Number of Users on the  $i^{\text{th}}$  site]

Line 3:  $P_1, P_2, P_3, \dots, P_m$  ( $P_i \leq 1e9$ ) [Number of spam mails the  $i^{\text{th}}$  virus can produce]

## **OUTPUT FORMAT:**

Line 1:  $I_1, I_2, I_3, \dots, I_m$  ( $1 \leq I_i \leq N$ ) [Index of the Site the  $i^{\text{th}}$  virus should attack on]

**Note:** If there are no sites, the  $i^{\text{th}}$  virus can attack, print 0 on the  $i^{\text{th}}$  index.

**SAMPLE:**

**Input:**

10 10

7 2 9 5 1 2 1 1 2 5

7 5 6 4 8 3 9 10 1 6

**Output:**

1 3 0 3 0 4 0 0 2 0

**Explanation:**

1<sup>st</sup> virus attacked the 1<sup>st</sup> site, after that the users of the 1<sup>st</sup> site decreased to 0. Now, no virus can attack the 1<sup>st</sup> site.

2<sup>nd</sup> virus attacked the 3<sup>rd</sup> site, and then the users of the 3<sup>rd</sup> site decreased to 4 and later on, it was attacked again by the 4<sup>th</sup> site and got users count decreased to 0.

Now, there remains no sites, which has users more than or equal to the spam mails of the 3<sup>rd</sup> virus. That's why, it can attack no site.