January 2023 CSE 106
Online: Array List & Linked List

Time: 30 minutes

Subsections C1 & C2

You are given two non-negative integers $A = a_1a_2a_3...a_{m-1}a_m$ and $B = b_1b_2b_3...b_{n-1}b_n$ represented as two distinct non-empty linked lists, "$A_L : a_1 \rightarrow a_2 \rightarrow a_3 \rightarrow ... \rightarrow a_{m-1} \rightarrow a_m$" and "$B_L : b_1 \rightarrow b_2 \rightarrow b_3 \rightarrow ... \rightarrow b_{n-1} \rightarrow b_n$". You can assume that neither A nor B starts with leading zeros. You need to determine the sum of A and B.

Input

Take m and n as input, denoting the number of digits in A and B respectively.

In the next line, take m space-separated integers a_1, a_2, ..., a_{m-1}, a_m, denoting the elements of A_L in order.

In the following line, take n space-separated integers b_1, b_2, ..., b_{n-1}, b_n, denoting the elements of B_L in order.

Output

Print the sum of A and B.

See the Sample I/O for further clarification.

Sample I/O

Input	Output
3 3 1 2 3 4 5 6	579
3 3 9 8 7 3 6 9	1356
2 4 5 0 4 3 2 1	4371

Marks Distribution

Approach	Marks
Print the sum	70%
Do not store A and B in any other variables or lists to calculate the sum	100%

Please note that any usage of the internet is strictly prohibited during the assignment. Usage of any unfair means will be duly punished.