Problem A.

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Today, Bekzat needs to hand over the project. Since the project is large, and he does not have time to do it at all, he divided the project into parts and asked for help from friends. Bekzat gave you a task where you need to draw a rectangle of size n by m. Look below for example.

Input

Only line of input contains 2 numbers n and m (3<= n, m <= 100) size of rectangle

Output

Draw a square in n lines, where each line contains m characters: plus `'+'` for corners, minus `'-'` (for upper and lower bounds), forward slash `'|'` (for left and right bounds) , space `' '` (for inner side) characters

Examples

standard input	standard output
3 3	+-+ | | +-+
4 10	+--------+ | | | | +--------+

Problem B. define Fibonacci

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given one int number. You have to find is this number fibonacci number or not? Fibonacci is -> 0, 1, 1, 2, 3, 5, 8, 13...

Input

The first line contains one integer n ($-10^8 <= n <= 10^8$)

Output

"YES"if this number fibonacci number. Else "NO".

Examples

standard input	standard output
5	YES
9	NO
-1	NO
13	YES

Problem C. Good Palindrome

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

A palindrome is a word which reads the same backward as forward, such as madam or racecar. The string called as a good palindrome if its size is even and the string is a palindrome.

For example, "aba"is palindrome, but not good palindrome, "abab"is not Palindrome, and "abaaba"is good palindrome.

Input

Single line, string `s` .

Output

Print "NotGoodPalindrome if it is not a good palindrome. (without whitespaces) Print "NotPalindrome if it is not a palindrome.(without whitespaces) Print "GoodPalindrome if it is a good palindrome.(without whitespaces)

Examples

standard input	standard output
aba	NotGoodPalindrome
abaa	NotPalindrome
ababbaba	GoodPalindrome
asdasd	NotPalindrome
abaabazxyyxzabaaba	GoodPalindrome

Problem D. Changing a characters

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are given a string `S` of length `N`, consisting of uppercase English letters, and an integers `L` and `R` which are between `1` and `N` (inclusive). Print the string S after lowercasing characters between L and R.

Input

First line of input contains string `S` (1 <= S.size() <= 50)

Second line contains two integers `L` and `R` (1 <= L <= R <= S.size())

Output

Print the string `S` after lowercasing the characters from L-th to R-th.

Examples

standard input	standard output
QWERTY 2 5	QwertY
A 1 1	a

Problem E. Trees After Wind

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

You have n - number of trees, each tree has number of leaves. Once a day, weather was very windy, so some leaves felt down. You are given n trees and number of leaves before and after the wind. Your task is to find overall number of leaves left on trees.

Input

First line integer number n;

Second line is an array of leaves that was initially on i'th tree.

Third line is an array of leaves left down from i'th tree. The number of leaves felt down is less or equals initial number.

Output

Output overall number of leaves left on all trees.

Examples

standard input	standard output
5 10 20 30 40 50 5 13 23 34 14	36
3 1 2 3 1 2 3	0
12 34 14 5 65 123 22 141 567 563 188 87 21 21 2 0 31 123 21 100 1 1 22 33 4	566
1 7 2	5

Problem F. Recursion

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Rahat thinks that 4 and 7 are lucky numbers. You are given integer number n. Please print all lucky numbers that are less or equal to number n.

Input

You have given one integer number n. (4<=n<= 100000)

Output

Print all lucky numbers by ascending order.

Examples

standard input	standard output
100	4 7 44 47 74 77
1000	4 7 44 47 74 77 444 447 474 477 744 747 774 777

Problem G. Again, Game with indexes

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Your task is to numerate the sides of 2D array in increasing order, from left to right, from upper to down and remember to put whitespaces inside of the resultant box.

Input

Single integer n , the sides of 2D array : n x n .

Output

Two dimensional array.

Examples

standard input	standard output
5	01234 1 5 2 6 3 7 45678
3	012 1 3 234
1	0
10	0123456789 1 10 2 11 3 12 4 13 5 14 6 15 7 16 8 17 91011121314151617 18