

LBP001

Problem

Submissions

Leaderboard

Discussions

Implement a program to check whether the given number is even number or odd number.

Input Format

An integer value

Constraints

$n \geq 0$

Output Format

even or odd or invalid

Sample Input 0

```
12
```

Sample Output 0

```
even
```

Sample Input 1

```
13
```

Sample Output 1

```
odd
```

Sample Input 2

```
-12
```

Sample Output 2

```
invalid
```

LBP02

Given an integer n , perform the following conditional actions,
If n is odd, print weird,
If n is even and in the inclusive range of 2 to 5, print not weird,
If n is even and in the inclusive range 6 to 20, print weird,
If n is even and greater than 20, print not weird.

Input Format

An integer value from the user.

Constraints

$1 \leq n \leq 100$

Output Format

Weird or Not Weird

Sample Input 0

```
3
```

Sample Output 0

```
Weird
```

Sample Input 1

```
4
```

Sample Output 1

```
Not Weird
```

Sample Input 2

```
50
```

Sample Output 2

```
Not Weird
```

LBP003

Implement a program to check whether the given year is leap year or not.

Input Format

Read year value as an integer from the user.

Constraints

Year>0

Leap Year: It is exactly divisible by 4 except for century year, if it is a century year then it must be divisible by 400.

Output Format

True or False

Sample Input 0

```
1600
```

Sample Output 0

```
True
```

Sample Input 1

```
2020
```

Sample Output 1

```
True
```

Sample Input 2

```
2100
```

Sample Output 2

```
False
```

LBP004

The e-commerce company Bookshelf wishes to analyze its monthly sales data between minimum ranges 30 to maximum range 100. The company has categorized these book sales into four groups depending on the number of sales, with the help of these groups the company will know which stock they should increase or decrease in their inventory for the next month. The groups are as follows

Sales range groups

30-50 -----> D

51-60 -----> C

61-80 -----> B

81-100 -----> A

Write an algorithm to find the group for the given book sale count.

Input Format

An integer salesCount represent total sales of a book.

Constraints

$30 \leq \text{saleCount} \leq 100$

Output Format

A character representing the group of given sale count.

Sample Input 0

```
90
```

Sample Output 0

```
A
```

Sample Input 1

```
45
```

Sample Output 1

```
D
```

Sample Input 2

```
77
```

Sample Output 2

```
B
```

LBP05

Implement a program that takes a number as an argument, increments the number by +1 and returns the result.

Input Format

An integer value from the user.

Constraints

$n \geq 0$

Output Format

An incremented integer value

Sample Input 0

```
10
```

Sample Output 0

```
11
```

Sample Input 1

```
5
```

Sample Output 1

```
6
```

LBP006

Implement a program to calculate the free number of cups the user gets for a specified number of cups bought by the user. In this particular case, the user gets 1 cup free for every 6 cups bought. (Example: If the user buys 12 cups, he gets 2 cups free as per the Buy 6 Get 1 Free offer, and hence the output will be $12+2 = 14$ cups).

Input Format

The input here is the number of coffee cups bought by the user.

Constraints

number of cups ≥ 1 .

Output Format

The output is the total number of cups the user gets including the free coffee cups

Sample Input 0

```
6
```

Sample Output 0

```
7
```

Sample Input 1

```
12
```

Sample Output 1

```
14
```

Sample Input 2

```
7
```

Sample Output 2

```
8
```

LBP007

Implement a program to extract digits from the given number

Input Format

a number from the user

Constraints

Number>0

Output Format

print digits in line separated by space

Sample Input 0

```
123
```

Sample Output 0

```
3 2 1
```

Sample Input 1

```
758
```

Sample Output 1

```
8 5 7
```

Sample Input 2

```
1207
```

Sample Output 2

```
7 0 2 1
```

LBP008

Implement a program to calculate sum of digits present in the given number.

Input Format

A number from the user

Constraints

Number>0

Output Format

print sum of digits

Sample Input 0

```
123
```

Sample Output 0

```
6
```

Sample Input 1

```
1200
```

Sample Output 1

```
3
```

Sample Input 2

```
100
```

Sample Output 2

```
1
```

Sample Input 3

```
195
```

Sample Output 3

```
15
```

LBP009

Implement a program to calculate sum of even digits present in the given number.

Input Format

A number from the user

Constraints

Number>0

Output Format

Print sum of even digits

Sample Input 0

```
123
```

Sample Output 0

```
2
```

Sample Input 1

```
555
```

Sample Output 1

```
0
```

Sample Input 2

```
888
```

Sample Output 2

```
24
```

Sample Input 3

```
910
```

Sample Output 3

```
0
```

Sample Input 4

```
6
```

Sample Output 4

```
6
```

LBP010

Implement a program to calculate sum of odd digits present in the given number.

Input Format

A number from the user

Constraints

Number>0

Output Format

Print sum of odd digits

Sample Input 0

```
123
```

Sample Output 0

```
4
```

Sample Input 1

```
1200
```

Sample Output 1

```
1
```

Sample Input 2

```
555
```

Sample Output 2

```
15
```

Sample Input 3

```
614
```

Sample Output 3

```
1
```

LBP011

Implement a program to calculate sum of prime digits present in the given number

Input Format

a number from the user

Constraints

$n > 0$

Output Format

print sum of prime digits

Sample Input 0

```
123
```

Sample Output 0

```
5
```

Sample Input 1

```
101
```

Sample Output 1

```
0
```

Sample Input 2

```
142
```

Sample Output 2

```
2
```

LBP012

Implement a program to calculate sum of digits that are divisible by 3 in the given number

Input Format

a number from the user

Constraints

$n > 0$

Output Format

print sum of digits that are divisible by 3

Sample Input 0

```
123
```

Sample Output 0

```
3
```

Sample Input 1

```
163
```

Sample Output 1

```
9
```

LBP013

Implement a program to calculate number of digits in the given number

Input Format

a number from the user

Constraints

$n > 0$

Output Format

print number of digits in the number

Sample Input 0

```
124
```

Sample Output 0

```
3
```

Sample Input 1

```
6789
```

Sample Output 1

```
4
```

LBP014

Given an integer x , return x with its digits reversed.

Input Format

a number from user

Constraints

$n \geq 0$

Output Format

reverse of the given number

Sample Input 0

```
123
```

Sample Output 0

```
321
```

Sample Input 1

```
124
```

Sample Output 1

```
421
```

Sample Input 2

```
0
```

Sample Output 2

```
0
```

LBP015

Program to read a number and check whether it is duck number or not.

Hint: A duck number is a number which has zeros present in it, but no zero present in the begining of the number.

Input Format

a number from the user

Constraints

$n \geq 0$

Output Format

Yes or No

Sample Input 0

```
123
```

Sample Output 0

```
No
```

Sample Input 1

```
140
```

Sample Output 1

```
Yes
```

LBP016

Program to find number of occurrences of the given digit in the number n

Input Format

two numbers n and d

Constraints

no constraints

Output Format

number of occurrences

Sample Input 0

```
199  
9
```

Sample Output 0

```
2
```

Sample Input 1

```
111  
1
```

Sample Output 1

```
3
```

LBP017

Program to check whether the given number is paliandrome or not

Input Format

a number from the user

Constraints

$n > 0$

Output Format

Yes or No

Sample Input 0

```
123
```

Sample Output 0

```
No
```

Sample Input 1

```
121
```

Sample Output 1

```
Yes
```

LBP018

Lisa always forgets her birthday which is on th 5th July.

So develop a function/method which will be helpful to remember her birthday.

The function/method `checkBirthday` return an integer 1, if it is her birthday else return 0.

the function/method `checkBirthday` accepts two arguments.Month, a string representing the month of her birth and day, an integer representing the date of her birthday.

Input Format

month & day

Constraints

no

Output Format

1 or 0

Sample Input 0

```
july  
5
```

Sample Output 0

```
1
```

Sample Input 1

```
june  
5
```

Sample Output 1

```
0
```

LBP019

A network protocol specifies how data is exchanged via transmission media. The protocol converts each message into a stream of 1's and 0's.

Given a decimal number, write an algorithm to convert the number into a binary form.

Input Format

a decimal number from the user

Constraints

$n \geq 0$

Output Format

its equivalent binary form

Sample Input 0

4

Sample Output 0

100

Sample Input 1

8

Sample Output 1

1000

LBP020

An e-commerce website wishes to find the lucky customer who will be eligible for full value cash back. For this purpose,a number N is fed to the system. It will return another number that is calculated by an algorithm. In the algorithm, a sequence is generated, in which each number n the sum of the preceding numbers. Initially the sequence will have two 1's in it.

The System will return the Nth number from the generated sequence which is treated as the order ID. The lucky customer will be one who has placed that order.

Write an alorithm to help the website find the lucky customer.

Input Format

an integer value from the user

Constraints

no constraints

Output Format

print order ID as an integer

Sample Input 0

```
8
```

Sample Output 0

```
21
```

Sample Input 1

```
5
```

Sample Output 1

```
5
```

LBP021

An e-commerce company plans to give their customers a special discount for the Christmas, they are planning to offer a flat discount. **The discount value is calculated as the sum of all prime digits in the total bill amount.** Write an algorithm to find the discount value for the given total bill amount.

Input Format

the input consists of an integer order value representing the total bill amount

Constraints

no conditions

Output Format

print an integer representing discount value for the given total bill amount.

Sample Input 0

```
123
```

Sample Output 0

```
5
```

Sample Input 1

```
4589
```

Sample Output 1

```
5
```

Sample Input 2

```
1700
```

Sample Output 2

```
7
```

LBP022

Write a program to accept a number and check and display whether it is a Niven Number or not.
Niven Number is that a number which is divisible by its sum of digits.

Input Format

a number

Constraints

$n > 0$

Output Format

Yes or No

Sample Input 0

```
126
```

Sample Output 0

```
Yes
```

Sample Input 1

```
10
```

Sample Output 1

```
Yes
```

LBP23

A special two digit number is a number such that when the sum of its digits is added to the product of its digits, the result should be equal to the original two-digit number.

Implement a program to accept a two digit number and check whether it is a special two digit number or not.

Input Format

a two digit number

Constraints

10<=n<=99

Output Format

Yes or No

Sample Input 0

```
59
```

Sample Output 0

```
Yes
```

Sample Input 1

```
69
```

Sample Output 1

```
Yes
```

Sample Input 2

```
11
```

Sample Output 2

```
No
```

LBP24

Implement a program to find sum of even number between x and y both are inclusive.

Input Format

two int values

Constraints

no

Output Format

sum of even numbers between x and y

Sample Input 0

```
10  
15
```

Sample Output 0

```
36
```

Sample Input 1

```
0  
10
```

Sample Output 1

```
30
```

LBP25

Create a function/method to convert celsius to fahrenheit

Input Format

celsius

Constraints

no

Output Format

Fahrenheit

Sample Input 0

```
0
```

Sample Output 0

```
32
```

Sample Input 1

```
4
```

Sample Output 1

```
39
```

Sample Input 2

```
90
```

Sample Output 2

```
194
```

LBP26

Program to convert fahrenheit to celsius.

Input Format

fahrenheit

Constraints

no

Output Format

celsius

Sample Input 0

```
32
```

Sample Output 0

```
0
```

Sample Input 1

```
12
```

Sample Output 1

```
-11
```

LBP27

Given three integers i,j & k, a sequence sum to be the value of $i+(i+1)+(i+2)+..+j+(j-1)+(j-2)+..+k$ (**increment from i until it equals to j, then decrement from j until equals k**). Given values i,j,k. calculate the sequence sum as described.

```
int getSequenceSum(int,int,int);
```

Input Format

Three int values

Constraints

no

Output Format

sum based on given constraints

Sample Input 0

```
5  
9  
6
```

Sample Output 0

```
56
```

Sample Input 1

```
0  
5  
-1
```

Sample Output 1

```
24
```

Sample Input 2

```
6  
10  
5
```

Sample Output 2

```
75
```

LBP28

You are climbing a stair case. It takes n steps to reach to the top. Each time you can either climb 1 or 2 steps. In how many distinct ways can you climb to the top?

Note: Given n will be a positive integer.

Input Format

a number from the user

Constraints

no

Output Format

number of ways

Sample Input 0

```
1
```

Sample Output 0

```
1
```

Sample Input 1

```
2
```

Sample Output 1

```
2
```

LBP29

Write a program to check whether the given number is prime number or not. A number is said to prime if it is having only two factors. i.e. 1 and number itself.

Input Format

a number from the user

Constraints

$n > 1$

Output Format

true or false

Sample Input 0

```
2
```

Sample Output 0

```
true
```

Sample Input 1

```
3
```

Sample Output 1

```
true
```

LBP30

Given a string, determine if it is a Palindrome string or not. A String is Palindrome if it is equal to reverse of the original string.

Input Format

A String from the user

Constraints

Non-empty String

Output Format

Palindrome or not

Sample Input 0

```
abba
```

Sample Output 0

```
valid
```

Sample Input 1

```
abc
```

Sample Output 1

```
invalid
```

Sample Input 2

```
madam
```

Sample Output 2

```
valid
```

LBP31

"Secure Assets Private Ltd", a small company that deals with lockers has recently started manufacturing digital locks which can be locked and unlocked using PINs (passwords). You have been asked to work on the module that is expected to generate PINs using three input numbers.

The three given input numbers will always consist of three digits each i.e. each of them will be in the range ≥ 100 and ≤ 999 .

Below are the rules for generating the PIN.

1. The PIN should made up of 4 digits.
2. The unit (ones) position of the PIN should be the least of the units position of the three numbers.
3. The tens position of the PIN should be the least of the tens position of the three input numbers.
4. The hundreds position of the PIN should be least of the hundreds position of the three numbers.
5. The thousands position of the PIN should be the max of all digits in the three input numbers.

Input Format

three numbers

Constraints

all the numbers must be in the range of ≥ 100 and ≤ 999

Output Format

PIN value

Sample Input 0

```
123  
582  
175
```

Sample Output 0

```
8122
```

Sample Input 1

```
190  
267  
853
```

Sample Output 1

```
9150
```

Sample Input 2

```
123  
456  
789
```

Sample Output 2

```
9123
```

LBP32

Program to count number of special characters and white spaces in a given string.

Input Format

A string from the user

Constraints

non-empty string

Output Format

number of special characters

Sample Input 0

```
wel123come@
```

Sample Output 0

```
1
```

Sample Input 1

```
abc@123#
```

Sample Output 1

```
2
```

LBP33

An e-commerce company plans to give their customers a discount for the newyears holiday. The discount will be calcualted on the basis of the bill amount of the order placed. **The discount amount is the sum of all the odd digits in the customers total bill amount.** if no odd digits is present in the bill amount, then discount will be zero.

Input Format

the input consists of an integer bill amount, representing the customers total bill amount.

Constraints

print an integer representing the discount for the given total bill amount.

Output Format

$n > 0$

Sample Input 0

```
2514795
```

Sample Output 0

```
27
```

Sample Input 1

```
21000
```

Sample Output 1

```
1
```

Sample Input 2

```
3700
```

Sample Output 2

```
10
```

LBP34

Email name should be starts with alphabet and should follow by number or underscore. It should contain either numbers or underscore finally ends with gmail.com only. Then given email id is true otherwise false.

Input Format

email id

Constraints

lowercase alphabet [a-z] followed by underscore or digit and gmail.com

Output Format

true or false

Sample Input 0

```
abc@gmail.com
```

Sample Output 0

```
false
```

Sample Input 1

```
abc1@gmail.com
```

Sample Output 1

```
true
```

Sample Input 2

```
abc_@gmail.com
```

Sample Output 2

```
true
```

LBP35

The IT company "Soft ComInfo" has decided to transfer its messages through the N/W using new encryption technique. The company has decided to encrypt the data using the non-prime number concept. The message is in the form of a number and the sum of non-prime digits present in the message is used as the encryption key.

Write an algorithm to determine the encryption key.

note: Digit 1 and 0 are considered as a prime number.

Input Format

The input consists of an integer numMsg representing the numeric form of the message.

Constraints

no

Output Format

print an integer representing the encryption key.

Sample Input 0

```
45673
```

Sample Output 0

```
10
```

Sample Input 1

```
123
```

Sample Output 1

```
0
```

LBP36

Implement a program to return First capital letter in a String

Input Format

A string from the user

Constraints

non-empty string

Output Format

First Capital letter

Sample Input 0

```
Test
```

Sample Output 0

```
T
```

Sample Input 1

```
Hello
```

Sample Output 1

```
H
```

Sample Input 2

```
wElCoMe
```

Sample Output 2

```
E
```

LBP37

Implement a program to calculate toggle case of each characters of a string

Input Format

A String from user

Constraints

non-empty String

Output Format

toggle case string

Sample Input 0

```
Hello
```

Sample Output 0

```
hELLO
```

Sample Input 1

```
tEsT
```

Sample Output 1

```
TeSt
```

Sample Input 2

```
Java
```

Sample Output 2

```
jAVA
```

LBP38

A company launched a new text editor that allows users to enter english letters, numbers and white spaces only. If a user attempts to enter any other type of characters, it is counted as miss. Given a String text, write an algorithm to help the developer detect the number of misses by a given user in the given input.

Input Format

String

Constraints

non-empty string

Output Format

number of misses

Sample Input 0

```
aa a234bc@ sa% hasgd^
```

Sample Output 0

```
3
```

Sample Input 1

```
g@@d morning#
```

Sample Output 1

```
3
```

LBP39

Implement the following function int BlackJack(int n1,int n2);
the function accepts two +ve integers n1 and n2 as its arguments. Implement the function on given two values
to return an int value as follows
return whichever value is nearest to 21 without going over. Return if they go both go over.

Input Format

two int values n1 and n2

Constraints

no

Output Format

0 or n1 or n2

Sample Input 0

```
19
21
```

Sample Output 0

```
21
```

Sample Input 1

```
21
19
```

Sample Output 1

```
21
```

Sample Input 2

```
19
22
```

Sample Output 2

```
19
```

LBP40

A company wishes to transmit data to another server. The data consists of numbers only. To secure the data during transmission, they plan to reverse the data during transmission, they plan to reverse the data first.
**Write an algorithm to reverse the data first **

Input Format

an integer data, representing the data to be transmitted

Constraints

no

Output Format

print an integer representing the given data in reverse form

Sample Input 0

```
123
```

Sample Output 0

```
321
```

Sample Input 1

```
456789
```

Sample Output 1

```
987654
```

LBP41

A company wishes to devise an order confirmation procedure. They plan to require an extra confirmation instead of simply auto-confirming the order at the time it is placed. for this purpose, the system will generate one time password to be shared with the customer. The customer who is placing the order has to enter the OTP to confirm the order. **The OTP generated for the requested order ID, as the product of the digits in orderID.** ***Write an algorithm to find the OTP for the OrderID.

Input Format

an intger representing order id

Constraints

no

Output Format

an integer representing OTP

Sample Input 0

```
2342
```

Sample Output 0

```
48
```

Sample Input 1

```
123
```

Sample Output 1

```
6
```

Sample Input 2

```
456
```

Sample Output 2

```
120
```

LBP42

Jackson, a math student, is developing an application on prime numbers. for the given two integers on the display of the application, the user has to identify all the prime numbers within the given range (including the given values). afterwards the application will sum all those prime numbers. Jackson has to write an algorithm to find the sum of all the prime numbers of the given range. Write an algorithm to find the sum of all the prime numbers of the given range.

Input Format

two space separated integers RL and RR.

Constraints

no

Output Format

sum of the prime numbers between RL and RR.

Sample Input 0

```
2  
10
```

Sample Output 0

```
17
```

Sample Input 1

```
45  
89
```

Sample Output 1

```
682
```

Sample Input 2

```
3  
12
```

Sample Output 2

```
26
```

LBP43

An e-Commerce company plans to give their customers a discount for the newyears holiday. The discount will be calculated on the basis of the bill amount of the order placed. The discount amount is the product of the sum of all odd digits and the sum of all even digits of the customers total bill amount.

Input Format

an integer bill amount, representing the total bill amount of the customer.

Constraints

no

Output Format

print an integer representing the discount amount for the given total bill.

Sample Input 0

```
2514795
```

Sample Output 0

```
162
```

Sample Input 1

```
12345
```

Sample Output 1

```
54
```

Sample Input 2

```
75385
```

Sample Output 2

```
160
```

LBP44

Given two int values, return their sum. Unless the two values are the same, then return double their sum.

Input Format

two int values

Constraints

$n1 \geq 0$ and $n2 \geq 0$

Output Format

return sum or double sum

Sample Input 0

```
1  
2
```

Sample Output 0

```
3
```

Sample Input 1

```
3  
2
```

Sample Output 1

```
5
```

Sample Input 2

```
5  
5
```

Sample Output 2

```
20
```

Sample Input 3

```
2  
2
```

Sample Output 3

```
8
```

LBP45

Create a function that tests whether or not an integer is a perfect number. A perfect number is a number that can be written as sum of its factors. (equal to sum of its proper divisors) excluding the number itself.

Input Format

a number from the user

Constraints

$n > 0$

Output Format

true or false

Sample Input 0

```
6
```

Sample Output 0

```
true
```

Sample Input 1

```
28
```

Sample Output 1

```
true
```

Sample Input 2

```
12
```

Sample Output 2

```
false
```

Sample Input 3

```
97
```

Sample Output 3

```
false
```

LBP46

Program to read date, month and year from the user and check whether it is magic date or not.
Here are the rules for magic date.

- 1) mm*dd is a 1-digit number that matches the last digit in YYYY
- 2) mm*dd is a 2-digit number that matches the last two digits in YYYY
- 3) mm*dd is a 3-digit number that matches the last three digits in YYYY

Input Format

three int values

Constraints

no

Output Format

true or false

Sample Input 0

```
1-1-2001
```

Sample Output 0

```
true
```

Sample Input 1

```
5-2-2010
```

Sample Output 1

```
true
```

Sample Input 2

```
5-1-2010
```

Sample Output 2

```
false
```

LBP47

Create a function that determines whether a number is Oddish or Evenish. A number is Oddish if the sum of all of its digits is Odd, and number is Evenish if the sum of all of its digits is even, if a number is Oddish return Oddish else return Evenish.

Input Format

a number

Constraints

$n > 0$

Output Format

Oddish or Evenish

Sample Input 0

```
43
```

Sample Output 0

```
Oddish
```

Sample Input 1

```
373
```

Sample Output 1

```
Oddish
```

Sample Input 2

```
4433
```

Sample Output 2

```
Evenish
```

LBP48

Accept video length in minutes the format is mm:ss in String format, create a function that takes video length and return it in seconds.

Input Format

video length in mm:ss

Constraints

no

Output Format

length in seconds

Sample Input 0

```
01:00
```

Sample Output 0

```
60
```

Sample Input 1

```
13:56
```

Sample Output 1

```
836
```

Sample Input 2

```
02:01
```

Sample Output 2

```
121
```

LBP49

Given an integer, create a function that returns the next prime. If the number is prime, return the number itself.

Input Format

a number

Constraints

no

Output Format

prime number

Sample Input 0

```
12
```

Sample Output 0

```
13
```

Sample Input 1

```
24
```

Sample Output 1

```
29
```

LBP50

Create a function that sums the total number of digits between two numbers inclusive. for example, if the numbers are 19 and 22, then $(1+9)+(2+0)+(2+1)+(2+2)=19$.

Input Format

two numbers from the user

Constraints

no

Output Format

sum of digits between n1 and n2

Sample Input 0

```
19  
22
```

Sample Output 0

```
19
```

Sample Input 1

```
7  
8
```

Sample Output 1

```
15
```

Sample Input 2

```
17  
20
```

Sample Output 2

```
29
```

LBP51

Given a valid IP address, return a defanged version of that IP address. A defanged IP address replaces every period '.' with "[.]".

Input Format

A string

Constraints

non-empty String

Output Format

replacement String

Sample Input 0

```
1.1.1.1
```

Sample Output 0

```
1[.]1[.]1[.]1
```

Sample Input 1

```
255.100.50.0
```

Sample Output 1

```
255[.]100[.]50[.]0
```

Sample Input 2

```
1.2.3.4
```

Sample Output 2

```
1[.]2[.]3[.]4
```

LBP52

Given two strings, a and b, return the result of putting them together in the order abba, e.g. "Hi" and "Bye" returns "HiByeByeHi".

Input Format

two strings s1 and s2

Constraints

non-empty strings

Output Format

return expected string

Sample Input 0

```
Hi  
Bye
```

Sample Output 0

```
HiByeByeHi
```

Sample Input 1

```
What  
Up
```

Sample Output 1

```
WhatUpUpWhat
```

Sample Input 2

```
tea  
coffee
```

Sample Output 2

```
teacoffeecoffeetea
```

Sample Input 3

```
x  
y
```

Sample Output 3

```
xyyx
```

LBP53

Given a string s , and an integer array indices of the same length. The string s will be shuffled such that the character at the i th position moves to indices[i] in the shuffled string, return shuffled string.

Input Format

a string and an array

Constraints

no

Output Format

a string

Sample Input 0

```
Hello
```

Sample Output 0

```
lololo
```

Sample Input 1

```
Prakash
```

Sample Output 1

```
shshsh
```

Sample Input 2

```
ab
```

Sample Output 2

```
ababab
```

Sample Input 3

```
Hai
```

Sample Output 3

```
aiaiai
```

LBP54

Create a function/method that takes a string and return the word count. The string will be a sentence.

Input Format

A string

Constraints

No

Output Format

Word count

Sample Input 0

```
This is test
```

Sample Output 0

```
3
```

Sample Input 1

```
Test Demo
```

Sample Output 1

```
2
```

Sample Input 2

```
Prakash
```

Sample Output 2

```
1
```

LBP55

Create a function/method that takes two Strings and returns true if the first string ends with second string, otherwise return false

Input Format

two strings

Constraints

No

Output Format

true or false

Sample Input 0

```
abc  
bc
```

Sample Output 0

```
true
```

Sample Input 1

```
abc  
d
```

Sample Output 1

```
false
```

LBP56

Create a function/method that accepts a string (of person's first and last name) and returns a string with in first and last name swapped).

Input Format

two space separated strings

Constraints

No

Output Format

return last name followed by first name

Sample Input 0

```
Donald  
Trump
```

Sample Output 0

```
Trump Donald
```

Sample Input 1

```
Pawan  
Kalyan
```

Sample Output 1

```
Kalyan Pawan
```

LBP57

Create a function/method that takes a string as its argument and returns the string in reversed order.

Input Format

A string

Constraints

No

Output Format

reversed string

Sample Input 0

```
Hello Word
```

Sample Output 0

```
droW olleH
```

Sample Input 1

```
The quick brown fox
```

Sample Output 1

```
xof nworb kciuq ehT
```

Sample Input 2

```
Test Demo
```

Sample Output 2

```
omeD tseT
```

LBP58

A word has been split into a left part and right part. Re-form the word by adding both halves together changing the first character to an upper case letter.

Input Format

two strings **left** and **right**

Constraints

No

Output Format

Concatenated String with first character as capital letter.

Sample Input 0

```
prakash  
babu
```

Sample Output 0

```
Prakashbabu
```

Sample Input 1

```
hacker  
rank
```

Sample Output 1

```
Hackerrank
```

Sample Input 2

```
comp  
lete
```

Sample Output 2

```
Complete
```

LBP59

Two Strings a and b are called anagrams, if they contain all the same characters in the same frequencies

Input Format

Two Strings

Constraints

No

Output Format

true or false

Sample Input 0

```
anagram
margana
```

Sample Output 0

```
true
```

Sample Input 1

```
python
java
```

Sample Output 1

```
false
```

LBP60

Given s string, implement a program to find max occurring character in the given string.

Input Format

A string

Constraints

No

Output Format

max occuring character

Sample Input 0

```
welcome
```

Sample Output 0

```
e
```

Sample Input 1

```
java
```

Sample Output 1

```
a
```

Sample Input 2

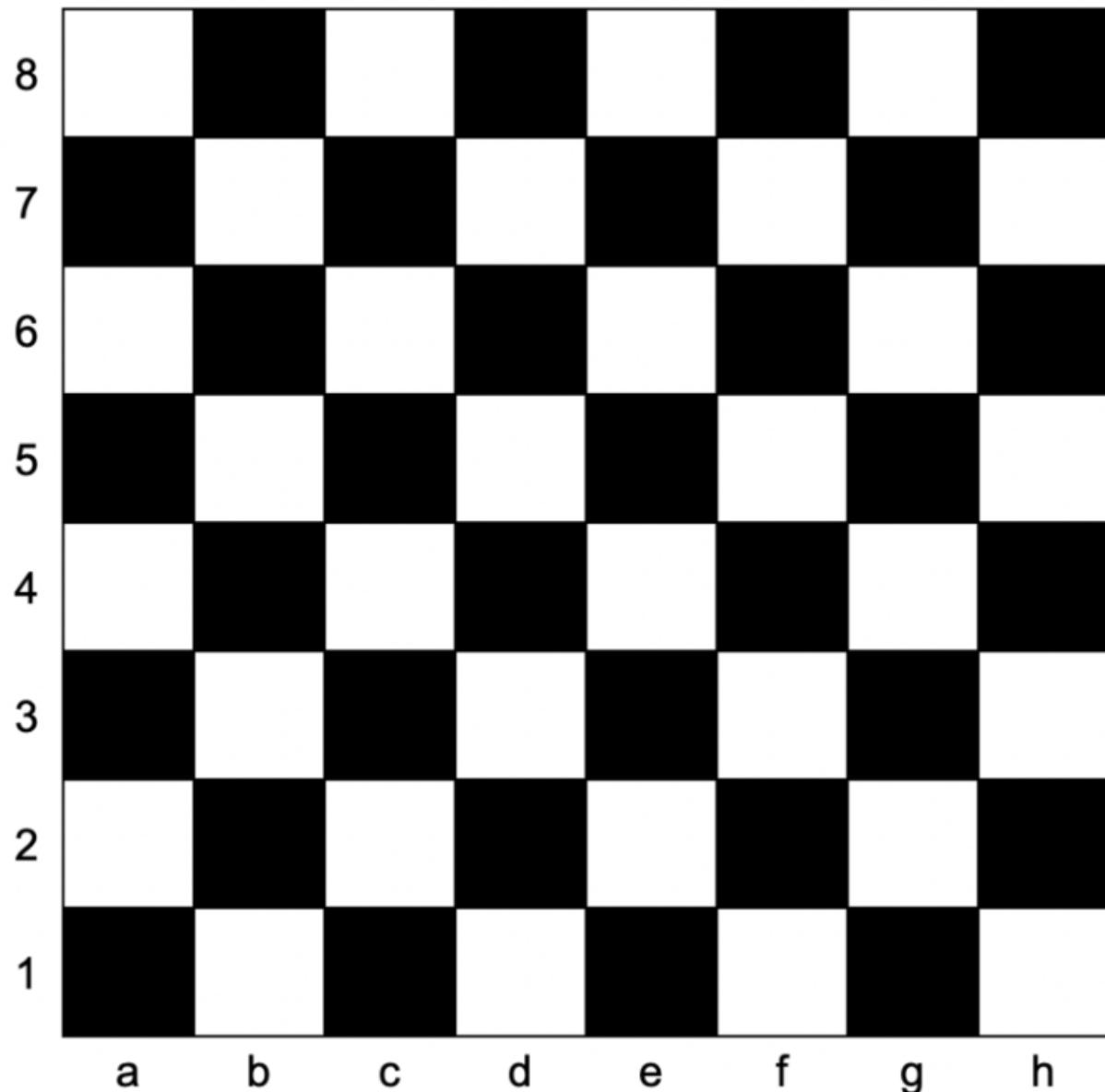
```
aabbcccccddd
```

Sample Output 2

```
d
```

LBP61

You are given coordinates, a string that represents the coordinates of a square of the chessboard. Below is a chessboard for your reference.



Return true if the square is white, and false if the square is black.

The coordinate will always represent a valid chessboard square. The coordinate will always have the letter first, and the number second.

Input Format

coordinates from the user

Constraints

coordinates.length == 2 'a' <= coordinates[0] <= 'h' '1' <= coordinates[1] <= '8'

Output Format

true or false

Sample Input 0

```
a1
```

Sample Output 0

```
false
```

Sample Input 1

```
h3
```

Sample Output 1

```
true
```

Sample Input 2

```
c7
```

Sample Output 2

```
false
```

LBP62

Write a function that finds the word "bomb" in the given string (not case sensitive). Return "DUCK!" if found, otherwise,"Relax, there's no bomb.".

Input Format

String

Constraints

No

Output Format

"DUCK!" or "Relax, there's no bomb."

Sample Input 0

```
There is a bomb.
```

Sample Output 0

```
DUCK!
```

Sample Input 1

```
Hey, did you think there is a BOMB?
```

Sample Output 1

```
DUCK!
```

Sample Input 2

```
This goes boom!!!
```

Sample Output 2

```
Relax, there's no bomb.
```

LBP63

Create a function that takes a string and returns the number of vowels contained within it.

Input Format

A string from the user

Constraints

no

Output Format

number of vowels

Sample Input 0

```
celebration
```

Sample Output 0

```
5
```

Sample Input 1

```
palm
```

Sample Output 1

```
1
```

LBP64

Create a function that takes a string, check if it has the same number of x's and o's and returns either true or false.

1. return boolean value true or false.
2. returns true if the amount x's and o's are the same.
3. returns false if they are not the same amount.
4. the string can contains any character.
5. when 'x' and 'o' are not in the string, return true.

Input Format

a string

Constraints

No

Output Format

true or false

Sample Input 0

```
ooxx
```

Sample Output 0

```
true
```

Sample Input 1

```
xooxx
```

Sample Output 1

```
false
```

LBP65

write a function that shutters a word as if someone is struggling to read it. The first two letters are repeated twice with an ellipsis ... , and then the word is pronounced with a question mark?

Input Format

a string

Constraints

no

Output Format

XX... XX... ~~~~~~?

Sample Input 0

```
incredible
```

Sample Output 0

```
in...in...incredible?
```

Sample Input 1

```
abc
```

Sample Output 1

```
ab...ab...abc?
```

LBP66

Create a function/method that takes a string and returns a string in which each character is repeated once

Input Format

A string from the user

Constraints

No

Output Format

String

Sample Input 0

```
string
```

Sample Output 0

```
ssttrriinngg
```

Sample Input 1

```
hello
```

Sample Output 1

```
hheelllloo
```

Sample Input 2

```
1234
```

Sample Output 2

```
11223344
```

LBP67

Create a function/method that takes, a word and returns true if the word has two consecutive identical letters.

Input Format

A string from the user

Constraints

No

Output Format

true or false

Sample Input 0

```
loop
```

Sample Output 0

```
true
```

Sample Input 1

```
yummy
```

Sample Output 1

```
true
```

Sample Input 2

```
orange
```

Sample Output 2

```
false
```

LBP68

Andy, Ben and Charlotte are playing a board game. the three of them decided to come up with a new scoring system. A player's first initial ("A","B" and "C") denotes that players scoring a single point. Given a string of capital letters, return an array of the player's score.

Input Format

A string from the user

Constraints

No

Output Format

Score

Sample Input 0

```
A
```

Sample Output 0

```
1 0 0
```

Sample Input 1

```
ABC
```

Sample Output 1

```
1 1 1
```

LBP69

Create a function/method that takes a string as a argument and returns a new string by removing all vowels from it

Input Format

a string from the user

Constraints

No

Output Format

A string

Sample Input 0

```
welcome
```

Sample Output 0

```
wlcm
```

Sample Input 1

```
demo
```

Sample Output 1

```
dm
```

LBP70

Create a function that takes a string as input and returns a string with spaces in between all of the characters.

Input Format

A string from the user

Constraints

No

Output Format

A space seperated string

Sample Input 0

```
abc
```

Sample Output 0

```
a b c
```

Sample Input 1

```
space
```

Sample Output 1

```
s p a c e
```

Sample Input 2

```
kpb
```

Sample Output 2

```
k p b
```

LBP71

Create a function that replaces all the vowels in a string with a specified character,

Input Format

A string from the user

Constraints

No

Output Format

A string

Sample Input 0

```
welcome  
#
```

Sample Output 0

```
w#lc#m#
```

Sample Input 1

```
prakash  
.
```

Sample Output 1

```
pr.k.sh
```

LBP72

Write a function that takes a string name and number num (either 1 or 0) and return "Hello"+name if number is 1, otherwise "Bye"+name.

Input Format

a string from the user

Constraints

no

Output Format

a string

Sample Input 0

```
prakash  
1
```

Sample Output 0

```
Hello prakash
```

Sample Input 1

```
java  
0
```

Sample Output 1

```
Bye java
```

Sample Input 2

```
python  
1
```

Sample Output 2

```
Hello python
```

LBP73

zipcodes consists of 5 consecutive digits. Given a string, write a function to determine whether the input is a valid zip code. a valid zipcode is as follows

1. must contain only numbers.
2. it should not contain any spaces.
3. length should be only 5.

Input Format

A string

Constraints

no

Output Format

true or false

Sample Input 0

```
59001
```

Sample Output 0

```
true
```

Sample Input 1

```
853a7
```

Sample Output 1

```
false
```

Sample Input 2

```
73232
```

Sample Output 2

```
true
```

LBP74

create a function that takes a string and returns, the middle character(s). if the word's length is odd return the middle character. if the word's length is even, return the middle two characters.

Input Format

a string from the user

Constraints

no

Output Format

middle character(s)

Sample Input 0

```
test
```

Sample Output 0

```
es
```

Sample Input 1

```
testing
```

Sample Output 1

```
t
```

Sample Input 2

```
middle
```

Sample Output 2

```
dd
```

LBP75

create a function that returns the index of first vowel in a string

Input Format

a string

Constraints

no

Output Format

an int value

Sample Input 0

```
apple
```

Sample Output 0

```
0
```

Sample Input 1

```
hello
```

Sample Output 1

```
1
```

LBP76

Write a function that finds the longest word in a sentence. If two or more words are found, return the first longest word. Characters such as apostrophe, comma, period (and the like) count as part of the word (e.g. O'Connor is 8 characters long).

Input Format

a string from the user

Constraints

no

Output Format

longest word

Sample Input 0

```
Hello Welcome to the world of Java
```

Sample Output 0

```
Welcome
```

Sample Input 1

```
C CPP Java and Python
```

Sample Output 1

```
Python
```

LBP77

Implement a program that returns the number of decimal places a number (given as a string) has. Any zeros after the decimal point count towards the number of decimal places.

Input Format

string from the user

Constraints

non empty string

Output Format

count of decimal places

Sample Input 0

```
43.20
```

Sample Output 0

```
2
```

Sample Input 1

```
400
```

Sample Output 1

```
0
```

Sample Input 2

```
3.1
```

Sample Output 2

```
1
```

Sample Input 3

```
7.333
```

Sample Output 3

```
3
```

LBP78

Given a string S, the task is to remove all the duplicates in the given string.

Input Format

a string from the user

Constraints

remove all duplicates

Output Format

a string without duplicates

Sample Input 0

```
hello
```

Sample Output 0

```
helo
```

Sample Input 1

```
welcome
```

Sample Output 1

```
welcom
```

LBP79

Write a Java program to take an input string and exchange the first and last word and reverse the middle word.

Input Format

a string

Constraints

no

Output Format

a string

Sample Input 0

```
Hello welcome to java
```

Sample Output 0

```
java ot emoclew Hello
```

Sample Input 1

```
java is very easy
```

Sample Output 1

```
easy yrev si java
```

LBP80

Create a function that determines whether a string is a valid hex code. A hex code must begin with a pound key # and is exactly 6 characters in length. Each character must be a digit from 0-9 or an alphabetic character from A-F. All alphabetic characters may be uppercase or lowercase.

Input Format

a string from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
#CD5C5C
```

Sample Output 0

```
true
```

Sample Input 1

```
#CD5C5G
```

Sample Output 1

```
false
```

LBP81

Write a program to print even length words in a string?

Input Format

a string from the user

Constraints

no

Output Format

list of strings with even length

Sample Input 0

```
hello world java
```

Sample Output 0

```
java
```

Sample Input 1

```
python is very easy
```

Sample Output 1

```
python is very easy
```

LBP82

Write a function that changes every letter to the next letter:

"a" becomes "b"

"b" becomes "c"

"d" becomes "e"

and so on ...

note: there is no z's in test cases, be happy.

Input Format

a string from the user

Constraints

no

Output Format

modified string

Sample Input 0

```
hello
```

Sample Output 0

```
ifmmp
```

Sample Input 1

```
bye
```

Sample Output 1

```
czf
```

Sample Input 2

```
welcome
```

Sample Output 2

```
xfmdpnf
```

LBP83

Write a function that returns the first n vowels of a string.

Input Format

a string from the user and an integer value

Constraints

Return "invalid" if the n exceeds the number of vowels in a string.

Output Format

return first n vowels in the string

Sample Input 0

```
sharpening skills  
3
```

Sample Output 0

```
aei
```

Sample Input 1

```
major league  
5
```

Sample Output 1

```
aoeau
```

Sample Input 2

```
hostess  
5
```

Sample Output 2

```
invalid
```

LBP84

Implement a program that takes a string and returns true or false, depending on whether the characters are in order or not.

Input Format

String from the user

Constraints

non-empty string

Output Format

true or false

Sample Input 0

```
abc
```

Sample Output 0

```
true
```

Sample Input 1

```
prakash
```

Sample Output 1

```
false
```

Sample Input 2

```
123
```

Sample Output 2

```
true
```

LBP85

Fanny is given a string along with the string which contains single character x. She has to remove the character x from the given string. Help her write a program to remove all occurrences of x character from the given string.

Input Format

String and character from the user

Constraints

non-empty string

Output Format

Updated string

Sample Input 0

```
welcome  
e
```

Sample Output 0

```
wlcom
```

Sample Input 1

```
prakash  
a
```

Sample Output 1

```
prksh
```

Sample Input 2

```
java  
a
```

Sample Output 2

```
jv
```

Sample Input 3

```
python  
y
```

Sample Output 3

```
pthon
```

LBP86

Someone has attempted to censor my strings by replacing every vowel with a *, l*k* th*s. Luckily, I've been able to find the vowels that were removed.

Given a censored string and a string of the censored vowels, return the original uncensored string.

Input Format

censored string and removed vowels as string

Constraints

non-empty string

Output Format

updated string

Sample Input 0

```
w*l*c*m*
eo
```

Sample Output 0

```
welcome
```

Sample Input 1

```
Wh*r* d*d my v*w*ls g*?
eeioeo
```

Sample Output 1

```
Where did my vowels go?
```

Sample Input 2

```
*bcd*
ae
```

Sample Output 2

```
abcde
```

Sample Input 3

```
*PP*RC*S*
UEAE
```

Sample Output 3

```
UPPERCASE
```

LBP87

Given a string S of '(' and ')' parentheses, we add the minimum number of parentheses ('(' or ')', and in any positions) so that the resulting parentheses string is valid. Formally, a parentheses string is valid if and only if: It is the empty string, or It can be written as AB (A concatenated with B), where A and B are valid strings, or It can be written as (A), where A is a valid string. Given a parentheses string, return the minimum number of parentheses we must add to make the resulting string valid.

Input Format

string from the user

Constraints

non-empty string

Output Format

minimum number of (or) required.

Sample Input 0

```
()
```

Sample Output 0

```
0
```

Sample Input 1

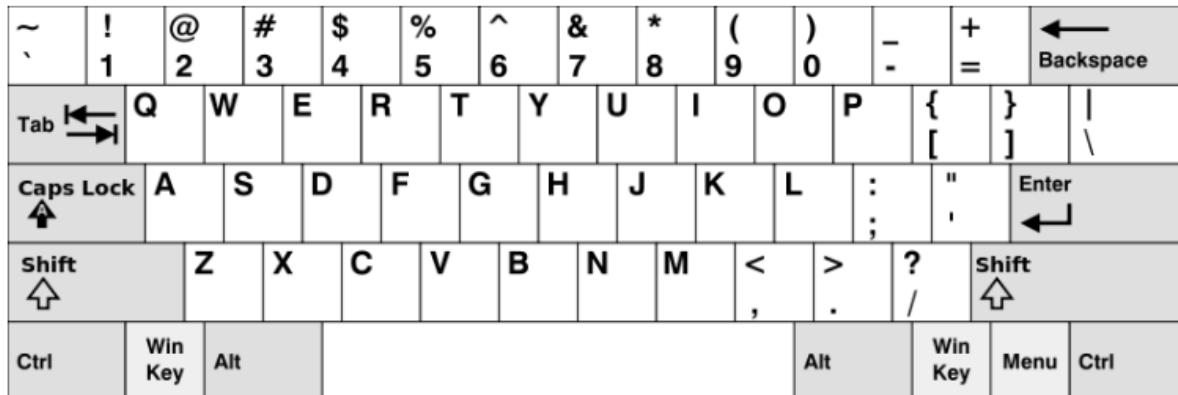
```
( ) (
```

Sample Output 1

```
1
```

LBP88

Given a string, return the true if that can be typed using letters of alphabet on only one row's of American keyboard like the image below.



In the American keyboard:

- => the first row consists of the characters "qwertyuiop",
- => the second row consists of the characters "asdfghjkl", and
- => the third row consists of the characters "zxcvbnm".

Note:

1. You may use one character in the keyboard more than once.
2. You may assume the input string will only contain letters of alphabet.

Input Format

A string from the user

Constraints

length of string >1

Output Format

true or false

Sample Input 0

```
mom
```

Sample Output 0

```
false
```

Sample Input 1

```
dad
```

Sample Output 1

```
true
```

Sample Input 2

```
love
```

Sample Output 2

```
false
```

Sample Input 3

```
false
```

Sample Output 3

```
false
```

LBP89

Given two strings s and $goal$, return true if and only if s can become $goal$ after some number of shifts on s . A shift on s consists of moving the leftmost character of s to the rightmost position. For example, if $s = "abcde"$, then it will be $"bcdea"$ after one shift.

Input Format

string s_1 and s_2 from the user

Constraints

non empty string

Output Format

true or false

Sample Input 0

```
abcde  
bcdea
```

Sample Output 0

```
true
```

Sample Input 1

```
kpb  
psk
```

Sample Output 1

```
false
```

Sample Input 2

```
xyz  
yzx
```

Sample Output 2

```
true
```

Sample Input 3

```
nayan  
abcde
```

Sample Output 3

```
false
```

LBP90

Given a string containing unique letters, return a sorted string with the letters that don't appear in the string.

Input Format

A string from the user

Constraints

non empty string

Output Format

return missing characters in the given string

Sample Input 0

```
abcdefghijklmnopqrstuvwxyz
```

Sample Output 0

```
hijklmno
```

Sample Input 1

```
zyxwvutsrq
```

Sample Output 1

```
abcdefghijklmnop
```

Sample Input 2

```
abc
```

Sample Output 2

```
defghijklmnopqrstuvwxyz
```

Sample Input 3

```
abcdefghijklmнопqrstuvwxyz
```

Sample Output 3

```
g
```

LBP91

Create a function that takes a string and replaces each letter with its appropriate position in the alphabet. "a" is 1, "b" is 2, "c" is 3, etc, etc.

Note: If any character in the string is n't a letter, ignore it.

Input Format

a string from the user

Constraints

non-empty string

Output Format

position of characters seperated by space

Sample Input 0

```
abc
```

Sample Output 0

```
1 2 3
```

Sample Input 1

```
xyz
```

Sample Output 1

```
24 25 26
```

LBP92

Implement a Program to replace a character with it's occurrence in given string.

Input Format

a string and a character from the user.

Constraints

non-empty string

Output Format

replaced string

Sample Input 0

```
test
t
```

Sample Output 0

```
1es2
```

Sample Input 1

```
prakash
a
```

Sample Output 1

```
pr1k2sh
```

LBP93

Program to find first non-repeated character

Input Format

a non-empty string from the user

Constraints

no

Output Format

non-repeated character

Sample Input 0

```
aabcdbe
```

Sample Output 0

```
c
```

Sample Input 1

```
prakash
```

Sample Output 1

```
p
```

Sample Input 2

```
indian
```

Sample Output 2

```
d
```

Sample Input 3

```
india
```

Sample Output 3

```
n
```

LBP94

Implement a program to check whether the given string pangram or not. A pangram is a string that contains all the letters of the English alphabet. An example of a pangram is "The quick brown fox jumps over the lazy dog"

Input Format

a string from the user

Constraints

non-empty string

Output Format

Yes or No

Sample Input 0

```
abc
```

Sample Output 0

```
No
```

Sample Input 1

```
abcdefghijklmnopqrstuvwxyz
```

Sample Output 1

```
Yes
```

Sample Input 2

```
the quick brown fox jumps over the lazy dog
```

Sample Output 2

```
Yes
```

Sample Input 3

```
abcdefghijklmnopqrstuvwxyz
```

Sample Output 3

```
No
```

LBP95

Implement a function/Method to return first character in each word from the given input string.

Input Format

a string

Constraints

no

Output Format

first character in each string

Sample Input 0

```
welcome to java programming
```

Sample Output 0

```
wtjp
```

Sample Input 1

```
Hi hello every one
```

Sample Output 1

```
Hheo
```

LBP96

Implement a program to return number of vowels present in the given string

Input Format

a string from the user

Constraints

non-empty string

Output Format

return number of vowels

Sample Input 0

```
welcome
```

Sample Output 0

```
3
```

Sample Input 1

```
abc
```

Sample Output 1

```
1
```

Sample Input 2

```
xyz
```

Sample Output 2

```
0
```

LBP97

Implement a program to return number of consonants present in the given string

Input Format

a string from the user

Constraints

non-empty string

Output Format

return number of consonants

Sample Input 0

```
welcome
```

Sample Output 0

```
4
```

Sample Input 1

```
abc
```

Sample Output 1

```
2
```

Sample Input 2

```
xyz
```

Sample Output 2

```
3
```

LBP98

Implement a program to check if a string contains only digits.

Input Format

a string from the user

Constraints

no

Output Format

Yes or No

Sample Input 0

```
abc123
```

Sample Output 0

```
No
```

Sample Input 1

```
123456
```

Sample Output 1

```
Yes
```

Sample Input 2

```
prakash22
```

Sample Output 2

```
No
```

LBP99

Implement a program to capitalize first letter of each word in a string.

Input Format

a string from the user

Constraints

non-empty string

Output Format

a string with capitalization

Sample Input 0

```
welcome to java
```

Sample Output 0

```
Welcome To Java
```

Sample Input 1

```
welcome to logic based programming
```

Sample Output 1

```
Welcome To Logic Based Programming
```

Sample Input 2

```
python programming by prakash sir
```

Sample Output 2

```
Python Programming By Prakash Sir
```

LBP100

You are given a string representing an attendance record for a student. The record only contains the following three characters: 'A' : Absent. 'L' : Late. 'P' : Present.

A student could be rewarded if his attendance record doesn't contain more than one 'A' (absent) or more than two continuous 'L' (late).

You need to return whether the student could be rewarded according to his attendance record.

Input Format

a string from the user

Constraints

non empty string

Output Format

Yes or No

Sample Input 0

```
PPALLP
```

Sample Output 0

```
Yes
```

Sample Input 1

```
PPALLL
```

Sample Output 1

```
No
```

Sample Input 2

```
PPP
```

Sample Output 2

```
Yes
```

LBP 101

Implement a program to read an array element and write on the screen.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

the given array

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
1 2 3 4 5
```

Sample Input 1

```
8
1 2 3 8 5 2 7 3
```

Sample Output 1

```
1 2 3 8 5 2 7 3
```

LBP102

Implement a program to read an array elements and print sum of all its elements.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
15
```

Sample Input 1

```
8
1 2 3 8 5 2 7 3
```

Sample Output 1

```
31
```

Sample Input 2

```
4
11 22 33 44
```

Sample Output 2

```
110
```

LBP103

Implement a program to read an array elements and print sum of all even elements.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all even elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
6
```

Sample Input 1

```
8
1 2 3 8 5 2 7 3
```

Sample Output 1

```
12
```

Sample Input 2

```
4
11 22 33 44
```

Sample Output 2

```
66
```

LBP104

Implement a program to read an array elements and print sum of all odd elements.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all odd elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
9
```

Sample Input 1

```
8
1 2 3 8 5 2 7 3
```

Sample Output 1

```
19
```

Sample Input 2

```
4
11 22 33 44
```

Sample Output 2

```
44
```

LBP105

Implement a program to read an array elements and print sum of all prime elements.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all prime elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
10
```

Sample Input 1

```
8
1 2 3 8 5 2 7 3
```

Sample Output 1

```
22
```

Sample Input 2

```
4
11 22 33 44
```

Sample Output 2

```
11
```

LBP106

Implement a program to read an array elements and print sum of all palindrome numbers in array.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all palindrome numbers

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
15
```

Sample Input 1

```
3
121 122 123
```

Sample Output 1

```
121
```

Sample Input 2

```
3
111 222 333
```

Sample Output 2

```
666
```

LBP107

Implement a program to read an array elements and print sum of all strong numbers in array.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of all strong numbers

Sample Input 0

```
4
1 2 145 40585
```

Sample Output 0

```
40733
```

Sample Input 1

```
5
1 2 3 4 5
```

Sample Output 1

```
3
```

Sample Input 2

```
1
145
```

Sample Output 2

```
145
```

LBP108

Implement a program to read an array elements and print sum of elements ending with 3 in array.

Input Format

size of the array and array elements

Constraints

size<100

Output Format

sum of elements ending with 3

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
3
```

Sample Input 1

```
4
10 13 20 23
```

Sample Output 1

```
36
```

Sample Input 2

```
3
13 33 23
```

Sample Output 2

```
69
```

LBP109

Implement a program to search for an element in an array.

Input Format

size, array elements and element to search

Constraints

size<100

Output Format

search for the given element

Sample Input 0

```
5
1 2 3 4 5
3
```

Sample Output 0

```
2
```

Sample Input 1

```
4
10 13 20 23
23
```

Sample Output 1

```
3
```

LBP110

Implement a program to sort the given array elements in ASC order.

Input Format

size and array elements

Constraints

size<100

Output Format

sorted array in ASC

Sample Input 0

```
4
1 3 2 4
```

Sample Output 0

```
1 2 3 4
```

Sample Input 1

```
5
5 1 3 2 4
```

Sample Output 1

```
1 2 3 4 5
```

Sample Input 2

```
6
10 50 20 40 30 60
```

Sample Output 2

```
10 20 30 40 50 60
```

LBP111

Implement a program to sort the given array elements in DESC order.

Input Format

size and array elements

Constraints

size<100

Output Format

sorted array in DESC

Sample Input 0

```
4
1 3 2 4
```

Sample Output 0

```
4 3 2 1
```

Sample Input 1

```
5
5 1 3 2 4
```

Sample Output 1

```
5 4 3 2 1
```

Sample Input 2

```
6
10 50 20 40 30 60
```

Sample Output 2

```
60 50 40 30 20 10
```

LBP112

Implement a program to search for an element in an array.

Input Format

size, array elements and element to search

Constraints

size<100

Output Format

search for the given element

Sample Input 0

```
8
1 2 3 4 5 7 8 6
4
```

Sample Output 0

```
3
```

Sample Input 1

```
2
1 2
1
```

Sample Output 1

```
0
```

Sample Input 2

```
5
11 22 33 55 44
44
```

Sample Output 2

```
3
```

LBP113

Implement a program to read array elements and find the max element in an array.

Input Format

size and array elements.

Constraints

size<100

Output Format

return max element

Sample Input 0

```
8
1 22 33 4 8 9 88 99
```

Sample Output 0

```
99
```

Sample Input 1

```
5
1 2 3 4 5
```

Sample Output 1

```
5
```

Sample Input 2

```
12
1 2 3 4 5 6 7 8 9 -10 -11 -12
```

Sample Output 2

```
9
```

LBP114

Implement a program to read array elements and find the min element in an array.

Input Format

size and array elements.

Constraints

size<100

Output Format

return min element

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
1
```

Sample Input 1

```
5
-1 -2 -3 -4 -5
```

Sample Output 1

```
-5
```

Sample Input 2

```
6
1 2 3 -1 -2 -3
```

Sample Output 2

```
-3
```

Sample Input 3

```
3
1 1 1
```

Sample Output 3

```
1
```

LBP115

Implement a program to read array elements and find the difference between max and min element in an array.

Input Format

size and array elements.

Constraints

size<100

Output Format

return difference between max and min element.

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
4
```

Sample Input 1

```
10
1 2 3 4 5 6 7 8 9 -10
```

Sample Output 1

```
19
```

Sample Input 2

```
5
1 -2 3 -4 5
```

Sample Output 2

```
9
```

LBP116

Implement a program to read array elements and find the second max element in an array.

Input Format

size and array elements

Constraints

size<100

Output Format

return second max element

Sample Input 0

```
5
1 2 8 9 7
```

Sample Output 0

```
8
```

Sample Input 1

```
3
100 200 300
```

Sample Output 1

```
200
```

Sample Input 2

```
4
1 -2 3 -4
```

Sample Output 2

```
1
```

LBP117

Implement a program to read array elements and find the second min element in an array.

Input Format

size and array elements

Constraints

size<100

Output Format

return second min element

Sample Input 0

```
5
1 8 7 5 2
```

Sample Output 0

```
2
```

Sample Input 1

```
7
10 11 12 7 8 9 -10
```

Sample Output 1

```
7
```

Sample Input 2

```
3
1 2 3
```

Sample Output 2

```
2
```

LBP118

Implement a program to find the number of occurrences of the given element.

Input Format

size,array element and key element

Constraints

size<100

Output Format

return number of occurrences

Sample Input 0

```
5
1 2 3 4 5
3
```

Sample Output 0

```
1
```

Sample Input 1

```
8
1 1 1 1 1 1 1 8
1
```

Sample Output 1

```
7
```

Sample Input 2

```
8
1 1 1 1 1 1 1 8
8
```

Sample Output 2

```
1
```

LBP119

Implement a program to insert an element into an array at the first position

Input Format

size, array elements and element to be inserted

Constraints

size<100

Output Format

return array after insertion

Sample Input 0

```
5
1 2 3 4 5
10
```

Sample Output 0

```
10 1 2 3 4 5
```

Sample Input 1

```
4
7 8 9 10
5
```

Sample Output 1

```
5 7 8 9 10
```

Sample Input 2

```
3
2 3 4
1
```

Sample Output 2

```
1 2 3 4
```

LBP120

Implement a program to insert an element into an array at the last position

Input Format

size, array elements and element to be inserted

Constraints

size<100

Output Format

return array after insertion

Sample Input 0

```
5
1 2 3 4 5
10
```

Sample Output 0

```
1 2 3 4 5 10
```

Sample Input 1

```
4
7 8 9 10
5
```

Sample Output 1

```
7 8 9 10 5
```

Sample Input 2

```
3
2 3 4
1
```

Sample Output 2

```
2 3 4 1
```

LBP121

Implement a program to delete an element from an array at the first position

Input Format

size,array elements

Constraints

size<100

Output Format

return array after deleting from first location

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
2 3 4 5
```

Sample Input 1

```
3
11 87 25
```

Sample Output 1

```
87 25
```

Sample Input 2

```
2
1 5
```

Sample Output 2

```
5
```

LBP122

Implement a program to delete an element from an array at the last position

Input Format

size,array elements

Constraints

size<100

Output Format

return array after deleting from last location

Sample Input 0

```
3
1 2 3
```

Sample Output 0

```
1 2
```

Sample Input 1

```
8
44 55 77 88 11 22 33 44
```

Sample Output 1

```
44 55 77 88 11 22 33
```

Sample Input 2

```
3
3 2 1
```

Sample Output 2

```
3 2
```

LBP123

Implement a program to delete an element from an array at the position

Input Format

size, array elements and position

Constraints

size<100

Output Format

return array after deleting from the location

Sample Input 0

```
5
1 2 3 4 5
0
```

Sample Output 0

```
2 3 4 5
```

Sample Input 1

```
3
7 8 6
1
```

Sample Output 1

```
7 6
```

Sample Input 2

```
5
11 22 33 44 55
4
```

Sample Output 2

```
11 22 33 44
```

LBP124

Implement a program to delete the given element from an array

Input Format

size,array elements and element

Constraints

size<100

Output Format

return array after deleting

Sample Input 0

```
5
7 6 1 2 3
1
```

Sample Output 0

```
7 6 2 3
```

Sample Input 1

```
3
11 22 33
44
```

Sample Output 1

```
-1
```

Sample Input 2

```
4
1 2 3 4
3
```

Sample Output 2

```
1 2 4
```

LBP125

Implement a program to update an element in the given array

Input Format

size,array elements and element to be updated (old element & new element)

Constraints

size<100

Output Format

return array after updating

Sample Input 0

```
6
11 22 33 44 55 66
33
99
```

Sample Output 0

```
11 22 99 44 55 66
```

Sample Input 1

```
3
1 2 3
3
4
```

Sample Output 1

```
1 2 4
```

Sample Input 2

```
5
1 1 1 1 1
1
6
```

Sample Output 2

```
6 6 6 6 6
```

Sample Input 3

```
8
1 1 1 1 1 1 7 8
1
10
```

Sample Output 3

```
10 10 10 10 10 10 7 8
```

LBP126

Implement a program to update an element in the given array based on position

Input Format

size, array elements and element to be updated and location

Constraints

size<100

Output Format

return array after updating

Sample Input 0

```
8  
4 7 8 6 1 2 3 5  
0  
9
```

Sample Output 0

```
9 7 8 6 1 2 3 5
```

Sample Input 1

```
3  
11 22 33  
1  
44
```

Sample Output 1

```
11 44 33
```

Sample Input 2

```
5  
8 9 4 5 3  
4  
111
```

Sample Output 2

```
8 9 4 5 111
```

LBP127

Write a program to reverse the elements present in an array

Input Format

size, array elements

Constraints

size<100

Output Format

return array in reverse

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
5 4 3 2 1
```

Sample Input 1

```
6
1 2 3 1 2 3
```

Sample Output 1

```
3 2 1 3 2 1
```

Sample Input 2

```
10
10 20 30 40 50 60 70 80 90 100
```

Sample Output 2

```
100 90 80 70 60 50 40 30 20 10
```

LBP128

Implement a program to increment each element in the given array

Input Format

size, array elements

Constraints

size<100

Output Format

increment each element by one unit

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
2 3 4 5 6
```

Sample Input 1

```
4
10 11 12 13
```

Sample Output 1

```
11 12 13 14
```

Sample Input 2

```
10
11 22 33 44 55 66 77 88 99 0
```

Sample Output 2

```
12 23 34 45 56 67 78 89 100 1
```

LBP129

Implement a program to find the number of duplicate elements present in the given array.

Input Format

size, array elements

Constraints

size<100

Output Format

number of duplicate elements in the array

Sample Input 0

```
5
1 1 2 2 3
```

Sample Output 0

```
2
```

Sample Input 1

```
4
1 1 1 2
```

Sample Output 1

```
1
```

Sample Input 2

```
6
1 2 3 4 5 6
```

Sample Output 2

```
0
```

Sample Input 3

```
3
1 1 1
```

Sample Output 3

```
1
```

LBP130

Implement a program to find the unique elements present in the given array.

Input Format

size, array elements

Constraints

size<100

Output Format

print unique elements present in the array

Sample Input 0

```
5
1 1 2 3 4
```

Sample Output 0

```
1 2 3 4
```

Sample Input 1

```
6
1 1 1 1 1 2
```

Sample Output 1

```
1 2
```

Sample Input 2

```
7
1 1 1 2 2 2 3
```

Sample Output 2

```
1 2 3
```

LBP131

Implement a program to read an array and sort array elements with 0s, 1s and 2s.

Input Format

size, array elements

Constraints

size<100

Output Format

print sorted elements

Sample Input 0

```
3
1 0 2
```

Sample Output 0

```
0 1 2
```

Sample Input 1

```
4
1 0 1 2
```

Sample Output 1

```
0 1 1 2
```

Sample Input 2

```
5
1 1 0 2 2
```

Sample Output 2

```
0 1 1 2 2
```

LBP132

Implement a program to read an array and replace every element with the greatest element on its right side.

Input Format

size, array elements

Constraints

size<100

Output Format

print updated array elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
5 5 5 5 5
```

Sample Input 1

```
6
1 0 2 1 0 2
```

Sample Output 1

```
2 2 2 2 2 2
```

LBP133

Implement a program to find the sum of two arrays and display the result array

Input Format

size and array elements

Constraints

no

Output Format

print resultant array

Sample Input 0

```
4
1 2 3 4
5 6 7 8
```

Sample Output 0

```
6 8 10 12
```

Sample Input 1

```
5
1 2 3 4 5
1 1 1 1 1
```

Sample Output 1

```
2 3 4 5 6
```

Sample Input 2

```
3
1 1 1
2 2 2
```

Sample Output 2

```
3 3 3
```

LBP134

Implement a program to find the sum of elements available at even index locations in an array.

Input Format

size and array elements

Constraints

no

Output Format

print sum value

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
9
```

Sample Input 1

```
5
1 1 1 1 1
```

Sample Output 1

```
3
```

Sample Input 2

```
6
1 2 3 4 5 6
```

Sample Output 2

```
9
```

LBP135

Implement a program to find the sum of elements available at odd index locations in an array.

Input Format

size and array elements

Constraints

no

Output Format

print sum value

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
6
```

Sample Input 1

```
5
1 1 1 1 1
```

Sample Output 1

```
2
```

Sample Input 2

```
6
1 2 3 4 5 6
```

Sample Output 2

```
12
```

LBP136

Implement a program to find the sum of first and last, second and second last and so on in an array.

Input Format

size and array elements

Constraints

no

Output Format

print sum of first and last, second and second last and so on

Sample Input 0

```
5  
1 2 3 4 5
```

Sample Output 0

```
6 6 6
```

Sample Input 1

```
4  
1 2 3 4
```

Sample Output 1

```
5 5
```

Sample Input 2

```
6  
1 2 3 4 5 6
```

Sample Output 2

```
7 7 7
```

Sample Input 3

```
7  
1 2 3 4 5 6 7
```

Sample Output 3

```
8 8 8 8
```

LBP137

Implement a program to print reverse of each element in an array

Input Format

size and array elements

Constraints

no

Output Format

print reverse of each element in an array

Sample Input 0

```
5
121 131 123 124 125
```

Sample Output 0

```
121 131 321 421 521
```

Sample Input 1

```
4
178 205 637 111
```

Sample Output 1

```
871 502 736 111
```

Sample Input 2

```
2
121 131
```

Sample Output 2

```
121 131
```

LBP138

Implement a program to find number of even and odd elements in the given array

Input Format

size and array elements

Constraints

no

Output Format

print number of even and odd elements line by line

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
2
3
```

Sample Input 1

```
6
1 2 3 4 5 6
```

Sample Output 1

```
3
3
```

Sample Input 2

```
4
1 2 3 4
```

Sample Output 2

```
2
2
```

LBP139

Implement a program to reverse only first half of the array and keep remaining elements as original.

Input Format

size and array elements

Constraints

no

Output Format

reverse only first half of the array

Sample Input 0

```
5
5 1 4 2 3
```

Sample Output 0

```
1 5 4 2 3
```

Sample Input 1

```
6
5 2 3 6 1 4
```

Sample Output 1

```
2 3 5 6 1 4
```

LBP140

Implement a program to find the difference between two arrays

Input Format

size and array elements

Constraints

no

Output Format

print difference between two arrays as third array

Sample Input 0

```
5
1 2 3 4 5
5 4 3 2 1
```

Sample Output 0

```
-4 -2 0 2 4
```

Sample Input 1

```
6
10 11 12 13 15 17
7 14 12 1 5 9
```

Sample Output 1

```
3 -3 0 12 10 8
```

Sample Input 2

```
3
1 2 3
3 2 1
```

Sample Output 2

```
-2 0 2
```

LBP141

Implement a program to rearrange an array in such an order that- smallest, largest, 2nd smallest, 2nd largest and so on.

Input Format

size and array elements

Constraints

no

Output Format

print the elements smallest, largest, 2nd smallest, 2nd largest and so on.

Sample Input 0

```
5
1 4 5 3 2
```

Sample Output 0

```
1 5 2 4 3 3
```

Sample Input 1

```
6
10 -10 20 -20 30 -30
```

Sample Output 1

```
-30 30 -20 20 -10 10
```

Sample Input 2

```
4
1 2 3 4
```

Sample Output 2

```
1 4 2 3
```

LBP142

Implement a program to create an array with n elements by taking multiples of m.

Input Format

m and n

Constraints

size of the array must be n

Output Format

return an array with n elements which contains multiples of m.

Sample Input 0

```
7  
5
```

Sample Output 0

```
7 14 21 28 35
```

Sample Input 1

```
12  
10
```

Sample Output 1

```
12 24 36 48 60 72 84 96 108 120
```

Sample Input 2

```
2  
5
```

Sample Output 2

```
2 4 6 8 10
```

LBP143

Write a function that, given the start `startNum` and end `endNum` values, return an array containing all the numbers inclusive to that range.

Note:

The numbers in the array are sorted in ascending order.

If `startNum` is greater than `endNum`, return an array with the higher value.

Input Format

`n` and `m` values

Constraints

no

Output Format

return an array with elements from `n` to `m`.

Sample Input 0

```
1
5
```

Sample Output 0

```
1 2 3 4 5
```

Sample Input 1

```
2
8
```

Sample Output 1

```
2 3 4 5 6 7 8
```

Sample Input 2

```
10
20
```

Sample Output 2

```
10 11 12 13 14 15 16 17 18 19 20
```

LBP144

Create a function that returns the average of an array composed of letters. First, find the number of the letter in the alphabet in order to find the average of the array.

A = 1

B = 2

C = 3

D = 4

E = 5

average = total sum of all numbers / number of item in the set

Return the result rounded to two decimal points.

Input Format

an array as string

Constraints

no

Output Format

Return the result rounded to two decimal points.

Sample Input 0

```
myworld
```

Sample Output 0

```
15.71
```

Sample Input 1

```
youarethebest
```

Sample Output 1

```
12.62
```

Sample Input 2

```
prakash
```

Sample Output 2

```
10.57
```

LBP145

Create a function that takes an array of numbers and returns only the even values.

Note:

Return all even numbers in the order they were given.

All test cases contain valid numbers ranging from 1 to 3000.

Input Format

size and an array

Constraints

no

Output Format

remove all odd numbers and print

Sample Input 0

```
8
1 2 3 4 5 6 7 8
```

Sample Output 0

```
2 4 6 8
```

Sample Input 1

```
7
43 65 23 89 53 9 6
```

Sample Output 1

```
6
```

Sample Input 2

```
6
718 991 449 644 380 440
```

Sample Output 2

```
718 644 380 440
```

LBP146

Create a function that takes an array of positive and negative numbers. Return an array where the first element is the count of positive numbers and the second element is the sum of negative numbers.

Input Format

size and an array

Constraints

If given an empty array, return an empty array and 0 is not positive.

Output Format

two space seperated int values

Sample Input 0

```
15
1 2 3 4 5 6 7 8 9 10 -11 -12 -13 -14 -15
```

Sample Output 0

```
10 -65
```

Sample Input 1

```
10
92 6 73 -77 81 -90 99 8 -85 34
```

Sample Output 1

```
7 -252
```

LBP147

Create a function that takes an array of numbers and returns the sum of the two lowest positive numbers.

Input Format

size and an array

Constraints

Don't count negative numbers

Output Format

sum of two smallest positive numbers

Sample Input 0

```
5
19 5 42 2 77
```

Sample Output 0

```
7
```

Sample Input 1

```
4
2 9 6 -1
```

Sample Output 1

```
8
```

Sample Input 2

```
10
879 953 694 -847 342 221 -91 -723 791 -587
```

Sample Output 2

```
563
```

LBP148

Write a function that retrieves the last n elements from an array.

Input Format

size, an array and N value

Constraints

return 0 if n exceeds size of the array

Output Format

last N elements

Sample Input 0

```
5
1 2 3 4 5
1
```

Sample Output 0

```
5
```

Sample Input 1

```
6
4 3 9 9 7 6
3
```

Sample Output 1

```
9 7 6
```

Sample Input 2

```
5
1 2 3 4 5
7
```

Sample Output 2

```
0
```

LBP149

Write a function that returns all the elements in an array that are strictly greater than their adjacent left and right neighbors.

Input Format

size, an array

Constraints

Do not count boundary numbers, since they only have one left/right neighbor.

Output Format

an array

Sample Input 0

```
8
4 5 2 1 4 9 7 2
```

Sample Output 0

```
5 9
```

Sample Input 1

```
9
1 2 1 1 3 2 5 4 4
```

Sample Output 1

```
2 3 5
```

Sample Input 2

```
6
1 2 3 4 5 6
```

LBP150

Create a function that takes an array of integers and returns true if every number is prime. Otherwise, return false.

Input Format

size and an array

Constraints

1 is not a prime number.

Output Format

true or false

Sample Input 0

```
5  
1 2 3 4 5
```

Sample Output 0

```
false
```

Sample Input 1

```
9  
2 3 5 7 13 17 19 23 29
```

Sample Output 1

```
true
```

Sample Input 2

```
3  
1 5 3
```

Sample Output 2

```
false
```

LBP 151

Write a program to calculate the sum of distances between the adjacent numbers in an array of positive integers.

Input Format

array size and array elements

Constraints

1<=size<=100

Output Format

print sum of distances between adjacent numbers

Sample Input 0

```
5
10 11 7 12 14
```

Sample Output 0

```
12
```

Sample Input 1

```
5
1 2 3 4 5
```

Sample Output 1

```
4
```

Sample Input 2

```
4
11 22 33 44
```

Sample Output 2

```
33
```

Sample Input 3

```
3
100 200 50
```

Sample Output 3

```
250
```

LBP 152

You are playing an online game. In the game, a list of N numbers is given. The player has to arrange the numbers so that all the odd numbers of the list come after even numbers. Write an algorithm to arrange the given list such that all the odd numbers of the list come after the even numbers.

Input Format

array size and array elements.

Constraints

1<=size<=100.

Output Format

modified array.

Sample Input 0

```
8  
10 98 3 33 12 22 21 11
```

Sample Output 0

```
10 98 12 22 3 33 21 11
```

Sample Input 1

```
5  
1 2 3 4 5
```

Sample Output 1

```
2 4 1 3 5
```

Sample Input 2

```
6  
1 2 3 4 5 6
```

Sample Output 2

```
2 4 6 1 3 5
```

Sample Input 3

```
10  
1 2 3 4 5 6 7 8 9 10
```

Sample Output 3

```
2 4 6 8 10 1 3 5 7 9
```

LBP 153

The garments company apparel wishes to open outlets at various locations. The company shortlisted several plots in these locations and wishes to select only plots that are square shaped. Write an algorithm to help Apparel find the number of plots that it can select for its outlets.

Input Format

input consists of an integer N, and A1,A2,...AN representing areas of outlets.

Constraints

1>=size of the array<=100

Output Format

print an integer representing the number of plots selected for outlets.

Sample Input 0

```
5  
12 13 14 15 16
```

Sample Output 0

```
1
```

Explanation 0

Have you observed that, 16 is perfect square (4x4), Hence output is 1.

Sample Input 1

```
4  
1 2 3 4
```

Sample Output 1

```
2
```

Sample Input 2

```
3  
14 15 16
```

Sample Output 2

```
1
```

Sample Input 3

```
6
25 26 35 36 49 50
```

Sample Output 3

```
3
```

Sample Input 4

```
10
81 83 85 87 89 91 93 95 97 100
```

Sample Output 4

```
2
```

LBP 154

A company wishes to provide a service for their N employees. The employees have distance ranging from 0 to N-1. The company has calculated the total distance from an employee's residence to the company, considering the path to be followed by the cab is a straight path. The distance of the company from itself is 0. The distance for the employees who live to the left side of the company is represented with a negative sign. The distance for the employees who live to the right side of the company is represented with a positive sign. The cab will be allotted a range of distance. The company wishes to find the distance for the employees who live within the particular distance range. **write an algorithm to find the distance for the employees who live within the distance range.**

Input Format

size of the list N ,SD,ED and an array of distance

Constraints

distance within the range else -1

Output Format

con

Sample Input 0

```
6
30 50
29 38 12 48 39 55
```

Sample Output 0

```
38 48 39
```

Sample Input 1

```
5
20 30
10 20 30 40 25
```

Sample Output 1

```
20 30 25
```

LBP 155

A company wishes to modify the technique by which tasks in the processing queue are executed. There are N processes with unique ID's from 0 to N-1. Each of these tasks has its own execution time. The company wishes to implement a new algorithm for processing tasks. for this purpose they have identified a value K by the new algorithm, the processor will first process the task that has the Kth shortest execution time.

Write an algorithm to find the Kth shortest execution time.

Input Format

array size, k value and array

Constraints

NA

Output Format

kth shortest execution time.

Sample Input 0

```
7
5
9 -3 8 -6 -7 18 10
```

Sample Output 0

```
9
```

Sample Input 1

```
6
3
1 2 3 4 5 6
```

Sample Output 1

```
3
```

LBP 156

Create a function that takes two inputs: idx (an array of integers) and str (a string). The function should return another string with the letters of str at each index in idx in order.

Input Format

a string followed by size and an array

Constraints

output must be in lower case but input many not be.

Output Format

a string contained in the specified locations given in the array.

Sample Input 0

```
She is the love of my love
3
7 11 14
```

Sample Output 0

```
tle
```

Sample Input 1

```
Relax and stay calm to avoid failures
3
3 6 12
```

Sample Output 1

```
aaa
```

LBP 157

Create a function that takes an array of numbers and return "Boom!" if the digit 7 appears in the array. Otherwise, return "there is no 7 in the array".

Input Format

an array from the user

Constraints

no

Output Format

Boom! or "there is no 7 in the array".

Sample Input 0

```
7  
1 2 3 4 5 6 7
```

Sample Output 0

```
Boom!
```

Sample Input 1

```
4  
8 6 33 100
```

Sample Output 1

```
there is no 7 in the array
```

LBP 158

Create a function which validates whether a given array alternates between positive and negative numbers.

Input Format

an array size and array

Constraints

no

Output Format

true or false

Sample Input 0

```
3  
3 -2 5
```

Sample Output 0

```
true
```

Sample Input 1

```
6  
3 -2 5 -5 2 -8
```

Sample Output 1

```
true
```

LBP 159

Write a function that returns true if all parameters are truthy, and false otherwise

Input Format

an array size and array

Constraints

no

Output Format

true or false

Sample Input 0

```
3
1 2 3
```

Sample Output 0

```
true
```

Sample Input 1

```
6
3 2 5 0 2 8
```

Sample Output 1

```
false
```

LBP 160

Create a function that returns true if each pair of adjacent numbers in an array shares at least one digit and false otherwise.

Input Format

array size and array elements

Constraints

no

Output Format

true or false

Sample Input 0

```
5
12 13 17 19 79
```

Sample Output 0

```
true
```

Sample Input 1

```
6
33 53 6351 12 2242 44
```

Sample Output 1

```
true
```

LBP 161

Write a function that returns true if two arrays, when combined, form a consecutive sequence. A consecutive sequence is a sequence without any gaps in the integers, e.g. 1, 2, 3, 4, 5 is a consecutive sequence, but 1, 2, 4, 5 is not.

Input Format

two array sizes and array elements

Constraints

no

Output Format

true or false

Sample Input 0

```
4
12 13 17 19
4
14 16 15 18
```

Sample Output 0

```
true
```

Sample Input 1

```
4
7 4 5 1
3
2 3 6
```

Sample Output 1

```
true
```

LBP 162

Arun is obsessed with primes, especially five. He considers a number to be luckiest if it has the highest number of five in it. If two numbers have the same frequency of five, Arun considers the last occurrence of them to be luckiest, and if there is no five in any number, the first given number is considered luckiest. Help him choose the luckiest number.

Input Format

array size and elements

Constraints

no

Output Format

return luckiest number

LBP 163

Write a function that accepts an array of numbers (where each number appears three times except for one which appears only once) and finds that unique number in the array and returns it.

Input Format

array size and elements

Constraints

no

Output Format

return non-repeated number

Sample Input 0

```
4  
2 2 3 2
```

Sample Output 0

```
3
```

Sample Input 1

```
7  
0 1 0 1 0 1 99
```

Sample Output 1

```
99
```

LBP 164

Implement a program to update every array element with multiplication of previous and next numbers in array.

Input Format

size and array elements

Constraints

no

Output Format

updated array

Sample Input 0

```
6
1 2 3 4 5 6
```

Sample Output 0

```
2 3 8 15 24 5
```

Sample Input 1

```
4
10 20 30 40
```

Sample Output 1

```
20 300 800 30
```

LBP 165

Given an integer array and an integer N denoting the array length as input. your task is to return the sum of third largest and second minimum elements of the array.

Input Format

array size and array elements

Constraints

no

Output Format

an int value

Sample Input 0

```
5
5 3 2 1 4
```

Sample Output 0

```
5
```

Sample Input 1

```
6
12 45 100 250 300 450
```

Sample Output 1

```
295
```

LBP 166

a company has a sales record of N products for M days. The company wishes to know the maximum revenue received from a given product of the N products each day. Write an algorithm to find the highest revenue received each day.

Input Format

space separated integers N and M

Constraints

no

Output Format

M space separated integers representing the maximum received each day

Sample Input 0

```
3 4
100 198 333 233
122 232 221 111
223 565 255 764
```

Sample Output 0

```
333 232 764
```

Sample Input 1

```
3 3
111 222 333
444 555 666
777 888 999
```

Sample Output 1

```
333 666 999
```

LBP 167

You are playing an online game. In the game, a numbers is displayed on the screen. In order to win the game, you have to count the trailing zeros in the factorial value of the given number. Write an algorithm to count the trailing zeros in the factorial value of the given number.

Input Format

an integer num, representing the number displayed on the screen.

Constraints

no

Output Format

the count of trailing zeros in the factorial of the given number.

Sample Input 0

```
5
```

Sample Output 0

```
1
```

Sample Input 1

```
0
```

Sample Output 1

```
0
```

LBP 168

Implement a program to check whether an array is paliandrome or not.

Input Format

Array size N and Array Elements

Constraints

no

Output Format

true or false

Sample Input 0

```
5
1 2 3 2 1
```

Sample Output 0

```
true
```

Sample Input 1

```
4
10 11 12 13
```

Sample Output 1

```
false
```

LBP 169

Implement a program to convert an array into matrix.

Input Format

array size and elements

Constraints

element count should be 1,4,9,16,25 and so on

Output Format

matrix

Sample Input 0

```
1  
1
```

Sample Output 0

```
1
```

Sample Input 1

```
4  
1 2 3 4
```

Sample Output 1

```
1 2  
3 4
```

LBP 170

Implement a program to convert the given matrix into array

Input Format

matrix of size mxn and elements

Constraints

one D array is required

Output Format

one-D array should be printed on screen

Sample Input 0

```
1 1  
1
```

Sample Output 0

```
1
```

Sample Input 1

```
2 2  
1 2  
3 4
```

Sample Output 1

```
1 2 3 4
```

LBP 171

One programming language has the following keywords that cannot be used as identifiers.
break,case,continue,default,defer,else,for,func,goto,if,map,range,return,struct,type,var
write a program to find if the given word is a keyword or not.

Input Format

string from the user

Constraints

con

Output Format

true or false

Sample Input 0

```
defer
```

Sample Output 0

```
true
```

Sample Input 1

```
class
```

Sample Output 1

```
false
```

Sample Input 2

```
default
```

Sample Output 2

```
true
```

LBP 172

Given a maximum of 100 digit numbers as input, find the difference between the sum of odd and even position digits.

Input Format

a number from the user

Constraints

no

Output Format

an integer

Sample Input 0

```
12
```

Sample Output 0

```
1
```

Sample Input 1

```
123
```

Sample Output 1

```
-2
```

LBP 173

Given a maximum of four digit to the base 17(10=>A,11=>B,12=>C,13=>D,14=>E,15=>F,16=>G) as input, output its decimal value.

Input Format

a string value

Constraints

no

Output Format

an integer value with base 17

Sample Input 0

```
D
```

Sample Output 0

```
13
```

Sample Input 1

```
ABC
```

Sample Output 1

```
3089
```

Sample Input 2

```
A
```

Sample Output 2

```
10
```

LBP 174

The cosmetic company "BeautyMe" wishes to know the alphabetic product code from the product barcode. The barcode of the product is a numeric value and the alphabetic product is a string value tagged 'a-j'. The alphabetic range 'a-j' represents the numeric range '0-9'. To produce the alphabetic product code, each digit in the numeric barcode is replaced by the corresponding matching letters.

Write an algorithm to display the alphabetic product code from the numeric barcodes.

Input Format

an integer value

Constraints

no

Output Format

a character

Sample Input 0

```
abc
```

Sample Output 0

```
012
```

Sample Input 1

```
cdef
```

Sample Output 1

```
2345
```

LBP 175

Implement a program to read a number and print prime numbers upto n seperated by spaces.

Input Format

a number from the user

Constraints

no

Output Format

space seperated prime numbers

Sample Input 0

```
10
```

Sample Output 0

```
2 3 5 7
```

Sample Input 1

```
15
```

Sample Output 1

```
2 3 5 7 11 13
```

LBP 176

Implement a program to read two integers values and return GCD of two numbers.

Input Format

two space seperated integers.

Constraints

no

Output Format

GCD of two numbers

Sample Input 0

```
98 56
```

Sample Output 0

```
14
```

Sample Input 1

```
2 3
```

Sample Output 1

```
1
```

LBP 177

A spy wants to send some secret information to the government. As the data is very important, he encrypts the message by encoding by adding some extra characters. the original message has only upper case letters and numbers, while the extra characters are madeup of lowercase letters and special characters. Can you help the receiver in designing a program that accepts the message and returns the secret information.

Input Format

a string from the user

Constraints

no

Output Format

original message

Sample Input 0

```
Wel1c%0mE
```

Sample Output 0

```
W10E
```

Sample Input 1

```
pRak123aSh
```

Sample Output 1

```
R123S
```

Sample Input 2

```
dEm0
```

Sample Output 2

```
E0
```

LBP 178

amir is travelling to mumbai, but this time he is taking flight. His brother has already told him about luggage weight limits but forgot it. Now he is taking with him 3 trolley bags.

As per the current airlines which amir will fly, has below weight limits.

There can be at max 2 check-in and 1 cabin luggage. Check-in has total limit of L1 and Cabin has limit of L2.

Now, amir has 3 luggage has weights as W1 and W2 and W3 respectively. Now he should be smart enough to make sure that he can travel with all the 3 luggage without paying extra charge.

Find out whether amir can take all of his luggage without any extra charges or not. If all good and no extra charges were paid, output "Yes" otherwise "No".

Input Format

integers W1,W2,W3 and L1,L2

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 2 3 1 2
```

Sample Output 0

```
No
```

Sample Input 1

```
6 9 7 16 7
```

Sample Output 1

```
Yes
```

LBP 179

given an array of size n, write a function to rearrange the numbers of the array in such that even and odd numbers are arranged alternatively in increasing order.

Input Format

array size n and elements

Constraints

no

Output Format

updated array

Sample Input 0

```
4
1 2 3 4
```

Sample Output 0

```
2 1 4 3
```

Sample Input 1

```
6
1 2 3 4 5 6
```

Sample Output 1

```
2 1 4 3 6 5
```

LBP 180

Michael wants to check the parity of the given number. To find the parity, follow below steps.

1. convert decimal number into binary number.
2. count the number of 1's and 0's in the binary representation.

If it contains odd number of 1-bits, then it is "odd parity" and if contains even number of 1-bits then "even parity". Write a program to validate the given number belongs to odd parity or even parity.

Input Format

a number from the user.

Constraints

no

Output Format

odd parity or even parity.

Sample Input 0

```
5
```

Sample Output 0

```
even
```

Sample Input 1

```
8
```

Sample Output 1

```
odd
```

Sample Input 2

```
7
```

Sample Output 2

```
odd
```

LBP 181

sofia loved to play with the programs unfortunately. she got stuck in one of the questions. she tought to take help of james. james asked her the problem statement. The problem statement was.

"for the given string S of length N consist of stream of character not in predefined order. Write a program to find second non-repeating character in a string S. Write a program to help sofia and james for the given problem statements.

Input Format

string from the user

Constraints

no

Output Format

single character

Sample Input 0

```
gaahaajapsps
```

Sample Output 0

```
h
```

Sample Input 1

```
welcome
```

Sample Output 1

```
l
```

Sample Input 2

```
demo
```

Sample Output 2

```
e
```

LBP 182

You are given an array of integers, N of size array length. Find the absolute difference (i.e. $\text{diff} \geq 0$) between the largest and smallest prime numbers.

Note:

1. if there are 1 or fewer prime numbers in array return 0.
2. the array may contain +ve and -ve numbers, ignore -ve numbers.
3. 1 and 0 are not prime.

Input Format

array size and array elements

Constraints

no

Output Format

absolute diff

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
3
```

Sample Input 1

```
5
1 -2 3 4 5
```

Sample Output 1

```
2
```

Sample Input 2

```
5
1 -2 -3 4 5
```

Sample Output 2

```
0
```

LBP 183

Given an integer N and integer array A as the input, where N denotes the length of A write a program to find an integer the sum of all these product with successors.

Input Format

array size and elements

Constraints

no

Output Format

an int value

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
70
```

Sample Input 1

```
4
1 2 3 5
```

Sample Output 1

```
50
```

LBP 184

You are given an array of integers, a of size n , Your task is to find the number of elements whose positions will remain unchanged after sorted in ascending order.

Input Format

array size and elements

Constraints

no

Output Format

unchanged count

Sample Input 0

```
5
1 2 5 3 4
```

Sample Output 0

```
2
```

Sample Input 1

```
10
1 10 2 9 3 8 4 7 5 6
```

Sample Output 1

```
1
```

LBP 185

There are 3 friends named Ronaldo,Messi,Rooney who worked at a company. Given their monthly salaries and monthly expenditures, returns the highest saving among them.

Input Format

single line with 6 space separated integers.

Constraints

no

Output Format

highest saving among the 3 of them

Sample Input 0

```
10 7 15 10 15 11
```

Sample Output 0

```
5
```

Sample Input 1

```
100 50 100 90 100 99
```

Sample Output 1

```
50
```

LBP 186

You are given a list of integers of size N, write an algorithm to sort the first K elements of the list in ascending order and the remaining elements in descending order.

Input Format

an arry size and elements

Constraints

no

Output Format

updated array

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
1 2 5 4 3
```

Sample Input 1

```
8
1 8 2 7 3 6 4 5
```

Sample Output 1

```
1 2 3 4 8 7 6 5
```

LBP 187

Given a string, create a new string made up of its last two letters, reversed and separated by comma.

Input Format

a string from the user

Constraints

no

Output Format

comma separated last and second-last character

Sample Input 0

```
demo
```

Sample Output 0

```
o,m
```

Sample Input 1

```
prakash
```

Sample Output 1

```
h,s
```

LBP 188

Write a program to find the digital root of a given number. Digital root is the recursive sum of digits in the given number (until single digit is arrived)

Input Format

a number from the user

Constraints

no

Output Format

single digit number

Sample Input 0

```
2478
```

Sample Output 0

```
3
```

Sample Input 1

```
69798
```

Sample Output 1

```
3
```

LBP 189

Write a program to find the absolute difference between the original number and its reserved number.

Input Format

a number from the user

Constraints

no

Output Format

absolute difference

Sample Input 0

```
245
```

Sample Output 0

```
297
```

Sample Input 1

```
923
```

Sample Output 1

```
594
```

Sample Input 2

```
1234
```

Sample Output 2

```
3087
```

LBP 190

A person went to an exhibition. A lucky draw is going on, where one should buy a ticket. And if their ticket number appears on the screen, that ticket will be considered as jackpot winner.
he knows the secret of picking up the ticket number, which will be considered for the jackpot.

1. sort the ticket number in the increasing order.
2. Now, the difference between the adjacent digits should not be more than 2.

If his ticket follows the above condition, then there are more chances to win the jackpot.

Given a ticket number, find whether the ticket is eligible to be part of jackpot or not. Print "Yes/No" based on the result.

Input Format

ticket number

Constraints

no

Output Format

Yes or No

Sample Input 0

```
171
```

Sample Output 0

```
No
```

Sample Input 1

```
123
```

Sample Output 1

```
Yes
```

LBP 191

In an online exam, the test paper set is categorized by the letters A-Z. The students enrolled in the exam have been assigned a numeric value called application ID. To assign the test set to the student, firstly the sum of all digits in the application ID is calculated. If the sum is within the numeric range 1-26 the corresponding alphanetic set code is assigned to the student, else the sum of the digits are calcualted again and so on until the sum falls within the 1-26 range.

Input Format

application id as int

Constraints

no

Output Format

set number

Sample Input 0

```
123
```

Sample Output 0

```
F
```

Sample Input 1

```
786
```

Sample Output 1

```
U
```

LBP 192

Cristina appeared for a corporate Hackathon. She cleared first round of this and would like to take next challenge which is coding round. The problem statement comes to her is "Write a program to find numbers which are in between integer 2 and integer N and such that the sum of its digits raised to the third power is equal to the number with the input given.

Input Format

integer N

Constraints

no

Output Format

an integer value

Sample Input 0

```
200
```

Sample Output 0

```
153
```

Sample Input 1

```
300
```

Sample Output 1

```
153
```

LBP 193

There was a grocery shop. Shopkeeper would like to keep trasactions as simple as he can. Hence, he used to take money as whole number. To optimize trasactions, he decided if someone buys groceries from his shop, he will round money to the nearest whole number having zeros as last digit. Write a program to help shopkeeper to make trasactions much simple.

Input Format

a number

Constraints

no

Output Format

nearest int value which ending with 0

Sample Input 0

```
17
```

Sample Output 0

```
20
```

Sample Input 1

```
153
```

Sample Output 1

```
160
```

Sample Input 2

```
174
```

Sample Output 2

```
180
```

LBP 194

Prakash a technical person wants to update his password for every 15 days, to create a new password, he is converting all lower case letters to upper case and upper case letters to lower case, help prakash to update password.

Input Format

a string from the user old password

Constraints

no

Output Format

updated password

Sample Input 0

```
welCOME
```

Sample Output 0

```
WELcome
```

Sample Input 1

```
pRaKaSh
```

Sample Output 1

```
PrAkAsH
```

Sample Input 2

```
welcome
```

Sample Output 2

```
WELCOME
```

LBP 195

Video share is an online video sharing platform. The company has decided to rate its users channels based on the sum total of the number of views received online and the subscribers. This sum total is referred to as user points. The rating will be given according to the below charts.

User points rating

30-50 Average

51-60 Good

61-80 Excellent

81-100 Outstanding

Input Format

points value

Constraints

points \geq 30 and points \leq 100

Output Format

rating

Sample Input 0

```
55
```

Sample Output 0

```
Good
```

Sample Input 1

```
90
```

Sample Output 1

```
Outstanding
```

Sample Input 2

```
99
```

Sample Output 2

```
Outstanding
```

LBP 196

Given three numbers b,e, and m. fill in a function that takes these three positive integer values and outputs $b^e \bmod m$.

Input Format

b,e and m values

Constraints

no

Output Format

$b^e \bmod m$

Sample Input 0

```
2 1 2
```

Sample Output 0

```
0
```

Sample Input 1

```
3 2 2
```

Sample Output 1

```
1
```

LBP 197

Two strings are said to be the same if they are of the same length and have the same character at each index. Backspacing in a string removes the previous character in the string.

Given two strings containing lowercase english letters and the character '#' which represents a backspace key. determine if the two final strings are equal or not. Return 1 if they are equal else 0.

Input Format

two strings s1 and s2

Constraints

no

Output Format

1 or 0

Sample Input 0

```
axx#bb#c  
axbd#c#c
```

Sample Output 0

```
1
```

Sample Input 1

```
ayx#cb#c  
axbd#c#c
```

Sample Output 1

```
0
```

LBP 198

Write an algorithm to generate the token number from the application ID by doing this modifications.

R1. If the digit is even add 1 to it.

R2. If the digit is odd sub 1 from it.

Input Format

a number from the user

Constraints

no

Output Format

token number

Sample Input 0

```
2347
```

Sample Output 0

```
3256
```

Sample Input 1

```
245567
```

Sample Output 1

```
354476
```

LBP 199

a game developing company has developed a math game for kids called "Brain Fun". The game is for smartphone users and the player is given list of N positive numbers and a random number K. the player need to divide all the numbers in the list with random number k and then need to add all the quotients received in each division. the sum of all the quotients is the score of the player.

Write an algorithm to generate the score of the player.

Input Format

array size, elements and random number k

Constraints

no

Output Format

an int value

Sample Input 0

```
5
1 2 3 4 5
3
```

Sample Output 0

```
3
```

Sample Input 1

```
5
7 3 2 10 4
5
```

Sample Output 1

```
3
```

LBP 200

Perfect math is an online math program. In once of the assignments the system displays a list of N number and a value K, and students need to calculate the sum of remainders after dividing all the numbers from the list of N numbers by K. The system need to develop a program to calcualte the correct answer for the assignment.

Write an algorithm to calcualte the correct answer for the assignment.

Input Format

size N and N elements and K value

Constraints

no

Output Format

an int value

Sample Input 0

```
5
1 2 3 4 5
3
```

Sample Output 0

```
6
```

Sample Input 1

```
5
7 3 2 10 4
5
```

Sample Output 1

```
11
```

LBP 201

Program to read matrix elements of order $n \times m$ and display on the console.

Input Format

A matrix of order $n \times m$.

Constraints

$1 \leq n \leq 5$

$1 \leq m \leq 5$

Output Format

Print the same matrix

Sample Input 0

```
2
2
1 2
3 4
```

Sample Output 0

```
1 2
3 4
```

Sample Input 1

```
3
3
1 2 3
4 5 6
7 8 9
```

Sample Output 1

```
1 2 3
4 5 6
7 8 9
```

Sample Input 2

```
3
3
1 0 0
0 1 0
0 0 1
```

Sample Output 2

```
1 0 0
0 1 0
0 0 1
```

Sample Input 3

```
3
3
1 1 1
1 1 1
1 1 1
```

Sample Output 3

```
1 1 1
1 1 1
1 1 1
```

LBP 202

Program to read matrix elements and find sum of all elements in the matrix.

Input Format

A matrix of order n x m.

Constraints

1<=n<=5

1<=m<=5

Output Format

Print sum of matrix elements

Sample Input 0

```
2
2
1 2
3 4
```

Sample Output 0

```
10
```

Sample Input 1

```
3
3
1 2 3
4 5 6
7 8 9
```

Sample Output 1

```
45
```

Sample Input 2

```
3
3
1 0 0
0 1 0
0 0 1
```

Sample Output 2

```
3
```

LBP 203

Write a program to find sum of all even elements in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of all even elements

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
20
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
2
```

Sample Input 2

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 2

```
72
```

LBP 204

Write a program to find sum of all odd elements in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of all odd elements

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
25
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
4
```

LBP 205

Write a program to find sum of all prime elements in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of all prime elements

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
17
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
5
```

Sample Input 2

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 2

```
2
```

LBP 206

Write a program to find row wise sum in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of each row

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
6
15
24
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
1
2
3
```

Sample Input 2

```
0 2 4
6 8 10
12 14 16
```

Sample Output 2

```
6
24
42
```

LBP 207

Write a program to find column wise sum in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of each column

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
12  
15  
18
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
1  
2  
3
```

Sample Input 2

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 2

```
18  
24  
30
```

LBP 208

Write a program to find sum of diagonal elements in matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of diagonal elements

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
15
```

Sample Input 1

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 1

```
24
```

Sample Input 2

```
2 3 5  
7 11 13  
17 19 23
```

Sample Output 2

```
36
```

LBP 209

Write a program to find sum of opposite diagonal elements in matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of opposite diagonal elements

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
15
```

Sample Input 1

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 1

```
24
```

Sample Input 2

```
100 101 102  
103 104 105  
106 107 108
```

Sample Output 2

```
312
```

LBP 210

Write a program to find sum of first and last element in a matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum of first and last element in matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
10
```

Sample Input 1

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 1

```
16
```

Sample Input 2

```
2 3 5  
7 11 13  
17 19 23
```

Sample Output 2

```
25
```

Sample Input 3

```
0 0 0  
0 0 0  
0 0 0
```

Sample Output 3

```
0
```

LBP 211

Write a program to find the product of diagonal matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

find the product of diagonal matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
45
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
6
```

Sample Input 2

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 2

```
0
```

LBP 212

Write a program to find the product of opposite diagonal matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

find the product of opposite diagonal matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
105
```

Sample Input 1

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 1

```
384
```

Sample Input 2

```
2 3 5  
7 11 13  
17 19 23
```

Sample Output 2

```
935
```

LBP 213

Implement a program to print max element in a matrix

Input Format

a 3x3 matrix

Constraints

no

Output Format

max element in matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
9
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
3
```

LBP 214

Implement a program to print min element in an matrix

Input Format

a 3x3 matrix

Constraints

no

Output Format

min element in matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
1
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
0
```

Sample Input 2

```
0 2 4  
6 8 10  
12 14 16
```

Sample Output 2

```
0
```

LBP 215

Implement a program to print max element in each row of a matrix

Input Format

a 3x3 matrix

Constraints

no

Output Format

print max element in each row of a matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
3
6
9
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
1
2
3
```

Sample Input 2

```
0 2 4
6 8 10
12 14 16
```

Sample Output 2

```
4
10
16
```

LBP 216

Implement a program to print min element in each row of a matrix

Input Format

a 3x3 matrix

Constraints

no

Output Format

print min element in each row of a matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
1  
4  
7
```

Sample Input 1

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 1

```
0  
0  
0
```

Sample Input 2

```
-1 0 0  
0 -2 0  
0 0 -3
```

Sample Output 2

```
-1  
-2  
-3
```

LBP 217

Implement a program to print transpose of a matrix

Input Format

a 3x3 matrix

Constraints

no

Output Format

print transpose of the matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
1 4 7
2 5 8
3 6 9
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
1 0 0
0 2 0
0 0 3
```

Sample Input 2

```
0 2 4
1 2 3
1 3 5
```

Sample Output 2

```
0 1 1
2 2 3
4 3 5
```

LBP 218

Implement a program to find trace(sum of diagonal elements) of the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

print trace of the matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
15
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
3
```

LBP 219

Write a program to find frequency of odd and even elements in the matrix excluding 0.

Input Format

a 3x3 matrix

Constraints

no

Output Format

odd elements and even elements count

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
5  
4
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
3  
0
```

Sample Input 2

```
1 0 0  
0 2 0  
0 0 3
```

Sample Output 2

```
2  
1
```

LBP 220

Implement a program to check whether the given matrix is identity matrix or not

Input Format

a 3x3 matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 0 0
0 1 0
0 0 1
```

Sample Output 0

```
Yes
```

Sample Input 1

```
1 2 3
4 5 6
7 8 9
```

Sample Output 1

```
No
```

LBP 221

Implement a program to check whether the given matrices are equal or not

Input Format

a 3x3 matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 2 3
4 5 6
7 8 9
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
Yes
```

Sample Input 1

```
1 2 3
4 5 6
7 8 9
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
No
```

Sample Input 2

```
1 0 0
0 1 0
0 0 1
1 0 0
0 1 0
0 0 1
```

Sample Output 2

```
Yes
```

LBP 222

Write a program to perform addition operation on two matrices

Input Format

two 3x3 matrices

Constraints

no

Output Format

resultent matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
1 0 0
0 1 0
0 0 1
```

Sample Output 0

```
2 2 3
4 6 6
7 8 10
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
2 0 0
0 2 0
0 0 2
```

LBP 223

Write a program to perform subtraction operation on two matrices

Input Format

two 3x3 matrices

Constraints

no

Output Format

resultent matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9  
1 0 0  
0 1 0  
0 0 1
```

Sample Output 0

```
0 2 3  
4 4 6  
7 8 8
```

Sample Input 1

```
1 2 3  
4 5 6  
7 8 9  
1 1 1  
1 1 1  
1 1 1
```

Sample Output 1

```
0 1 2  
3 4 5  
6 7 8
```

LBP 224

Write a program to perform multiplication operation on two matrices

Input Format

two 3x3 matrices

Constraints

no

Output Format

resultent matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9  
1 0 0  
0 1 0  
0 0 1
```

Sample Output 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1  
1 0 0  
0 1 0  
0 0 1
```

Sample Input 2

```
1 2 3  
4 5 6  
7 8 9  
1 2 3  
4 5 6  
7 8 9
```

Sample Output 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 2

```
30 36 42  
66 81 96  
102 126 150
```

LBP 225

Implement a program to sort all the elements in asc order in the matrix

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 3 2
6 7 9
5 4 8
```

Sample Output 0

```
1 2 3
4 5 6
7 8 9
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
0 0 0
0 0 0
1 2 3
```

LBP 226

Implement a program to sort all the elements in desc in the matrix

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
9 8 7
6 5 4
3 2 1
```

Sample Input 1

```
1 0 0
0 2 0
0 0 3
```

Sample Output 1

```
3 2 1
0 0 0
0 0 0
```

LBP 227

Implement a program to sort all the rowwise elements in asc order

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
3 2 1  
4 6 5  
9 7 8
```

Sample Output 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
0 0 1  
0 0 1  
0 0 1
```

LBP 228

Implement a program to sort all the row wise elements in desc order

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 3 2
4 5 6
7 9 8
```

Sample Output 0

```
3 2 1
6 5 4
9 8 7
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
1 0 0
1 0 0
1 0 0
```

LBP 229

Implement a program to sort all the column values in asc order

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Input 1

```
9 8 7  
6 5 4  
3 2 1
```

Sample Output 1

```
3 2 1  
6 5 4  
9 8 7
```

LBP 230

Implement a program to sort the all the column values in desc order

Input Format

a matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
7 8 9
4 5 6
1 2 3
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
1 1 1
0 0 0
0 0 0
```

LBP 231

Implement a program to check whether the given matrix is sparse matrix or not.
Note: a sparse matrix is a matrix with the majority of its elements equal to zero.

Input Format

a matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
No
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
Yes
```

LBP 232

Implement a program to swap two given rows.

Input Format

matrix and m and n values

Constraints

no

Output Format

modified matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
1
2
```

Sample Output 0

```
4 5 6
1 2 3
7 8 9
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
1
2
```

Sample Output 1

```
0 1 0
1 0 0
0 0 1
```

LBP 233

Implement a program to swap two given columns

Input Format

matrix and m and n values

Constraints

no

Output Format

modified matrix

Sample Input 0

```
1 2 3
4 5 6
7 8 9
1
2
```

Sample Output 0

```
2 1 3
5 4 6
8 7 9
```

Sample Input 1

```
1 2 3
4 5 6
7 8 9
1
3
```

Sample Output 1

```
3 2 1
6 5 4
9 8 7
```

LBP 234

Program to accept a matrix of order 3x3 & interchange the diagonals.

Input Format

a 3x3 matrix

Constraints

no

Output Format

modified matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
3 2 1  
4 5 6  
9 8 7
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
0 0 1  
0 1 0  
1 0 0
```

LBP 235

Program to accept a matrix and check whether it is upper triangular matrix or not

Input Format

a 3x3 matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 2 3  
0 5 6  
0 0 9
```

Sample Output 0

```
Yes
```

Sample Input 1

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 1

```
No
```

LBP 236

Program to accept a matrix and check whether it is lower triangular matrix or not

Input Format

a 3x3 matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 0 0
4 5 0
7 8 9
```

Sample Output 0

```
Yes
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
Yes
```

Sample Input 2

```
1 2 3
4 5 6
7 8 9
```

Sample Output 2

```
No
```

LBP 237

Implement a program to read a matrix and multiplier and return scalar matrix multiplication.

Input Format

a 3x3 matrix and multiplier

Constraints

no

Output Format

resultent matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9  
2
```

Sample Output 0

```
2 4 6  
8 10 12  
14 16 18
```

Sample Input 1

```
1 1 1  
1 1 1  
1 1 1  
5
```

Sample Output 1

```
5 5 5  
5 5 5  
5 5 5
```

LBP 238

Implement a program to read a matrix and check whether the given matrix is symmetric matrix or not

Input Format

a 3x3 matrix

Constraints

no

Output Format

Yes or No

Sample Input 0

```
1 2 3
2 4 5
3 5 8
```

Sample Output 0

```
Yes
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
Yes
```

LBP 239

Implement a program to read a matrix and display only diagonal elements.

Input Format

a 3x3 matrix

Constraints

no

Output Format

print only diagonal elements

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
1
5
9
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
1
1
1
```

LBP 240

Implement a program to find square of each element present in a matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

resultent matrix

Sample Input 0

```
1 0 0
0 1 0
0 0 1
```

Sample Output 0

```
1 0 0
0 1 0
0 0 1
```

Sample Input 1

```
1 1 1
2 2 2
3 3 3
```

Sample Output 1

```
1 1 1
4 4 4
9 9 9
```

LBP 241

Implement a program to find sum of even indexed rows in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
30
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
2
```

LBP 242

Implement a program to find sum of odd indexed rows in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3
4 5 6
7 8 9
```

Sample Output 0

```
15
```

Sample Input 1

```
1 0 0
0 1 0
0 0 1
```

Sample Output 1

```
1
```

LBP 243

Implement a program to find sum of even indexed cols in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
30
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
2
```

LBP 244

Implement a program to find sum of odd indexed cols in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
15
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
1
```

LBP 245

Implement a program to find sum of row index and col index is even in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
25
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
3
```

LBP 246

Implement a program to find sum of row index and col index is odd in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
20
```

Sample Input 1

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 1

```
0
```

LBP 247

Implement a program to find sum of prime elements in the given matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

sum as an int

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
17
```

Sample Input 1

```
10 11 12  
13 14 15  
16 17 18
```

Sample Output 1

```
41
```

LBP 248

Implement a program to count number of prime digits present in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

prime digits count

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
4
```

Sample Input 1

```
10 11 12  
13 14 15  
16 17 18
```

Sample Output 1

```
4
```

Sample Input 2

```
1 0 0  
0 1 0  
0 0 1
```

Sample Output 2

```
0
```

LBP 249

Implement a program to reverse each element in the matrix.

Input Format

a 3x3 matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Input 1

```
11 12 13  
14 15 16  
17 18 19
```

Sample Output 1

```
11 21 31  
41 51 61  
71 81 91
```

Sample Input 2

```
121 131 141  
151 161 171  
181 191 111
```

Sample Output 2

```
121 131 141  
151 161 171  
181 191 111
```

LBP 250

Implement a program to keep all paliandrome numbers as it is and replace remaining with 0.

Input Format

a 3x3 matrix

Constraints

no

Output Format

result matrix

Sample Input 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Output 0

```
1 2 3  
4 5 6  
7 8 9
```

Sample Input 1

```
111 122 133  
141 151 168  
888 567 999
```

Sample Output 1

```
111 0 0  
141 151 0  
888 0 999
```

Sample Input 2

```
11 22 33  
44 55 66  
77 88 99
```

Sample Output 2

```
11 22 33  
44 55 66  
77 88 99
```

LBP 251

Given an array A of N integer numbers. The task is to rewrite the array by putting all multiples of 10 at the end of the given array.

Note: The order of the numbers which are not multiples of 10 should remain unaltered, and similarly, the order of all multiples of 10 should be unaltered.

Input Format

N and Array Elements

Constraints

no

Output Format

updated array

Sample Input 0

```
9
10 12 5 40 30 7 50 9 10
```

Sample Output 0

```
12 5 7 9 10 40 30 50 10
```

Sample Input 1

```
5
10 2 3 4 5
```

Sample Output 1

```
2 3 4 5 10
```

LBP 252

In a company, an employee's rating point (ERP) is calculated as the sum of the rating points given by the employee's manager and HR. The employee rating grade (ERG) is calculated according to the ERP ranges given below.

ERP ERG

30-50 D

51-60 C

61-80 B

81-100 A

Write an algorithm to find the ERG character for a given employee's ERP.

Input Format

an integer value

Constraints

con

Output Format

employee rating grade

Sample Input 0

40

Sample Output 0

D

Sample Input 1

90

Sample Output 1

A

Sample Input 2

70

Sample Output 2

B

LBP 253

A company transfers an encrypted code to one of its clients. The code needs to be decrypted so that it can be used for accessing all the required information. The code can be decrypted by interchanging each consecutive digit and once if the digit got interchanged then it cannot be used again. If at a certain point there is no digits to be interchanged with, then that single digit must be left as it is.

Write an algorithm to decrypt the code so that it can be used to access the required information.

Input Format

a number from the user

Constraints

no

Output Format

an integer value

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
2 1 4 3 5
```

Sample Input 1

```
6
1 2 3 4 5 6
```

Sample Output 1

```
2 1 4 3 6 5
```

LBP 254

The e-commerce company 'Easy Shopping' displays some specific products for its premium customers on its user interface. The company shortlisted a list of N products. The list contains the price of each product. The company will select random products for display. The selection criteria states that only those products whose price is a perfect cube number will be selected for display. The selection process is automated and is done by the company's system. The company wishes to know the total count of the products selected for display. Write an algorithm to find the count of products that will be displayed.

Input Format

an array size and elements

Constraints

no

Output Format

perfect cube elements

Sample Input 0

```
5
1 2 3 4 5
```

Sample Output 0

```
1
```

Sample Input 1

```
10
1 2 3 4 5 6 7 8 9 10
```

Sample Output 1

```
1 8
```

Sample Input 2

```
5
1 2 4 8 27
```

Sample Output 2

```
1 8 27
```

LBP 255

In a game, organizers has given a number to the player. The player has to find out the differnece between the number and the reverse of the number. The difference between two numbers is the player's score. The number given to the player and the player's score can be a negative or positive number.

Write an algorithm to find the player's score.

Input Format

an integer

Constraints

no

Output Format

player's score

Sample Input 0

```
123
```

Sample Output 0

```
-198
```

Sample Input 1

```
721
```

Sample Output 1

```
594
```

LBP 256

The media company "GlobalAdd" has received a batch of advertisements from different product brands. The batch of advertisements is a numeric value where each digit represents the number of advertisements the media company has received from different product brands. Since the company banners permit only even numbers of advertisements to be displayed, the media company needs to know the total number of advertisements it will be able to display from the given batch.

Write an algorithm to calculate the total number of advertisements that will be displayed from the batch.

Input Format

an integer

Constraints

no

Output Format

count of advertisements

Sample Input 0

```
1234
```

Sample Output 0

```
2
```

Sample Input 1

```
136
```

Sample Output 1

```
1
```

LBP 257

The games development company "FunGames" has developed a balloon shooter game. The balloons are arranged in a linear sequence and each balloon has a number associated with it. The numbers on the balloons are Fibonacci series. In the game the player shoots 'k' balloons. The player's score is the sum of numbers on k balloons.

Write an algorithm to generate the player's score.

Input Format

an integer value n

Constraints

no

Output Format

sum value

Sample Input 0

```
1
```

Sample Output 0

```
0
```

Sample Input 1

```
2
```

Sample Output 1

```
1
```

Sample Input 2

```
3
```

Sample Output 2

```
2
```

LBP 258

To create a profile on a scocial media account "ThePastBook". The user needs to enter a string value in the form of user name. The username should consist of only characters tagged a-z. if the user enters an incorrect string containing digits the system automatically identifiers the number of digits in the string and removes them.

Write an alogorithm to help the system identify the count of digits present in the username.

Input Format

A string from the user.

Constraints

no

Output Format

count of digits

Sample Input 0

```
a1b2c3
```

Sample Output 0

```
3
```

Sample Input 1

```
string
```

Sample Output 1

```
0
```

Sample Input 2

```
abc34
```

Sample Output 2

```
2
```

LBP 259

Student of a school are assembled in a straight line for the morning prayer. To uplift the spirit of the students, an exercise is conducted. The initial letter of all the student's names is noted down(str). The task here is to substitute the initial letters in the list with consonants such that if the initial letter of the student is a vowel, retain the student in the same position.

If the initial letter of the student is a consonant, swap with the next immediate consonants from the english alphabet sequence (a-z). Say, initial letter of a student starts with b swap with c, next immediate consonant. If the initial letter is 'z' swap with 'b'.

Input Format

a string from the user

Constraints

no

Output Format

updated string

Sample Input 0

```
abc
```

Sample Output 0

```
acd
```

Sample Input 1

```
prakash
```

Sample Output 1

```
qsalatj
```

LBP 260

Mikes likes to play with numbers. His friends are also good with numbers and often plays mathematical games. they made a small game where they will spell the last digit of a factorial of a number other than 0. Let say the given number is 5, so $5!$ will be 120, Here 0 is the last digit. But we dn't want 0, we want a number other than 0. Then last digit is 2.

Input Format

an integer value

Constraints

no

Output Format

an integer vlaue

Sample Input 0

```
1
```

Sample Output 0

```
1
```

Sample Input 1

```
2
```

Sample Output 1

```
2
```

LBP 261

Jack was in 9th standard. He appeared for a speed maths competitive exam. Jack is taking longer time to solve one of the problems. Count the number of 1's in the binary representation of an integer. Help him to solve the below problem and write a code for the same.

Input Format

an integer value

Constraints

no

Output Format

an int value

Sample Input 0

5

Sample Output 0

2

Sample Input 1

8

Sample Output 1

1

Sample Input 2

11

Sample Output 2

3

LBP 262

Dennis was solving a puzzle. the puzzle was to verify a number whose cube ends with the number itself. Help Dennis to find the solution of the puzzle and write the code accordingly.

Input Format

integer value to verified

Constraints

no

Output Format

boolean value True or False

Sample Input 0

```
3
```

Sample Output 0

```
false
```

Sample Input 1

```
4
```

Sample Output 1

```
true
```

LBP 263

In a mathematics class, number system is being taught to students, before teaching them 10's and 100's place, they will be taught the number positions. The positions will be starting from sequence number 1 and the direction will be from left to right.

So if i want to find second position of a digit in the number 90876, it will be 0. if the kth digit exceeds the number position return -1.

write a program to find the kth digit in a given number.

Input Format

integer value and kth digit

Constraints

no

Output Format

no

Sample Input 0

```
90876
2
```

Sample Output 0

```
0
```

Sample Input 1

```
90876
3
```

Sample Output 1

```
8
```

Sample Input 2

```
90876
1
```

Sample Output 2

```
9
```

LBP 264

In a mathematics class, the students are being taught power function. So "a" raised to the power of "b" is shown as a^b and the calculation goes as $a*a*a...b$ times. Now there is slight twist to the problem, the students have to find out the last digit of the resultant a^b .

Input Format

an integer value as base and power

Constraints

no

Output Format

last digit of a^b

Sample Input 0

```
2 3
```

Sample Output 0

```
8
```

Sample Input 1

```
10 2
```

Sample Output 1

```
0
```

Sample Input 2

```
12 2
```

Sample Output 2

```
4
```

LBP 265

Aryan is studying in the 5th standard. He is very interested in mathematical tricks and always wanted to play with numbers. Aryan would like to replace existing numbers with some other numbers. Today he decided to replace all digits of the number (which is greater than or equal to 2 digits) by its squares and print it in reverse order. Write a program to help him to replace numbers accordingly.

Input Format

a number

Constraints

no

Output Format

replaced all digits by its squares and revered number

Sample Input 0

```
12345
```

Sample Output 0

```
2516941
```

Sample Input 1

```
1234
```

Sample Output 1

```
16941
```

Sample Input 2

```
123
```

Sample Output 2

```
941
```

LBP 266

Tom has joined a new company and he is assigned a program to code. But before starting to code, he needs to know the coding standards. He need to make sure that the variable name should meet the below standards,

- => contains only english letter
- => and/or digits
- => and/or underscore (_)
- => should not start with digits

The program should return True/False based on the above conditions

Input Format

a string from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
abc7
```

Sample Output 0

```
true
```

Sample Input 1

```
abc#
```

Sample Output 1

```
false
```

Sample Input 2

```
ab$c
```

Sample Output 2

```
false
```

LBP 267

While sitting in party, Tom came up with an idea of a quiz, and the quiz is, Tom will spell out a number, and a person has to tell a number which is next to it. But this number has to be perfect square.

Input Format

a number from the user

Constraints

no

Output Format

the perfect square after N

Sample Input 0

```
5
```

Sample Output 0

```
9
```

Sample Input 1

```
7
```

Sample Output 1

```
9
```

Sample Input 2

```
2
```

Sample Output 2

```
4
```

LBP 268

Write a program to get two inputs from the user and find the absolute difference between the sum of two numbers and the product of two numbers.

Input Format

two numbers from the user

Constraints

no

Output Format

absolute difference

Sample Input 0

```
35  
67
```

Sample Output 0

```
2243
```

Sample Input 1

```
37  
66
```

Sample Output 1

```
2339
```

Sample Input 2

```
74  
99
```

Sample Output 2

```
7153
```

LBP 269

James wants to travel by bus to reach his friend John's home. John gave a hint that all busses from James's location will reach his home if the bus number is prime number.

Write a program to help James find the bus that reaches John's home.

Input Format

a number from the user

Constraints

no

Output Format

yes or no

Sample Input 0

```
12
```

Sample Output 0

```
no
```

Sample Input 1

```
23
```

Sample Output 1

```
yes
```

Sample Input 2

```
15
```

Sample Output 2

```
no
```

LBP 270

The teacher in a school has started to teach the very basics rule for a sentence is that it should start with a capital letter and ends with a full stop. If the sentence fails any of the above mentioned criteria, it will be an incorrect sentence. Make a program to validate whether a given statement is a correct sentence or not. The program should return True/False based on the validity.

Input Format

a string from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
This is demo.
```

Sample Output 0

```
true
```

Sample Input 1

```
hello.
```

Sample Output 1

```
false
```

LBP 271

Geetha Singh is trying to create a system to convert binary number to its decimal equivalent. Help her to automate the process.

Input Format

a binary value

Constraints

no

Output Format

decimal value

Sample Input 0

```
1101
```

Sample Output 0

```
13
```

Sample Input 1

```
1111
```

Sample Output 1

```
15
```

LBP 272

A company wishes to bucketize their item id's for better search operations. The bucket for the item ID is chosen on the basis of the maximum value of the digit in the item ID. Write an algorithm to find the bucket to which the item ID will be assigned.

Input Format

ItemId

Constraints

no

Output Format

bucket ID

Sample Input 0

```
32387634
```

Sample Output 0

```
8
```

Sample Input 1

```
12345
```

Sample Output 1

```
5
```

LBP 273

Implement the following function

```
def NextLetter(ch1,ch2);
```

The function accepts two characters ch1 and ch2 as arguments, ch1 and ch2 are alphabetical letters.

Implement the function to find and return the next letter so that distance between ch2 and the next letter is the same as the distance between ch1 and ch2. While counting distance if you exceed the letter 'z' then, count the remaining distance starting from the letter 'a'.

Distance between two letters is the number of letters between them.

Input Format

char ch1 and char ch2

Constraints

no

Output Format

char ch

Sample Input 0

```
c g
```

Sample Output 0

```
k
```

Sample Input 1

```
a c
```

Sample Output 1

```
e
```

LBP 274

Implement a program to find sum of all integers between two integer numbers taken as input and are divisible by 7.

Input Format

an integer value

Constraints

no

Output Format

sum value

Sample Input 0

```
1 7
```

Sample Output 0

```
7
```

Sample Input 1

```
1 25
```

Sample Output 1

```
42
```

LBP 275

The country visa center generates the token number for its applicants from their application ID. the application ID is numeric value. The token number is generated in a specific form. the even digits in the applicant's ID are replaced by the digit one greater than the even digitand the odd digits in the applicant's ID are replaced by the digit one lesser than the odd digit. The numeric value thus generated represents the token number of applicant.

Write an algorithm to generate the token number from the applicant ID.

Input Format

application ID

Constraints

no

Output Format

token id

Sample Input 0

```
235
```

Sample Output 0

```
324
```

Sample Input 1

```
417
```

Sample Output 1

```
506
```

LBP 276

Rahul's teacher gave an assignment to all the student that when they show up tomorrow they should find a special type of number and report her. He thought very carefully and came up with an idea to have neon numbers. A neon number is a number where the square of the sum of each digit of the number results in the given number. Given an integer N, Write a program to find whether the number N is a Neon number. If it's not a Neon number, print the square of the sum of digits of the number.

Input Format

a number

Constraints

no

Output Format

true or false

Sample Input 0

```
81
```

Sample Output 0

```
true
```

Sample Input 1

```
91
```

Sample Output 1

```
false
```

LBP 277

A super market maintains a pricing format for all its products. A value N is printed on each product. When the scanner reads the value N on the item, the product of all the digits in the value N is the price of the item. the task here is to design the software such that given the code of any item N the product (multiplication) of all the digits of value should be computed (price).

Input Format

an integer value

Constraints

no

Output Format

price

Sample Input 0

```
5244
```

Sample Output 0

```
160
```

Sample Input 1

```
123
```

Sample Output 1

```
6
```

Sample Input 2

```
4511
```

Sample Output 2

```
20
```

LBP 278

Given two positive numbers N and K. The task is to find the number N contains exactly K digit or not. If it contains then print Truedigit_count otherwise Falsedigit_count.

Input Format

Value of N and K

Constraints

con

Output Format

True | FalseDigit_Count

Sample Input 0

```
501 3
```

Sample Output 0

```
True 3
```

Sample Input 1

```
50121 4
```

Sample Output 1

```
False 5
```

Sample Input 2

```
505 5
```

Sample Output 2

```
False 3
```

LBP 279

A pronic number is a number which is a product of two consecutive integers, that is, a number of the form $n(n + 1)$. Create a function that determines whether a number is pronic or not.

Input Format

a number from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
0
```

Sample Output 0

```
true
```

Sample Input 1

```
7
```

Sample Output 1

```
false
```

LBP 280

Implement a program that will test if a string is a valid PIN or not via a regular expression.
A valid PIN has:

- Exactly 4 characters.
- Only numeric characters (0-9).
- No whitespace.

Input Format

an input from the user

Constraints

con

Output Format

true or false

Sample Input 0

```
0511
```

Sample Output 0

```
true
```

Sample Input 1

```
78945
```

Sample Output 1

```
false
```

LBP 281

Implement a program that takes the memory size as an argument and returns the actual memory size.
Note: The actual storage loss on a USB device is 7% of the overall memory size!

Input Format

memory size in GB

Constraints

no

Output Format

actual memory size, round your result to two decimal places.

Sample Input 0

```
1
```

Sample Output 0

```
0.93
```

Sample Input 1

```
3
```

Sample Output 1

```
2.79
```

LBP 282

The happy number can be defined as a number which will yield 1 when it is replaced by the sum of the square of its digits repeatedly. If this process results in an endless cycle of numbers containing 4, then the number is called an unhappy number.

Write a program that accepts a number and determines whether the number is a happy number or not. Return true if so, false otherwise.

Input Format

a number from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
32
```

Sample Output 0

```
true
```

Sample Input 1

```
16
```

Sample Output 1

```
false
```

LBP 283

Implement a function that takes an array of numbers and returns the mean (average) of all those numbers.

Input Format

an array size and elements

Constraints

no

Output Format

print mean value and round to two decimal places.

Sample Input 0

```
6
5 3 6 7 5 3
```

Sample Output 0

```
4.83
```

Sample Input 1

```
5
1 2 3 4 6
```

Sample Output 1

```
3.20
```

LBP 284

Implement a program to that takes a number as its argument and returns an array of all its factors

Input Format

a number

Constraints

no

Output Format

list of factors

Sample Input 0

```
5
```

Sample Output 0

```
1 5
```

Sample Input 1

```
6
```

Sample Output 1

```
1 2 3 6
```

Sample Input 2

```
4
```

Sample Output 2

```
1 2 4
```

LBP 285

Implement a program to display next 5 characters after input character.

Input Format

a character from the user

Constraints

no

Output Format

next 5 characters excluding input

Sample Input 0

```
a
```

Sample Output 0

```
b c d e f
```

Sample Input 1

```
m
```

Sample Output 1

```
n o p q r
```

LBP 286

Implement a program to check whether the given number is composite number or not.

Input Format

a number from the user

Constraints

no

Output Format

true or false

Sample Input 0

```
4
```

Sample Output 0

```
true
```

Sample Input 1

```
5
```

Sample Output 1

```
false
```

Sample Input 2

```
6
```

Sample Output 2

```
true
```

LBP 287

Implement a program, it reads integers from the input device(until it gets -ve number) and put them into array. We define a hot number as any number whose last digit is 2, and cold number as any number that is less than 50. You have to modify the program such that

if it is hot number replace by -1
if it is cold number replace by -5
if it is both hot and cold replace by -6
else keep old number

Input Format

a sequence of int values

Constraints

no

Output Format

a sequence of int values

Sample Input 0

```
92 61 13 42 -1
```

Sample Output 0

```
-1 61 -5 -6
```

Sample Input 1

```
11 12 85 96 82 -1
```

Sample Output 1

```
-5 -6 85 96 -1
```

LBP 288

Write a program to check whether a string not having alphabet 'a'?

Input Format

string from the user

Constraints

con

Output Format

true or false

Sample Input 0

```
apple
```

Sample Output 0

```
true
```

Sample Input 1

```
demo
```

Sample Output 1

```
false
```

LBP 289

The online math course provider 'MathAtTip' has designed a course for children called Learning Number Recognition and Counting. The assessment part of the course has a question where the student is given a number and a digit. The student needs to find out the total count of the digits present in the number excluding the given digit.

Input Format

two space separated int values

Constraints

no

Output Format

count of total digits excluding k

Sample Input 0

```
12345
5
```

Sample Output 0

```
4
```

Sample Input 1

```
5644456
5
```

Sample Output 1

```
5
```

LBP 290

The e-commerce company "TodaysApparel" has a list of sales values of N days. Some days the company made a profit, represented as a positive value. Other days the company incurred a loss, represented as a negative sales value. The company wishes to know the number of profitable days in the list.

Write an algorithm to help the company know the number of profitable days in the list.

Input Format

array size and elements

Constraints

no

Output Format

count number of +ve values

Sample Input 0

```
7  
23 -7 13 -34 56 43 -12
```

Sample Output 0

```
4
```

Sample Input 1

```
5  
1 2 -3 4 5
```

Sample Output 1

```
4
```

LBP 291

A data company wishes to store its data files on the server. They N files. Each file has a particular size, the server stores the files in bucket list. The bucket ID is calculated as the sum of the digits of its file size. The server.. the bucket ID for every file request where the file is stored.

Write an algorithm to find the bucketIDs where the files are stored.

Input Format

an array size and elements

Constraints

no

Output Format

bucketIds

Sample Input 0

```
4  
43 345 20 987
```

Sample Output 0

```
7 12 2 24
```

Sample Input 1

```
5  
12 13 14 15 16
```

Sample Output 1

```
3 4 5 6 7
```

LBP 292

Implement a program to convert the given decimal value into octal

Input Format

decimal value

Constraints

no

Output Format

octal number

Sample Input 0

```
16
```

Sample Output 0

```
20
```

Sample Input 1

```
10
```

Sample Output 1

```
12
```

LBP 293

Implement a program to find sum of adjacent elements in the array

Input Format

an array size and elements

Constraints

no

Output Format

array with sum of adjacent elements

Sample Input 0

```
3
1 2 3
```

Sample Output 0

```
1 3 6
```

Sample Input 1

```
4
1 0 1 4
```

Sample Output 1

```
1 1 2 6
```

LBP 294

Currently government is taking lot of measures to control the spread of Coronavirus. As we have vaccine now, many campaigns are done to vaccination.

Health dept is identifying the people in each area and recommended/vaccination of them. They are planning three stages

stage1: above 60 years

stage2: between 18 and 60

stage3: below 18 years

Implement a program to read date of birth of the person and decide he belongs to which stage.

Input Format

date of birth

Constraints

no

Output Format

1 or 2 or 3

Sample Input 0

```
13/05/1952
```

Sample Output 0

```
1
```

Sample Input 1

```
03/12/1972
```

Sample Output 1

```
2
```

LBP 295

Implement a program to find the area of the circle

Input Format

radius value

Constraints

no

Output Format

area of the circle (round to two decimals)

Sample Input 0

```
12
```

Sample Output 0

```
458.38
```

Sample Input 1

```
1
```

Sample Output 1

```
3.14
```

LBP 296

Implement a program to print the list of integers which are divisible by 5 or 7.

Input Format

a number from the user

Constraints

no

Output Format

seq of int values which are divisible by 5 or 7

Sample Input 0

```
10
```

Sample Output 0

```
5 7 10
```

Sample Input 1

```
15
```

Sample Output 1

```
5 7 10 14 15
```

LBP 297

Implement a program to print the list of integers which are ending with 3 in the given range.

Input Format

n1 and n2 values

Constraints

no

Output Format

list of int values

Sample Input 0

```
10 15
```

Sample Output 0

```
13
```

Sample Input 1

```
1 30
```

Sample Output 1

```
3 13 23
```

LBP 298

Implement a program to find absolute diff betwee sum of max digits and sum of min digits present in three integers n1,n2 and n3

Input Format

n1,n2 and n3

Constraints

no

Output Format

int value

Sample Input 0

```
5213  
5698  
2153
```

Sample Output 0

```
12
```

Sample Input 1

```
1212  
1234  
5678
```

Sample Output 1

```
7
```

LBP 299

Write a program to find whether the given string is lucky or not. A string is said to be lucky if the sum of ascii values of the characters in the string is even.

Input Format

a string

Constraints

non empty string

Output Format

true or false

Sample Input 0

```
abc
```

Sample Output 0

```
true
```

Sample Input 1

```
anitha
```

Sample Output 1

```
false
```

Sample Input 2

```
technology
```

Sample Output 2

```
true
```

LBP 300

Implement a program to find sum of last three digits in the given number.

Input Format

an int value

Constraints

must be three digit number

Output Format

int value

Sample Input 0

```
2345
```

Sample Output 0

```
12
```

Sample Input 1

```
1234
```

Sample Output 1

```
9
```

Sample Input 2

```
1234
```

Sample Output 2

```
9
```

LBP 301

Given String/Sentence need to be reversed and the vowels need to be replaced with numbers from 1-9 in the reversed string replaced number should be appears in descending order from left to right.
If there are more than 9 vowels, numbering should restart from 1.

Input Format

a string from the user

Constraints

non-empty string

Output Format

updated string

Sample Input 0

```
welcome
```

Sample Output 0

```
w1lc2m3
```

Sample Input 1

```
prakash
```

Sample Output 1

```
pr1k2sh
```

Sample Input 2

```
demo
```

Sample Output 2

```
d1m2
```

Sample Input 3

```
welcome to python programming
```

Sample Output 3

```
w1lc2m3 t4 pyth5n pr6gr7mm8ng
```

LBP 302

A party has been organized on cruise. The party is organized for a limited time (T). The number of guests entering E[i] and leaving L[i] the party at every hour is represented as elements of the array. The task is to find the total number of guests present on the cruise at the end.

Input Format

size of two arrays and elements of E and L array

Constraints

no

Output Format

number of guests present at the end of party.

Sample Input 0

```
5
7 0 5 1 3
1 2 1 3 4
```

Sample Output 0

```
5
```

Sample Input 1

```
4
3 5 2 0
0 2 4 4
```

Sample Output 1

```
0
```

Sample Input 2

```
4
3 5 2 2
1 1 1 1
```

Sample Output 2

```
8
```

Sample Input 3

```
4
3 5 2 0
0 2 4 4
```

Sample Output 3

```
0
```

LBP 303

Airport Security officials have confiscated several items of the passenger at the security checkpoint. All the items have been dumped into a huge box (array). Each item possessed a certain amount of risk (0, 1, 2). Here is the risk severity of the item representing an array [] of N number of integer values. The risk here is to sort the item based on their level of risk values range from 0 to 2.

Input Format

array size and elements

Constraints

non-empty array

Output Format

sorted items based on risk

Sample Input 0

```
7  
1 0 2 0 1 0 2
```

Sample Output 0

```
0 0 0 1 1 2 2
```

Sample Input 1

```
10  
2 1 0 2 1 0 0 1 2 0
```

Sample Output 1

```
0 0 0 0 1 1 1 2 2 2
```

Sample Input 2

```
4  
1 0 2 1
```

Sample Output 2

```
0 1 1 2
```

Sample Input 3

```
3  
0 1 2
```

Sample Output 3

```
0 1 2
```

LBP 304

A chocolate factory is packing chocolates into the packets. The chocolate packets here represent an array of n number of integer values. The task is to find the empty packets (0) of chocolate and push it to the end of the conveyor belt (array).

Input Format

array size and elements

Constraints

non-empty array

Output Format

updated array

Sample Input 0

```
7  
4 5 0 1 9 5 0
```

Sample Output 0

```
4 5 1 9 5 0 0
```

Sample Input 1

```
6  
6 0 1 8 0 2
```

Sample Output 1

```
6 1 8 2 0 0
```

Sample Input 2

```
4  
1 2 3 4
```

Sample Output 2

```
1 2 3 4
```

Sample Input 3

```
3  
1 0 0
```

Sample Output 3

```
1 0 0
```

LBP 305

Joseph is learning digital logic subject which will be for his next semester. He usually tries to solve unit assignment problems before the lecture. Today he got one tricky question. The problem statement is "A positive integer has been given as an input. Convert decimal value to binary representation. Toggle all bits of it after the most significant bit including the most significant bit. Print the positive integer value after toggle all bits.

Input Format

an integer value

Constraints

$n > 0$

Output Format

+ve decimal integer value

Sample Input 0

```
10
```

Sample Output 0

```
5
```

Sample Input 1

```
7
```

Sample Output 1

```
8
```

Sample Input 2

```
5
```

Sample Output 2

```
10
```

Sample Input 3

```
6
```

Sample Output 3

```
9
```

LBP 306

A company is transmitting data to another server. The data is in the form of numbers. To secure the data during transmission, they plan to obtain a security key that will be sent along with the data. The security key is identified as the count of the repeating digits in the data. Write a algorithm to find the security key for the data.

Input Format

The input consists of an integer data, representing the data to be transmitted.

Constraints

no

Output Format

print an integer representing the security key for the given data. if no data is repeated it should display -1

Sample Input 0

```
578378923
```

Sample Output 0

```
3
```

Sample Input 1

```
733122723
```

Sample Output 1

```
3
```

LBP 307

A company wishes to encode its data. The data is in the form of a number. They wish to encode the data with respect to a specific digit. They wish to count the number of times the specific digit reoccurs in the given data so that they can encode the data accordingly. Write an algorithm to find the count of the specific digit in the given data.

Input Format

The input consists of two space-separated integers - data and digit, representing the data to be encoded and the digit to be counted in the data.

Constraints

no

Output Format

Print an integer representing the count of the specific digit.

Sample Input 0

```
572378233 3
```

Sample Output 0

```
3
```

Sample Input 1

```
1234 5
```

Sample Output 1

```
0
```

LBP 308

An e-commerce site wishes to enhance its ordering process. They plan to implement a new scheme of OTP generation for order confirmations. The OTP can be any number of digits. For OTP generation, the user will be asked for two random numbers where first number is always smaller than second number. The OTP is calculated as the sum of the maximum and minimum prime values in the range of the user-entered numbers. Write a program to generate OTP.

Input Format

Two int values

Constraints

Fn

Output Format

Sum of max and min prime numbers.

Sample Input 0

```
10 20
```

Sample Output 0

```
30
```

Sample Input 1

```
1 10
```

Sample Output 1

```
9
```

LBP 309

Write a program to find nearest greater paliandrome

Input Format

an int value

Constraints

no

Output Format

an int value

Sample Input 0

```
192
```

Sample Output 0

```
202
```

Sample Input 1

```
2
```

Sample Output 1

```
2
```

LBP 310

Given a number n, for each integer i in the range from 1 to n inclusive, print one value per line as follows.

- => if i is a multiple of both 3 and 5 print FizzBuzz
- => if i is a multiple of 3 (but not 5), print Fizz
- => if i is a multiple of 5 (but not 3), print Buzz
- => if i is not a multiple of 3 or 5 print the value of i.

implement a program to read number n print the output as described above.

Input Format

a number n

Constraints

no

Output Format

print n string as per the above rules.

Sample Input 0

```
10
```

Sample Output 0

```
Buzz
```

Sample Input 1

```
2
```

Sample Output 1

```
2
```

Sample Input 2

```
15
```

Sample Output 2

```
FizzBuzz
```