C Programming Lab Assignment #1

Write a C program to compute the distance between the two points in 2/3 dimensional space.
Write a C program to find the volume/area/perimeter of a square/rectangle/triangle/circle.
Write a C program to swap two numbers.
Write a C program to find the minimum/maximum of two/three numbers.
Write a C program to convert a given integer (in seconds) to hours, minutes and seconds
Write a C program to find all roots of a quadratic equation
Write a C program to enter temperature in Celsius/Fahrenheit and convert it into Fahrenheit/ Celsius.
Write a C program to enter marks/GP of five subjects and calculate total/average/percentage/GPA.

C Programming Lab Assignment #1

Write a C program to compute the distance between the two points in 2/3 dimensional space.
Write a C program to find the volume/area/perimeter of a square/rectangle/triangle/circle.
Write a C program to swap two numbers.
Write a C program to find the minimum/maximum of two/three numbers.
Write a C program to convert a given integer (in seconds) to hours, minutes and seconds
Write a C program to find all roots of a quadratic equation
Write a C program to enter temperature in Celsius/Fahrenheit and convert it into Fahrenheit/ Celsius.
Write a C program to enter marks/GP of five subjects and calculate total/average/percentage/GPA.

C Programming Lab Assignment #1

Write a C program to compute the distance between the two points in 2/3 dimensional space.
Write a C program to find the volume/area/perimeter of a square/rectangle/triangle/circle.
Write a C program to swap two numbers.
Write a C program to find the minimum/maximum of two/three numbers.
Write a C program to convert a given integer (in seconds) to hours, minutes and seconds
Write a C program to find all roots of a quadratic equation
Write a C program to enter temperature in Celsius/Fahrenheit and convert it into Fahrenheit/ Celsius.
Write a C program to enter marks/GP of five subjects and calculate total/average/percentage/GPA.

C Programming Lab Assignment #1

Write a C program to compute the distance between the two points in 2/3 dimensional space.
Write a C program to find the volume/area/perimeter of a square/rectangle/triangle/circle.
Write a C program to swap two numbers.
Write a C program to find the minimum/maximum of two/three numbers.
Write a C program to convert a given integer (in seconds) to hours, minutes and seconds
Write a C program to find all roots of a quadratic equation
Write a C program to enter temperature in Celsius/Fahrenheit and convert it into Fahrenheit/ Celsius.
Write a C program to enter marks/GP of five subjects and calculate total/average/percentage/GPA.

C Programming Lab Assignment #2

9. Write a C program to find the summation of the following series:
   i. $1^2 + 3^2 + 5^2 + \ldots\ldots\ldots\ldots (2n+1)^2$
   ii. $1+ (1+2) + (1+2+3) + \ldots\ldots\ldots\ldots + (1+2+3+\ldots\ldots\ldots +n)$

10. Your task is to find the minimal positive integer number Q so that the product of digits of Q is exactly equal to N.

Input

The input contains the single integer number N ($0 \le N \le 10^9$).

Output

Your program should print to the output the only number Q. If such a number does not exist print -1.

Sample

input	output
10	25

11. Your task is to find the sum of all integer numbers lying between 1 and N inclusive.

Input

The input consists of a single integer N that is not greater than 10000 by it's absolute value.

Output

Write a single integer number that is the sum of all integer numbers lying between 1 and N inclusive.

Sample

input	output
-3	-5

12. At last the first term at the University came to its finish. Mr. ABC has already passed all the exams and wants to know if he gets a scholarship. There is the following practice of giving scholarship to students at the University:
    - if a student has got satisfactory marks, the scholarship is not given,
    - if a student has passed through the examination period with only excellent marks, he gets a personal scholarship,
    - if a student doesn't get a personal scholarship and his average mark is not less than 4.5, he gets a high scholarship,
    - if a student gets neither high nor personal scholarship and doesn't have satisfactory marks, he gets a common scholarship.

A satisfactory mark corresponds to value 3, a good mark corresponds to value 4, and an excellent mark corresponds to value 5. An average mark for a student is the average value of all the marks this student got in his exams. Help Mr. ABC find out which scholarship he gets.

Input

The first line contains an integer n that is the number of exams ($1 \le n \le 10$). In the i-th of the next n lines there is an integer m_i that is value of Mr. ABC's mark in i-th exam ($3 \le m_i \le 5$).

Output

If Mr. ABC doesn't get any scholarship output "None". If he gets a common scholarship output "Common", if he gets a high scholarship output "High", if he gets a personal one output "Named".

Samples

input	output
3 5 5 4	High
3 3 3 3	None

Practical Assignment On
Character Arrays and String in C Language

1. **Write a C Program to find the length of a string with and without using the built-in function. (You can use standard library function strlen() to find the length of a string and alsoyou have to compute the length of a string manually without using strlen() function.)**

   Sample Output

   Enter a string: University
   The length of University is = 10

2. **Write a C program to concatenate two strings. (You can concatenate two strings easily using standard library function strcat() and also have to concatenates two strings manually without using strcat() function.)**

   Sample Output

   Enter first string: lol
   Enter second string: :)
   After concatenation: lol:)

3. **Write a C program to copy string with and without using strcpy(). (You can use the strcpy() function to copy the content of one string to another and also have to copies the content of one string to another manually without using strcpy() function.)**

   Sample Output

   Enter String s1: programiz
   String s2: programiz

4. **Write s C program to find the frequency of characters in a string. (This program asks user to enter a string and a character and checks how many times the character is repeated in the string.)**

   Sample Output:

   Enter a string: This website is awesome.
   Enter a character to find the frequency: e
   Frequency of e = 4

5. **Write a C program that takes string input from the user and count the number of vowels, consonants and so on. (This program counts the number of vowels, consonants, digits and white-spaces in a string which is entered by the user.)**

   Sample Output:

   Enter a line of string: adfslkj34 34lkj343 34lk
   Vowels: 1
   Consonants: 11
   Digits: 9
   White spaces: 2

University of Rajshahi
Dept. of Information and Communication Engineering
B. Sc. (Engineering) Part-I (Even Semester)
Programming with C Lab

Assignment on Function and Pointer

1. Write a function that will calculate and display the real roots of the quadratic equation: $ax^2 + bx + c = 0$. Assume that a, b and c are floating-point arguments whose values are given.
2. Write a function that will allow a floating-point number to be raised to an integer power. In other words, we wish to evaluate the formula: $y = x^n$ where y and x are floating-point variables and n is an integer variable.
3. Write a complete C program that includes a recursive function to determine the value of the n-th Fibonacci number, F_n, where $F_n = F_{n-1} + F_{n-2}$ and $F_1 = F_2 = 1$. Let the value of n be an input quantity.
4. Write a program in C that will display all prime numbers between two intervals using a function which will take the intervals as its arguments.
5. Write a program in C that will calculate the factorial of a given integer number using recursive function.
6. Write a program in C that will convert a given binary number to its decimal equivalent and vice versa using functions.
7. Write a program in C using pointers to read in an array of integers and print its elements in reverse order.
8. Write a function using pointers to add two matrices and to return the resultant matrix to the calling function.
9. Write a program in C to find the largest number using dynamic memory allocation.
10. Using pointers write a function that receives a character string and a character as argument and deletes all occurrences of this character in the string. The function should return the corrected string with no holes.