VIT

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act 1956)

Continuous Assessment Test I – January 2023

Programme	: B.Tech(BAI,BCE,BPS,BRS)	Semester	: Winter Sem 22-23
		Code	: BCSE102L
Course Title	: Structured and Object-Oriented Programming	Class Nbr	: CH2022235002447
			CH2022235002908
Faculty (s)	: Dr. A.Vinothini, Dr. R. Dhanalakshmi	Slot	: B2
Time	: 02.00 to 03.30 pm	Max. Marks	: 50

Answer all the Questions

1. Ashmita is an ardent short storybook lover. She keeps buying lots of books and places them in her library in a certain fashion based on the number of pages(P).

   Assume she hates the number 7. If P is a factor of 7, she just leaves the library. If P is equal to 100, she places it in a rack named "Centum" and if P is less than 100 and not a factor of 7, she places it in a rack named "Sleek". If none of the above conditions are satisfied, she generally returns the book to the shop. Your task is to write a program to help Ashmita to arrange her book in the library.

   Input Format

   Read a positive integer N representing the total number of books bought.
   In the next N lines, read the number of pages in each book.

   Output Format

   Print the name of the rack or print the statements "Left" / "Return" as per the conditions.   **10**

   Sample Input

   4
   21
   156
   100
   20

   Sample Output

   Left
   Return
   Centum
   Sleek

2. Major Adavan sends secret messages to his counterparts in the base camp at regular intervals. It would always be two positive integers. The officers in the base camp will decode the message using the following method.

   The sum of digits of the product of the two integers is the number of troops in the enemy camp. If the number of troops is odd the enemy troop is towards "North" and if it is even then the enemy troop is towards "South".   **10**

   Input Format

   Read two space-separated positive integers

   Output Format

   The first line prints the number of troops
   The second lines Prints "North" /" South"

   Sample Input

   12 3

3. A diabetologist records the blood glucose level of his patients for a week from Sunday to Saturday (i.e., day 1 to day 7). He wishes to analyze the highest blood glucose level recorded in a week for his N patients to plan his treatment and diet chart. Your task is to write a program to read a two-dimensional array N x C to store the blood glucose levels of N patients (Patient 1 to Patient N) for a week. Print the highest blood glucose level recorded in a week for each patient and the day order in which the highest level was recorded.

Input Format
The first line reads a positive integer N representing the number of patients.
The next line read N x C array where C represents the number of days in a week.

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Output Format
N lines to print the highest blood glucose level recorded for each patient and the day order

Sample Input
2
92 91 104 140 148 146 150
102 112 104 142 140 141 132

Sample Output
Patient 1 -Highest blood glucose level 150 on day 7
Patient 2 -Highest blood glucose level 142 on day 4

4. Mr. Ram, a primary school teacher plans to organize a competition for the students of grade II in the republic day function. In each team, two children can participate. Each participant must write one word related to republic day. He then decides the winner of Level 1 by performing a few manipulations on the words W1 and W2. Write a program to help Mr. Ram to complete the given task.
Converts the words W1 and W2 to uppercase letters and checks if both words are equal. If both the words are equal then print as "Disqualified Team". Else join W1 and W2 by adding a blank space between them and store it as a new string S1. Compute and print the length of the string S1. if the length is greater than 6 print as "Move to Level 2" else print as "Thank You".

Input Format
Read the word1 (W1)
Read the word2 (W2)

Output Format
The first 2 lines to print the words W1 and W2 in upper case.
The next lines prints "Disqualified Team" if W1 and W2 are equal else print S1.
The next line prints the length of S1
The next line prints "Move to Level 2" /"Thank You"

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Sample Input
India
Country

Sample Output
INDIA
COUNTRY
INDIA COUNTRY
13
Move to Level 2

5. The employee of the software company "XYZ" decided on a funny task during their weekend celebrations. Each employee will receive a token number N.
If N is a prime number, then the employee will receive a surprise gift. Your task is to

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write a program to read the token number and pass it to a user-defined function that will check whether N is prime or not.

If N is prime, print as "Congratulations!" else print as "Better Luck Next Time!".

Input Format

Read a positive integer N representing the token number

Output Format

Print Congratulations!" / "Better Luck Next Time!"

Sample Input

17

Sample Output

Congratulations!

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