DIU Take Off Programming Contest, Fall 2017
Problem Analysis

Problem A: Take off right now!!!

Category: Giveaway
Solution: Just print "Every accomplishment starts with a decision to try." with newline(\n).

Problem B: I have a long way to go

Category: Simple arithmetic
Problem Setter: Md. Ferdouse Ahmed Foysal
Special Thanks: Mahmud Sajjad Abeer
Solution: You are given v and t and asked for s where s=v*t. So, the output should be the multiplication of v and t.

Problem C: Hobe ki?

Category: Simple if/else
Problem Setter: Aquibuzzaman Sayem
Special Thanks: Mahmud Sajjad Abeer
Solution: if n is less or equal to k, print "Yes" or else, print "No" with newline.

Problem D: Contest Reminder

Category: Loop, if/else
Problem Setter: Mahmud Sajjad Abeer
Solution: If H is Zero, output 12:M AM, else if H<12 output H:M AM else output (H-12):M PM. Here input and output formatting was important. Most of you had complexities taking the input and output. I expected more solves than this. I agree that you know a lot of things but you have to practice more hard after this. It really was an easy problem.

Problem E: Spider-Man DhakaComing

Category: Loop, finding minimum
Problem Setter: Azharul Islam Tazib
Special thanks: Muhaiminul Islam Jim
Dataset: Mahmud Sajjad Abeer

Solution: We didn't expect zero solve in this problem as this was a very easy problem. Just find the position of the bus with minimum free seats except zero free seats as he can't get into that. If all buses are full he should stay on the Queue.

Problem F: Intelligent Cinderella

Category: Adhoc
Problem Setter & Dataset: Tanzina Afroz Rimi
Alternate & Dataset: Mahmud Sajjad Abeer
Solution: Define 3 variables a, b, c, run a loop from 1 to n. If ith number is prime a++, else if ith number is odd b++, else c++.
The output is a/k b/k c/k. If you want to know about prime numbers, read this.

Problem G: Bachao!!!

Category: Adhoc, if/else
Problem Setter: Mahmud Sajjad Abeer
Original Idea: Mohammad Mahmudur Rahman
Alternate Writer: Muhaiminul Islam Jim
Solution: Cost table might look new to you. First read the statement and cost table carefully. The problem was really very easy, there were only 3 ways to ride the whole map. I'm just giving you a hint:- 1->2->3->4->1 is equivalent to 1->4->3->2->1. You try out the all the possible valid paths and then yell at yourself why you couldn't solve that problem ;)

Problem H: Startup

Category: Stopper, Implementation, String Processing
Problem Setter: Mahmud Sajjad Abeer
Alternate: Rajdip Saha
Solution: Trust me, you just need to know how to work with strings and some more experiences to solve this problem. The solution is very easy, though much complex for you to understand atm. First, store all the patterns in a 2D string. Then, convert it into a smaller sub-problem. Suppose, you want to fill up a single cell. What would you do? You will find out the row, column and then fill it with values. Here, we'll make a function that given a cell number, returns the equivalent starting cell number to store a 15x15 string. For example, for (1, 1) we'll fill a 15x15 grid from (1, 1) and for the cell (1, 2) we'll fill another 15x15 grid from (1, 15) with one border overlapping.

Nevermind, get back to coding now -_- I was in the same level as you were just a year ago. It takes time and effort. Please don't ever give up on yourself. Best of luck!

#Dreams don't work unless you DO.

Chief Judge:-

Mohammad Mahmudur Rahman,
Associate Professor(Adjunct), DIU
CEO and Founder, MuktoSoft and CodeMarshal
ACM ICPC World Finalist, 2007
Judge ACM ICPC

Judges: Mohammad Mahmudur Rahman, Mahmud Sajjad Abeer, Muhaiminul Islam Jim.

Special Thanks: Prof. Syed Akhter Hossain, CodeMarshal, Department of Computer Science & Engineering, DIU and Computer and Programming Club.

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