Programming Contests

MSUM ACM

Competitive programming

is a mind sport usually held over the Internet or a local network, involving participants trying to programaccording to provided specifications. Competitive programming is recognized and supported by several multinational software and Internet companies, such as Google,[1][2] Facebook[3] and IBM.[4] There are several organizations who host programming competitions on a regular basis.

[1] http://en.wikipedia.org/wiki/Competitive_programming

What is a Programming Contest?

- A 2-3 hour event where teams solve as many problems as possible
- Around 7-8 questions ranging in difficulty (Questions are right or wrong)
- Languages available are based on the contest rules (C/C++ and Java)
- One shared Computer (Limited Resources….Books and Print outs)

Rules

- I/O is strictly defined (usually standard in and out)
- Submission: Correct - Current time added to score (if 1st submission)

  Wrong - Obscure feedback (Extra time added if question is submitted later correctly plus current time)
- Most correct answers wins, if draw than lowest time wins

D. Four-Tower Towers of Hanoi

Refer to problem three for a description of the classic three-tower version of the Towers of Hanoi problem.

For this problem, we extend the Towers of Hanoi to have four towers and ask the question "What are the fewest number of moves to solve the Towers of Hanoi problem for a given n if we allow four towers instead of the usual three?" We keep the rules of trying to move n disks from one specified post to another and do not allow a bigger disk to be put on top of a smaller one. What is new for this problem is to have two spare posts instead of just one.

For example, to move 3 disks from post A to post D, we can move disk 1 from A to B, disk 2 from A to C, disk 3 from A to D, disk 2 from C to D, and disk 1 from B to D, making a total of 5 moves.

Input:

Input will be positive integers (n), one per line, none being larger than 1,000. For each value of n, compute the fewest number of moves for the four-tower problem. Stop processing at the end of the file. (There is no end-of-data flag.)

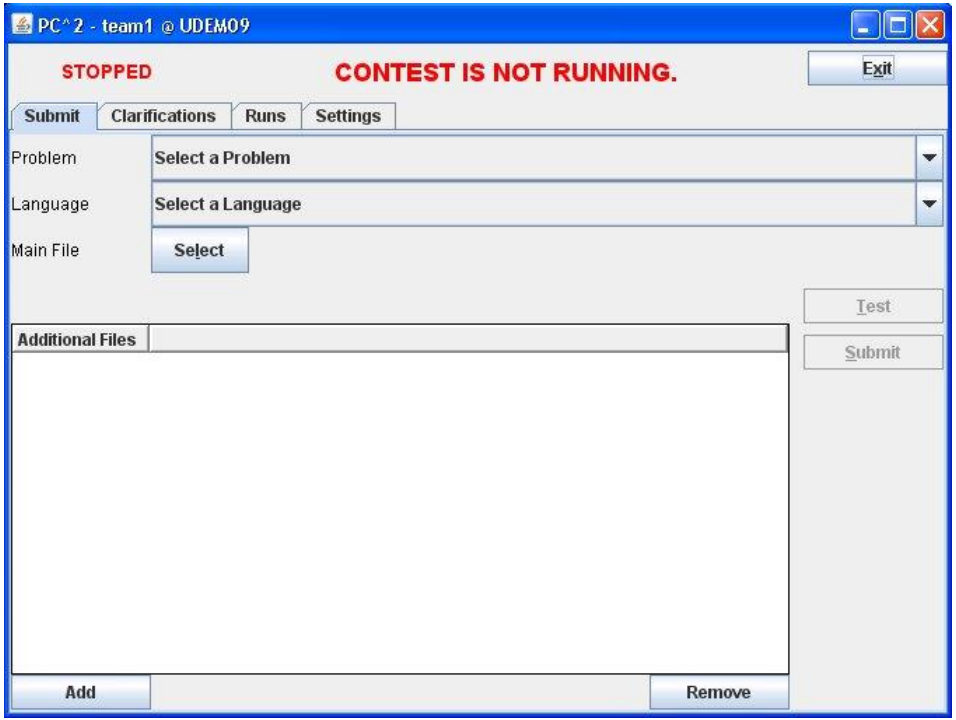
Output:

Output the fewest number of moves. Follow this format exactly: "`Case`", one space, the case number, a colon and one space, and the answer for that case. You may assume the answer will fit in a 64-bit integer type. Do not print any trailing spaces.

Sample Input	Sample Output
1 3 5	Case 1: 1 Case 2: 5 Case 3: 13

Platform Used

http://www.ecs.csus.edu/pc2/



Digi-Key Programming Contest

http://www.digikey.com/US/EN/Careers/computing-competition.html

ACM-ICPC

http://icpc.baylor.edu/welcome.icpc

MICS

http://www.micsymposium.org/mics2015/programmingcontest.html