Lanqiao Competition Ruels

Competition Environment

The competition includes one competition day. Contestants will be given 8 tasks to complete in 5 hours. Each contestant solves theirtasks individually.

Candidates must bring their own laptop, and can carry the necessary personal items into the examination room , including: clothing, jewelry, English dictionaries, small mascots. Other items are not allowed, especially: any electronic equipment (e.g., keyboards, mice, calculators, tablets), any books, manuals, written or printed materials, any data storage medium (e.g., CD-ROMs, USB drives, flash cards, micro-drives), any communication devices (e.g., mobile phones, radios of any sort), watches.

Contestant should sit in the assigned seat and should not leave the competition area during the competition. A contestant should get the permission from invigilators before going to the bathroom.

Any communication between contestants is strictly prohibited during the competition.

A clarification request form will be given to each contestant during the competition. Contestants are not allowed to ask questions about tasks to invigilators during the competition, any questions about tasks should be submitted by filling clarification request form. Contestants should phrase their questions so that the questions can be answered by YES/NO. If required, delegation leaders may translate their contestants' questions before the question is answered by Competition Committee.

The contestant should solve tasks using one of the following language: C, C++, Java.

The versions and compile command of the compilers in judging system are:

C: gcc (tdm64-1) 4.9.2, gcc -O2 code.cpp -o code

C++: g++ (tdm64-1) 4.9.2, g++ -O2 code.cpp -o code

Java: javac 1.8.0_60, javac Main.java

The following IDEs are installed in competition computers:

DEV-CPP 5.11

Code::Blocks

Eclipse Helios for JavaSE

Tasks

All tasks will be described in English.

Each task contains a problem which can be solved using computer algorithms. In each task, input data is given by standard input and the answer should be written to standard output.

There will be separate sessions in each task to describe input and output format. The input format is guaranteed to be satisfied. Contestant read data as described in the input format. It is recommended that contestant do NOT check input data for input format, as this may take some valuable competition time but gain no score.

Contestant should write output follow the output format, otherwise the output will be

judged as wrong (even you found the correct answer).

In each task, any variable in the input will be given a range unless it is derivable from other variables. Beside the final range, a task may contain variable ranges for partition score ranges, which means that if contestant do not solve the final range (full mark), it can gain a partition of score.

The ranges may beyond some common sense. In such a case contestant should follow the range described by the task. For example, a problem may be defined in a period of 1000000 days. In common sense a people would not live such a long time. But as a good programmer, you should be able to solve problem of such a long period.

Each task will specify explicitly time and memory limit. The submitted program should execute within time and memory limit. If a program executes longer that time limit, it will be terminated and marked as Time-Limit-Exceeded. If a program contains multiple threads, the executing time is evaluated as sum executing time of each thread. If a program requires more memory than limit, it will also be terminated. Memory is evaluated as all memory required by a program, including memory of code space, heap, stack, etc.

Submission

Only submissions during competition time are accepted. Any submission after contest time will be denied.

The answers should be submitted via web client (this website). Other submissions (such as emails, USB disks) are INVALID for judging.

Contestants are allowed to review submitted answers and resubmit an answer at any time during the contest, only the last submission is saved and judged for each task. Judge result will not present to contestants, contestant should debug their programs without feedbacks.

For each task, a unified program file should be provided as an answer. The content of the program file should be copied and pasted to the submission area of this website.

C/C++ Programs should only include standard header files, such as <stdio.h>, <cstdio>, <stdlib.h>, <cstdlib>, <iostream>, <map>, <set>, etc. Standard Template Library (STL) can be included in programs. Answers should NOT include any user defined header files, such as <stdafx.h>.

Java programs should only import standard packages, such as java.util.Scanner, java.util.Date, java.util.HashMap, java.util.TreeSet, java.math.BigInteger, etc.

Third party libs are not allowed to use in programs.

Programs should only contain calculate modules, do NOT include any other components such as graphics, system API, system interrupt. Any interaction to system interface should be called via standard libraries such as stdio.h/cstdio.

For C/C++ Programs, the return value of main() should always be 0 otherwise the program is considered to be runtime error when executed.

For Java Programs, package should NOT be used, which means that the program should in default package.

Included files should be specified explicitly in the program and submitted along with the rest of program (#include <xxx> or import xxx). It is not recognized for judging if you only

specify included files in project configuration, and the program may be judged as compile-error.

Please choose the correct compile language of your program. Do not choose C as compile language if you are writing a C++ program. C++ may be the language if you cannot distinguish C or C++.

Judging

Programs will be judged using a set of test-cases. Each test-case is attached with some score. Your program will be compiled and executed taking all test-cases as input independently.

If the output of your program is compatible with the correct answer of a test-case, you get the score attached to this test-case.

Test-cases for judging are usually NOT the same as sample input and output provided in task descriptions, so please test your program carefully with various cases before submit it.

Programs should strictly follow the directions of output format to write outputs, including where to write a white space or a newline. Any output that is incompatible with output format is judge as wrong answer. Please note that an output with any extra information is considered incompatible, so do NOT leave any extra output, such as debug info, in the program.