

Ateneo Computer Programming Competition (ACPC)

Official Rules

Mission

The Ateneo Computer Programming Competition (ACPC) provides students in Ateneo de Naga University with opportunities to sharpen and demonstrate their problem-solving and programming skills. The contest shall provide competent students to represent the University in Regional, National, and International Programming Competitions.

Introduction

ACPC is an annual competition among, but not limited to, Computer Science, Information Management, Information Systems, and Information Technology students of Ateneo de Naga University. Participants first compete in a qualifying round a week before the contest proper. Students who qualify will advance to the ACPC *Finals*.

Organization

The Department of Computer Science is responsible for establishing the following committees:

- a. The ***Steering Committee*** formulates and reviews contest rules, policy and guidelines; oversees the conduct of the contest; resolves issues and appeals; recommends ways to make the contest attractive to participants; and selects the contest judges.

The Contest Director heads this committee along with the Chief Judge, and Systems Manager.

- b. The ***Secretariat*** creates and disseminates official communication, invitation, and information (i.e. letter to sponsors, judges and guests, contest guidelines); facilitates contest registration; documents the competition, and creates any similar documents thereof.
- c. The ***Program and Awards*** formulates and/or implements the flow of the contest, solicits sponsorship, and takes care of the tokens and certificates that will be given to the participants and winners.
- d. The ***Food and Logistics*** ensures the availability of food; and the reservation, preparation, and restoration of the contest venue and the necessary equipment before, during, and after the contest.

Eligibility

Participants' eligibility shall be determined by the following:

- a. He/she is a bonafide student of the Department of Computer Science. However, students from other departments are also allowed to join subject to the approval of the Steering Committee;
- b. He/she submits a fully accomplished registration form;
- c. Knowledgeable in C, C++ or Java; and
- d. Approval of the Steering Committee.

The Contest

Each participant has access to one computer workstation, and is given a set of independent problems which may be solved in any order. Each solution is a program in one of a set of available programming languages. The ACPC will provide C, C++, and Java compilers only. IDEs will likewise be provided.

Participants may bring books, notes, or papers for reference, but may not use any electronic or programmable devices other than the single computer workstation supplied. No participants are allowed to communicate with each other. Contest officials will assist teams with system problems but all questions relating to the contest problem set must be submitted to the judges via the clarification mechanism (described in the "Conduct of the Contest" section below).

The competition runs for five hours and consists of six or more problems. The problems draw from high school and college mathematics and computing, as well as everyday knowledge and problem solving. Scores are available to spectators, except that they are not updated during the last hour of the contest (so as to ensure suspense about the final rankings).

Conduct of the Contest

When the participant feels that it has solved a problem, the solution (a program in C/C++ or Java) is submitted for judging. It is judged by compiling it and running it against blind test data. If it produces correct output for all test data, it is judged correct. If it produces incorrect output, it is judged incorrect. If it fails, either to compile, or to run without error, it is judged incorrect. The judgement is communicated to the participant in as timely manner as possible, and the participant may re-submit solutions judged incorrect. Re-submissions for problems already judged correct are ignored.

Notification of accepted runs may be suspended at an appropriate time to keep the final results secret. A general announcement to that effect will be made during the contest. Notification of rejected runs will continue until the end of the contest.

A contestant may submit a claim of ambiguity or error in a problem statement by submitting a *clarification request* to a judge. If the judges agree that an ambiguity or error exists, a *clarification* will be issued to all contestants.

Contestants are not to converse with anyone except the personnel designated by the ACPC. Systems support staff may advise contestants on system-related problems such as explaining system error messages.

While the contest is scheduled for five hours, the ACPC has the authority to alter the length of the contest in the event of unforeseen difficulties. Should the contest duration be altered, every attempt will be made to notify contestants in a timely and uniform manner.

A contestant may be disqualified by the ACPC for any activity that jeopardizes the contest such as dislodging extension cords, unauthorized modification or misuse of contest materials, or distracting behavior.

If irregularities or misconduct are observed during the contest, contestants should bring them to the attention of the contest officials so that action may be taken as soon as possible.

Scoring

A problem is solved when it is accepted by the judges. The judges are solely responsible for accepting or rejecting submitted runs. In consultation with the Chief Judge, the Contest Director (CD) determines the winners of the contest. The CD and the Chief Judge are empowered to adjust for or adjudicate unforeseen events and conditions. Their decisions are final.

The score is based on three components: the number of problems correctly solved, the time from the beginning of the contest to the submission of a correct solution for each problem, and the number of incorrect submissions to a problem for which a correct solution is eventually submitted. First, contestants are ranked in order of the number of correct solutions. When two or more contestants have the same number of correct solutions, they are further ranked by penalty minutes computed as the sum of:

1. For each solved problem, the number of minutes from the beginning of the contest until the correct solution was submitted.
2. For each solved problem, 20 minutes for each incorrect solution submitted before the correct solution.

There is no time consumed for a problem that is not solved.

Tie Breakers

It is possible for a tie to occur - exactly the same number of penalty points and number of questions answered. The following tie breaker will be applied only where prizes or finals berths are at stake:

If two or more contestants have exactly the same score (number of questions solved and penalty points) the contestant that achieves its final score first will be deemed the winner. If there is still a tie, then the contestant which solved a problem first will be deemed the winner.

Example Scoring

Consider three contestants: **Red**, **Green**, and **Blue**. The contest starts at 1:00 and the submissions are as follows:

- **Red** submits a correct solution to Problem A at 2:15.
- **Green** submits a correct solution to Problem B at 3:00.
- **Red** submits an incorrect solution to Problem H at 3:01.
- **Green** submits a correct solution to Problem A at 3:50.
- **Red** submits a correct solution to Problem H at 4:00.
- **Green** submits an incorrect solution to Problem C at 4:00.
- **Red** submits an incorrect solution to Problem G at 4:15.
- **Blue** submits a correct solution to Problem C at 5:00.

The scores are as follows:

- **1st Place:** **Red** with 2 correct, 275 penalty minutes.
- **2nd Place:** **Green** with 2 correct, 290 penalty minutes.
- **3rd Place:** **Blue** with 1 correct, 240 penalty minutes.

Appeals

Disclaimer: The Department of Computer Science works, at all times, for the best intent of the students. Any decisions or judgments are based on the information at hand, and are predicated on fairness to all.

After the conclusion of the contest and the results have been made public, contestants may file complaints or appeals if it is deemed necessary.