

2003 Atlantic Provinces Computer Science Programming Competition

Welcome. **Please read the following instructions carefully.**

Each team is assigned a new account. Please keep it confidential until after the competition is over. The judges and coaches should not know which team is which. The label below will indicate your login information.

You must first login to the NOVELL network to gain access to a terminal program; you can then use the QVT terminal application to connect to the target box, as shown above. You must append `.math-cs.upei.ca` to the given name (example: `star99.math-cs.upei.ca`)

Do not put any information which would identify your team members into your programs.

Each team must use **only one computer**. You must not use any account or machine other than the one assigned to your team for this competition. You may have only one terminal session open to this account. You must not attempt to connect to the internet (outside the university) either. Your use of the computers is monitored.

Teams may use any printed reference material they wish, but no disks or solid state drives (“memory sticks”) are allowed and no access to the internet will be available.

Violation of any of these rules is grounds for dismissal from the competition.

The competition runs from 1:00pm until 6:00pm. There is no food or drink other than water (in a bottle) allowed in the computer labs.

After the competition is over, the pizza party will begin. Pizza will be served from 6:00 until 7:00 in the classroom centre. This will be followed by the Blundon Lecture (7:15pm) located in the Steel Recital Hall.

There are 6 questions to solve during the 5 hours of competition. The problems are named A, B, C, D, E, F. Please write your solution in a file with the same prefix. For example, a solution to problem A should be in a file `A.java` or `A.c` or `A.cc` depending upon the language you use. Note that the suffix for C++ is `cc`. The judge’s software is set up for these file types only – **only these filenames will be accepted**. Please put your entire solution to each separate problem into one file. Java files should have only one class which is to be declared **public**.

You may use Java, C or C++. The commands to compile are:

```
Java:  javac A.java
C:     gcc -o A.exe A.c -lm
C++:   g++ -o A.exe A.cc -lm
```

This is for problem A – the commands for problems B, C, etc. are similar. Notice that the executable program must be A.class for Java or A.exe for C/C++. The math library `-lm` is probably not required for most programs.

To submit a file to the judges, use the **submit** command. It takes one argument, a single filename. For example, to submit the file A.java to the judges:

submit A.java

This will mark the file for automatic delivery to the judges. The system will give you notification that this has occurred within 1 minute of your issuing the submit command. A copy of the automatic transfer log is placed in your account under the name “TransferLog.txt”, which you can view using **more** or **cat** or your editor. A copy of this log is also kept in the judges area, so you don’t have to worry about mangling it.

When the judges have looked at your solution, they will respond by placing a message in the response log. To access your entries in the log, type **mystatus**

Log entries are of the form:

date/time – team_ID – program_ID – code

team_ID is your team’s login name; **program_ID** is the letter which indicates which program was checked. **code** is a single-digit code which indicates what the judges have to say about your submission:

- 1 - program accepted as valid solution
- 2 - program gave wrong output for some test input file
- 3 - program gave no output for some test input file
- 4 - program gave improperly formatted output
- 5 - program failed to compile
- 6 - program ran for more than 2 minutes and was halted

There is also a **status** command, which can take an optional argument of **codes**, **info** or **help**, and will display this information. This command without any argument will return the entire status log to your screen via the **more** filter. You can see how other teams are doing (of course, you won’t know *who* they are . . . identities are not posted anywhere during this competition.)

Also, **apicsinfo** will give you help on the editing system. The editors available are Joe’s Own Editor (JOE) which has the forms **joe**, **jpico** and **jmacs**. You should all be familiar with this from your demo account usage over the past while. **vi** is also available, for those who enjoy pain.

There is a registration sheet attached, which identifies your team members and school. These will be held by the Systems Administrator, who will match them up with the account IDs after the competition is closed and judged. The judges will *not* know which account belongs to which team, nor will any coach, or even the other competitors. Fill out this form legibly – failure to submit the form will result in disqualification.

Good luck, and may the best programmers win!