

IBM Mastering the Mainframe

Contest Overview and Components

The Mastering the Mainframe competition is a progressive set challenges designed so that a student with no mainframe experience can succeed – all necessary tools will be introduced along the way!

This competition is a progressive set of tasks to be completed by individuals that will include logging in to a mainframe environment using z/OS; using ISPF to modify and submit JCL; checking the status of JES jobs by investigating SDSF; compiling and running programs written in a variety of programming languages; performing some system administrator tasks such as modifying security settings; and logging on to and interacting with zLinux, z/VM.

Students will be given download and competition instructions at the beginning of the contest time, with time for set up. Competition instructions will also be presented at this time along with time for any questions in a common session. Once instructions are given, set up is complete and the question and answer time has closed, no further questions will be answered.

At the end of the contest period, the judging team will inspect each student's work on the mainframe for grading.

Teams may want to have the necessary tools (Vista emulator and SSH client) preloaded on their machines prior to the competition. These are quick installs and students are encouraged to compete in the contest even if they haven't already installed the software.

Team Composition

This is an individual participant event – teams are limited to ONE student.

Skills

Any and all mainframe skills needed to do well in this contest will be presented as you go. Experience with programming in a language such as C++ or Java is preferred, but a motivated student with no prior programming experience can do very well in this contest. Students wishing to be successful should have an inquisitive nature and a drive to succeed.

Scoring

An automated exec, which can be run by the contestants at any point as they work through the contest, will show completion status of each challenge in the contest. Points will be given for successful and correct completion of challenges. In case of a tie, the winners' partial, incomplete, or incorrect submissions will be analyzed and partial points will be given for attempted but incorrect challenges. Grading will be done by a judge with several years of experience grading the Master the Mainframe contest.

In the event of multiple students completing the entire contest 100% correctly, the student to complete the contest first will be given the win.

Schedule

For this contest, contestants will have a total time of 2½ hours for the contest overview, contest work and turn in. See contest schedule for contest time and place. Check in will begin 30 minutes before the contest begins.

Resources

Tom Brennan's Vista emulator will be provided for contestants to use to connect to and interact with z/OS and z/VM running on the mainframe.

If desired, students may download and install the emulator ahead of time to test their connection to the mainframe at <https://www.tombrennansoftware.com/>. There is a 30 day free trial you can use. Suggestion: download after February 25th. This step will save some time at the beginning of the contest but is not required as the installation only takes a few minutes.

Students need access to a SSH client to connect to zLinux on the mainframe – for students running Windows. PuTTY is a recommended free software and an executable will be provided at the start of the contest. Installation only takes a moment. For more information on PuTTY see <https://www.putty.org/>.

For students running Linux or Mac, OpenSSH is generally installed on the workstation by default.

An Internet browser will be required to view contest instructions as well as complete one of the challenges. Students are encouraged to use any online resources they wish, including Google search, to learn and complete the challenges.