



## PROJECT DATA

**Note:** This form is for **APPROVED GRANTS** only! A Project Data form is a requirement for the grants. The information provided will be posted on the Learning College website.

**Directions:** Fill out the form and email it to [anne.holte@montgomerycollege.edu](mailto:anne.holte@montgomerycollege.edu).

**Project Name:** The MC Computer Programming Competition

**Project Director:** Grigoriy Grinberg

**Co-Director :** Alla Webb

**Project Starting and Ending Date:** 12/01/07 – 05/12/08

**Brief description of the project:** This is a start-up computer programming competition that will bring talented students from high schools throughout Maryland to the Rockville campus to participate in a three hour competition. Students will compete in teams to demonstrate their programming skills and problem solving abilities by attempting to solve between eight to ten programming problems in the Java computer language.

Why?

- to increase student critical thinking skills
- to prepare students for real-life workplace problems
- to broaden classroom experience with life simulation

Who? Participants:

- competing high school students
- judging MC students
- MC students who create scenarios/problems to be solved in the competition
- MC faculty who participate in different committees to prepare for the competition.
- Publishers such as Mike Murach & Associates, Inc, McGraw-Hill Education, Course Technologies and more
- Sponsors : Montgomery College Book Store
- IT department

The CS and Information Technologies Department endorsed this project during a department meeting on 11/15/07.

**State fundamental need or concern addressed in this project:**

Students in high school and at Montgomery College can benefit from real-life simulated learning experiences. Students can also benefit from recognition. The MC Computer Programming Contest seeks to broaden students' traditional classroom experience by encouraging them to think practically about what it means to be a software developer or computer science specialist. By giving them a practical hands-on opportunity to conceive and work on their own programming ideas to solve problems, they will be better prepared in the future to enter the workforce or become MC students. In other words, they will be better prepared to contribute to our computer related community.

MC students will participate in a learning-centered activity to utilize their knowledge of Java by being involved in designing and testing the problems and programs they create for the high school competition, and then by judging the high school contestants as they attempt to solve the programming problems during the competition.

**List the project's core goals and/or objectives.**

- to increase student critical thinking skills
- to prepare students for real-life workplace problems
- to broaden classroom experience with life simulation

Aspects of the competition include:

- The 2008 contest will be held on April 11th, Friday, at Montgomery College, Rockville Campus.
- The contest will consist of three hours of competition.
- Students will compete in teams of two but no more than five.
- Programs will be written in the Java programming language and submitted electronically to the panel of judges.
- The judging panel will test the programs and decide if a submission successfully satisfies the required criteria.
- The Judges will be CS/IT faculty and students who completed courses related to the subject covered in the competition
- Contestants will be allowed to bring textbooks and notes, but no disks or other computer media.
- Participants will be awarded certificates and prizes.
- We would like the students' Java instructors to attend the competition. We will offer tours of the Computer Science facilities at the Rockville Campus for the instructors while the competition is taking place.
- Before and after the competition we will provide refreshment.
- Commercial companies such as Sun, Google, SAIC and others will be contacted to promote the College's Computer Science program and related disciplines.

It takes about 5 – 6 month to prepare for the competition. MC students who took or take java courses will be asked to submit at least one programming problem which will be included in the bank of the contest questions. All questions will be tested by faculty and students prior to

the event. The competition will be advertised on MC Online, on the MC Event Calendar and on the MCPS newsletter.

Please find attached is a post-event announcement of the last year competition on MyMC.

As a result, anticipated outcomes of the project include increased opportunities for students to apply classroom-learned skills to real-life scenarios, increased recognition for student performance and achievement, increased business partnerships and sponsorships for MC, increased pool of high school students who may wish to attend MC, increased instructional collaboration with MCPS and other high school districts throughout the state, increased engagement of parents, increased interaction among students and faculty as well as students and other students (teams), and finally, increased opportunities for an interactive, social, intellectual, student-centered learning experience.

**Who will benefit from this project?**

- MC Students, Faculty, and the local community.
- College Students and Faculty will benefit from the experience of organizing the programming competition, including the design of problems, solution to the problems, and testing the programs.
- College students will benefit from the experience of being judges.
- Departments, especially those in computer related fields, may benefit by increased future student enrollments.
- College students will benefit from the experience of designing questions and programs for the competition.
- MC and MCPS faculty will have the opportunity to establish a rapport and have a better understanding of the continuum between the course at MC and MCPS.