Bayview Glen School

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Name: _____
Date: Wednesday, October 06, 2010
Teacher: Mr. DesLauriers
Course: Introduction to Computer Science, Grade 11, University Preparation

Cross Country Assignment

Students are to create an application written in Java usig the Eclipse IDE that will allow a user to enter data from the keyboard pertaining to times to run portions of a 5 km race. After performing several calculations, output pertaining to the 5 km ru is displayed on the screen.

Specific Expectations

11A1.1	use constants and variables, including integers, floating points, strings, and Boolean values, correctly in computer programs
11A1.3	use assignment statements correctly with both arithmetic and string expressions in computer programs
11A2.1	write programs that incorporate user input, processing, and screen output
11A3.1	demonstrate the ability to use existing sub-programs (e.g., random number generator, substring, absolute value) within computer programs
11A4.2	use workplace and professional conventions (e.g., naming, indenting, commenting) correctly to write programs and internal documentation
11A4.5	demonstrate the ability to validate a program using a full range of test cases
11B1.3	use the input-process-output model to solve problems
11B2.5	design user-friendly software interfaces (e.g., prompts, messages, screens, forms)
11B3.2	solve common problems (e.g., calculation of hypotenuse, determination of primes, calculation of area and circumference) by applying mathematical equations or formulas in an algorithm

Criteria	Level 1 (50% - 59%)	Level 2 (60% - 69%)	Level 3 (70% - 79%)	Level 4 (80% - 100%)	Mark
Knowledge and Understanding					
comprehend solution requirements	comprehends a few of the solution requirements	comprehends some of the solution requirements	comprehends many of the solution requirements	comprehends all or almost all of the solution requirements	
understands the correct data type to use in a particular situation	chooses the correct data type to represent data with limited success	chooses the correct data type to represent data with some success	chooses the correct data type to represent data with most of the time	chooses the correct data type to represent data all of the time	
use naming conventions in computer programs	uses naming conventions in computer programs 50-60%of the time	uses naming conventions in computer programs 60 - 70% of the time	uses naming conventions in computer programs70 - 80% of the time	uses naming conventions in computer programs 90% - 100% of the time	
Thinking					
solve and verify solutions to simple problems using various tools	demonstrates limited ability to solve and verify solutions to simple problems using various tools	demonstrates some ability to solve and verify solutions to simple problems using various tools	demonstrates proficient ability to solve and verify solutions to simple problems using various tools	demonstrates expert ability to solve and verify solutions to simple problems using various tools	

validate program results	produces a program with few correct results	produces a program with some correct results	produces a program that provides correct results in most run situations	produces a program that provides correct results in all test run situations	
Communication					
correctly document all programs	correctly documents a few areas of the program	correctly documents some areas of the program	correctly documents most areas of the program	correctly documents all or almost all areas of the program	
chooses appropriate names for identifies	chooses appropriate names for identifiers with limited success	chooses appropriate names for identifies some of the time	chooses approprate names for identifies most of the time	chooses appropriate names for idetifies all of the time	
uses correct programming covensions to make code easy to read	code is rarely indented and spaces correctly	code is indented and spaces correctly some of the time	code is indented and spaces correctly most of the time	code is indented and spaces correctly throughout the program	
Application					
demonstrate use of IPO concepts to solve problems using a computer	demonstrates limited use of IPO concepts to solve problems using a computer	demonstrates some use of IPO concepts to solve problems using a computer	demonstrates considerable use of IPO concepts to solve problems using a computer	demonstrates exemplary use of IPO concepts to solve problems using a computer	
follow a software design process	follows a software design process with limited effectiveness	follows a software design process with some effectiveness	follows a software design process with considerable effectiveness	follows a software design process with excellent effectiveness	
solve simple problems using a programming language	is able to solve simple problems using a programming language with limited success	is able to solve simple problems using a programming language with some success	is able to solve simple problems using a programming language with considerable success	is able to solve simple problems using a programming language with excellent success	
use appropriate programming structures and conventions	rarely uses appropriate programming structures and conventions	sometimes uses appropriate programming structures and conventions	often uses appropriate programming structures and conventions	always or almost always uses appropriate programming structures and conventions	
write I/O statements that conform to program design	is able to write I/O statements that conform to program design with limited clarity	is able to write I/O statements that conform to program design with adequate clarity	is able to write I/O statements that conform to program design with considerable clarity	is able to write I/O statements that conform to program design with excellent clarity	