**Program 3**

**Due by 11:59pm 3/29**

You have been asked by Educational On-line Corp. to write a math program for elementary school students. The main function will ask the student to choose among the following categories: multiplication, division, addition, and subtraction. Use a validation while loop to make sure the user enters a valid category. Each function will then generate random numbers and display a question such as “What is 5 x 10?”. The student will enter a number and the program will respond with correct or incorrect. If the answer is incorrect, you must show the student the correct answer. The program will ask **5 questions** (for loop) in the category chosen. After the 5th response, the program will tell the student how many correct and incorrect answers the student had. When finished with the category, the main function will invite the student to try another category. This will continue until the student responds with **STOP** when invited to try another category. However, once the student selects a category all 5 questions must be answered.

**Once the user has elected to quit, your program will print the overall total of correct and incorrect answers.**

Your program must have a **separate function** for each category and one for the main function. **Only integers need to be accepted and generated**. The random generator should deal only with the range **1-20** inclusive for division, addition and subtraction; and **1-10** for multiplication.

For the Division category:

* + Use integer division.
  + Make sure the number you are dividing by is smaller than the number you are dividing into.
  + Have the student provide the quotient and the remainder.

Make sure you use comments for each function and for the overall program.

Attach your program to blackboard

**See below for an example.**

