

# Programming Logic - Beginning

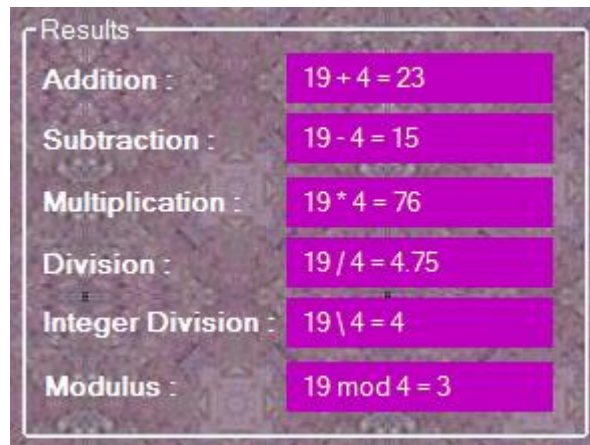
152-101

## Math Program

20 points

### General Program Requirements

A friend of yours has just been hired as a math teacher. She asks you for a program that will demonstrate math skills for her students while letting them use the ever popular computer. These are young students, so we'll keep this version of the program simple. Allow the user to enter two whole numbers. When the user clicks the calculate button, display mathematical equations that the students can review. Include addition, subtraction, multiplication, division, and because these students are future programmers, display integer division and modulus equations as well. See the example below. Your program's output DOES NOT have to duplicate this example, but it DOES have to display complete equations.



### Program Design

- Follow the design you created for this program in Unit 3.
- If necessary, update the design
- **Submit the design with your program**

### Detailed Program Requirements

Use group boxes (appropriately labeled) to group similar data.

Provide a button to clear the two numbers (inputs) and all the mathematical equations (outputs).

Make the calculate button the form's Accept Button. Make the Clear button the form's Cancel button.

All equations should only display integers EXCEPT the results of division (however, not integer division). Format the answer of the division equation to display two decimal places.

Insert an appropriate image on the form. Create a professional appearance for the form.

If the user enters invalid numeric data, display an appropriate error message.

Include a Welcome Screen for this project. You may use your Unit 3 Welcome screen, but customize the welcome screen for this program. Display the Welcome Screen for 5 seconds. Provide buttons to exit the program without launching the main form and another button to start the program immediately, without waiting for the timer.

Follow the class [programming standards](#), incorporating all highlighted standards.

### Challenge Points - 1 point EACH

- Do research on the **char** data type and Unicode character values. Insert the ÷ symbol in the division equation instead of the / symbol. Do not do this for the integer division equation.
- Add a version number display in an appropriate place on the main form. You may only earn this challenge point once for Unit 4 assignments.
- Anchor the form buttons, the version number (if provided) and any other appropriate objects to the appropriate locations of the form so they move appropriately when the form is resized. You may only earn this challenge point once for Unit 4 assignments.