Fraction Program Part 2

Computer Programming II   Mrs. Alano

Add a third field to the Fraction structure that can hold the whole-number portion of a Fraction. Write a main function in which you create 3 Fraction objects. Prompt the user for values for each field of the first 2 Fractions. The add statements to main to do the following:

- If the user enters a 0 for the denominator, force it to be 1.
- Display each Fraction. If the whole-number portion is 0 and the numerator is 0, as in 0 0/2, then just display 0. If the whole-number portion is 0, just display the fraction portion. For example, a Fraction with value 0 1/3 should display as 1/3. If the numerator of a Fraction is 0, then just display the whole number portion; for example, if the user enters 2 0/3, just display 2.
- Determine whether the value of the first Fraction is greater than, equal to, or less than the value of the second Fraction. For example, ½ and 3/6 are equal. As another example 1 ½ and 0 3/2 are also equal. Display an appropriate message indicating the results.
- Determine whether each entered Fraction is more than 1, and reduce the Fraction if it is. For example, 7/2 should be reduced to 3 ½, and 10/4 should be reduced to 2 2/4 (in other words, you do not need to reduce it to 2 ½). If the Fraction is not more than 1, then set the whole-number field to 0. Display the reduced Fraction.
- Prompt the user to enter an arithmetic operation: + or *. Calculate the third Fraction to be the result of applying the requested operation to the 2 entered Fractions. Display the result as a whole number, if any, and the fractional part, if any. For example, adding ¼ and ¼ results in 2/4 (you do not need to reduce 2/4 to ½) and multiplying 1/3 by 6/1 results in 2. Display the results.