

**Discussion Think-Pair-Share Activity:**

Write a menu-driven floating-point calculator which can perform addition, subtraction, multiplication, division, and take the absolute value.

To design this program, let us take a look at the following questions before we start programming.

1. What is the input and output of this program?

Input: initial value, second operand for binary arithmetic operations, user choices

Output: menu, current value, other messages.

2. What does menu-driven mean? How to design the menu?

The program shows a menu to the user and ask for choices of different computation operations.

Use a repetition statement to keep showing the menu; Use a switch-case statement to handle different choices.

3. How many variables will you need? What are they? What are the types? What are their scopes?

Global Var: currValue, newValue (double)

Local var to main: choice (int/unsigned int)

You can define any other vars if you need.

4. How many functions will you define? What are they? What are the parameters for those functions? What are the return values? When, where, and how to invoke those functions?

Please refer to Section 3.3.1 of assignment3.

Function invocation example:

```
currValue = Add(currValue, newValue);
```

5. What is the exception for division? How to handle this exception?

Divisor is zero.

Use a repetition statement to keep asking the user for the divisor (newValue) until it is not zero.