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# Linux Shell Scripting III

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## Procedure

You will create a script file to perform basic calculations.

1. Create a script file called ***mycalc.sh*** using **vim**.
2. The first line of your script file should force the use of the **bash** shell.
3. At the header of the script file there should be a section of comments that contains the following
  - a. assignment number
  - b. your name and student number
  - c. lab section number
  - d. name of the script file
  - e. the date
  - f. a description of what the script file does
4. Your script file should be properly commented throughout the script.
5. The script file should perform the following operations: '+' and '-' (addition and subtraction).
6. The script should have two functions:
  - a. Each named *add* and *subtract*
  - b. Each of the functions should accept two integer numbers as parameters
  - c. The functions should perform the desired algebraic operation
7. The script file should support two modes of operation, either with no parameters or with three parameters.
  - a. If three parameters are provided, the second parameter must be + or - :
    - The first and third parameters must be numbers.
    - The user can enter integer numbers only.
    - The result should be displayed on the screen and the program exit.
    - The example below demonstrates how the plus operation should work. Do a similar operation for '-'
    - Example:

```
mycalc 12 + 3
The sum of 12 plus 3 equals 15
```
  - b. If no parameters are provided the script should do the following:
    - A menu should be provided allowing the user to either *Exit* or *Do a*

*Calculation.* Allow upper or lower case menu selections. See Menu 1 below.

**Menu 1**

C) Calculation  
X) Exit

- If 'C' menu option is selected from Menu 1, the screen should clear and the user should be prompted to enter a number. See Menu 2 below.
  - You don't need to check if the input numbers are integers

**Menu 2**

Please enter an integer number or **X** to exit:

- If a number is entered into Menu 2, the screen should clear and a new menu should be displayed. See Menu 3 below.

**Menu3**

+) Add  
- ) Subtract  
X) Exit

- If + or - is entered the screen should clear and the user should be prompted to enter a second number. See Menu 2 above.
- If a second number was entered the calculated result should be displayed on the screen.
- After three seconds the screen should clear and Menu 1 should be displayed again.

c. Error checking should be done to make sure of the following:

- Either no parameters or three parameters are entered.
- If three parameters are entered then the second parameter must be one of the following + or -.
- Any invalid choices in the menu system should be recognized/identified, and the user should be presented the menu item again.
- You don't need to check if the input numbers are integers.