



# Basic Calculator

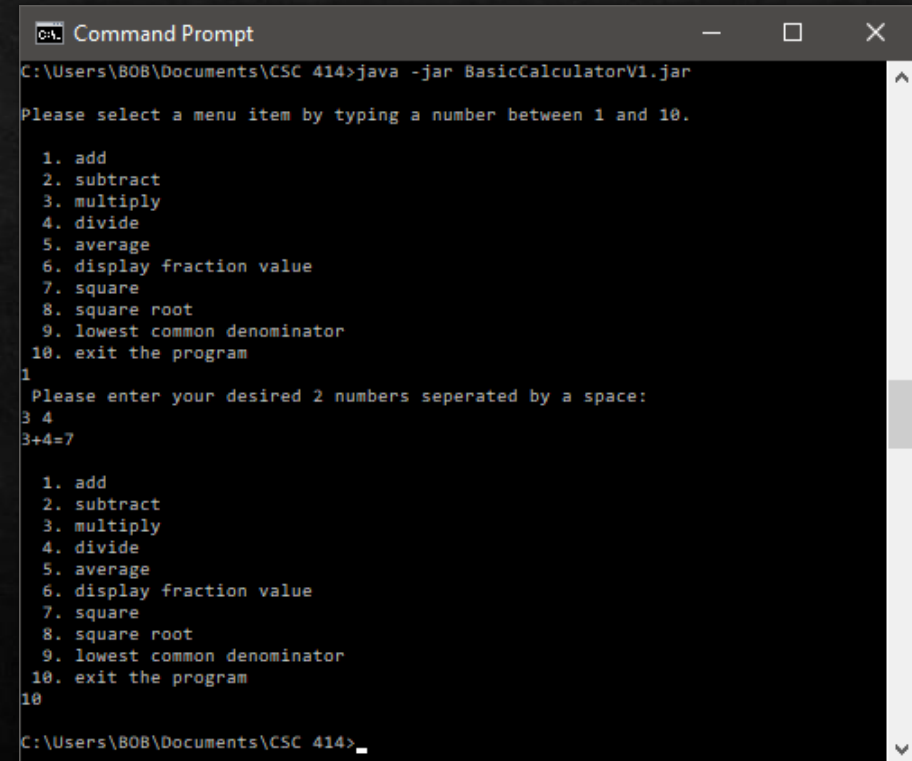
Development Design Review

# What does the Basic Calculator do?

‘Basic Calculator v1.0.0’ was created to perform basic mathematical calculations with the intention to be developed further in later versions. It will perform calculations for real numbers only and only takes input and output through a terminal window. It has nine set operations that the user can choose from. The operations are addition, subtraction, multiplication, division, mean (or average), fraction value of a decimal, square, square root, and lowest common denominator. Each of these operations only take two integers with the exception of fraction, square, and square root which will only take one double or integer.

# How does the Basic Calculator work?

As you can see in the example run to the right, the program displays a simple menu that takes a number to select an operation. After an operation is chosen, it displays instructions for appropriate input, takes the users input, then outputs the operation with the answer. It will continue to display the numbered menu until the user selects option '10' to exit.



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C:\> Command Prompt
C:\Users\BOB\Documents\CSC 414>java -jar BasicCalculatorV1.jar

Please select a menu item by typing a number between 1 and 10.

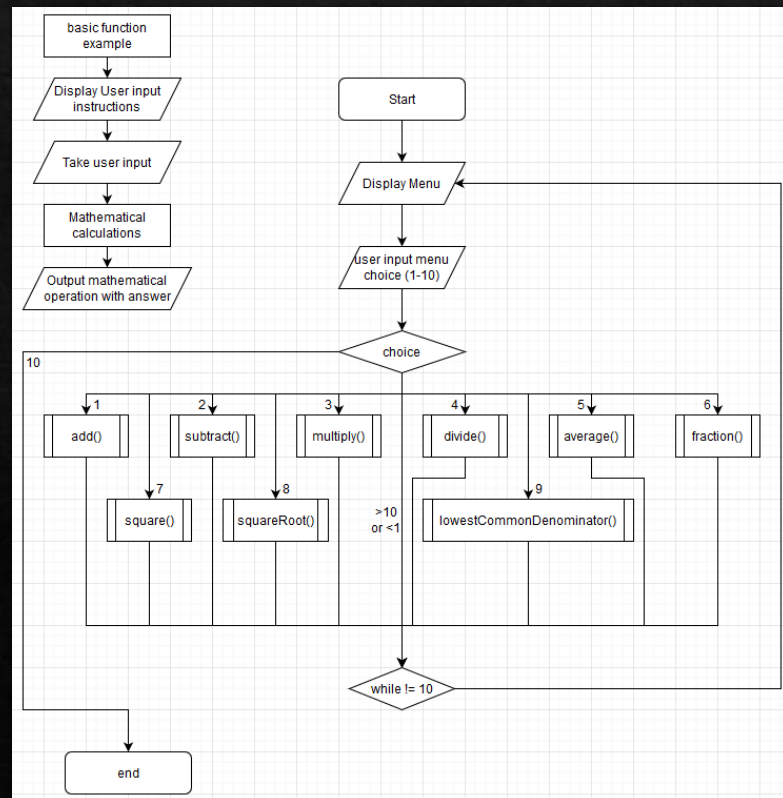
1. add
2. subtract
3. multiply
4. divide
5. average
6. display fraction value
7. square
8. square root
9. lowest common denominator
10. exit the program
1
Please enter your desired 2 numbers seperated by a space:
3 4
3+4=7

1. add
2. subtract
3. multiply
4. divide
5. average
6. display fraction value
7. square
8. square root
9. lowest common denominator
10. exit the program
10

C:\Users\BOB\Documents\CSC 414>
```



# Behind the Scenes Operation



To go a little deeper into how this program works, let's look at some of the programming. To the left you can see a flow chart as a visual representation. The program is started, displays a menu for the user, then takes the first operation choice input. From there the program forks into different functions based on the user's choice. Each function then outputs new instructions specific to the operation, takes the user's input, performs the appropriate calculations, then outputs the correct mathematical notation for the problem with the answer. The program then loops back to the original menu and repeats the process until the user inputs '10' to exit and the program closes.

# What is the User Experience?

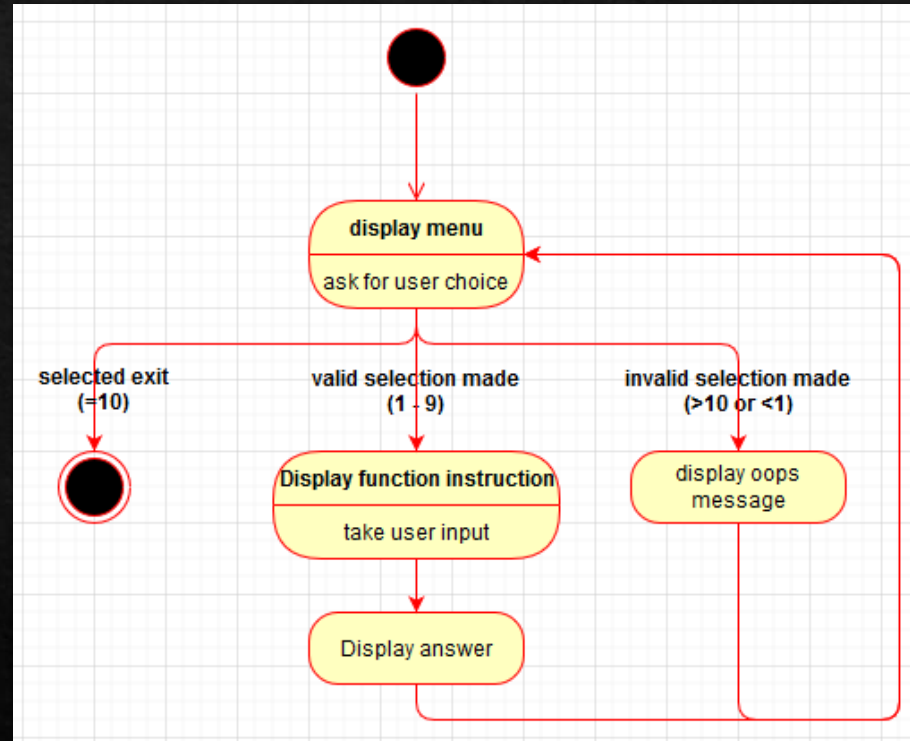


Diagram showing step by step what user sees based on input