

INLS 560 – Lab 3: Calculator

Description

For this assignment, you will create a program that is a simple calculator. Your calculator will perform addition, subtraction, multiplication and division. It will check for division by zero.

1. Create a file named Calculator.py
2. The program will prompt the user to enter the following three (in the specified order):
 - a. The first operand (int)
 - b. The operator (+, -, *, or /)
 - c. The last operand (int)

An operand can be any real number.

If the operator is division (/) and the last operand is 0, the program must not attempt to divide by zero and should print, Cannot divide by 0.

3. You must use a while loop to continue asking the user for input.

Lab Specification

Write a python program with the following functions

- `add(first_operand, second_operand)`
 - returns the sum of `first_operand` and `second_operand` (`first_operand + second_operand`)
- `subtract(first_operand, second_operand)`
 - returns the difference of `first_operand` and `second_operand` (`first_operand - second_operand`)
- `multiply (first_operand, second_operand)`
 - returns the product of `first_operand` and `second_operand` (`first_operand * second_operand`)
- `divide(first_operand, second_operand)`
 - returns the quotient of `first_operand` and `second_operand` (`first_operand / second_operand`)
- `perform_calculation(first_operand, operator, second_operand)`
 - uses if/else statements to determine if the operator is `+`, `*`, `/`, or `-`
 - based on the value of operator it calls the appropriate function and returns the result of the function
 - For example, if the operator is `"+"`, it calls the add function and returns the sum

- main()
 - Asks the user for input (first_operand, operator, second_operand)
 - Checks if the operator is "/" and the second_operand is 0
 - Prints "Cannot divide by 0"
 - Otherwise it calls perform_calculation(first_operand, operator, second_operand) and prints the result
 - Asks the user if they want to perform another calculation
 - If no, the program ends
 - If yes, it continues to run the program

Sample Interactions (Green is user input)

```

Please enter the first operand: 6
Please enter the operator: +
Please enter the second operand: 6
6 + 6 = 12
Would you like to perform another calculation? (y for yes and n for no) y
Please enter the first operand: 8
Please enter the operator: *
Please enter the second operand: 9
8 * 9 = 72
Would you like to perform another calculation? (y for yes and n for no) n
Process finished with exit code 0

```

```

Please enter the first operand: 9
Please enter the operator: /
Please enter the second operand: 0
Cannot divide by 0
Would you like to perform another calculation? (y for yes and n for no) y
Please enter the first operand: 9
Please enter the operator: /
Please enter the second operand: 9
9 / 9 = 1
Would you like to perform another calculation? (y for yes and n for no) n

```