

## HW2

For HW2, you will write a program that prompts the user for two integers and one of the 4 basic mathematical operations. The only valid choices are: add, subtract, multiply, or divide (use true division and not integer division). The user can type the operation using any combination of upper case and lower case letters. If the user types in an operation that is not defined, the program should simply tell the user the operation is not a valid operation (See sample run 1). Assuming the user's operation is defined, you will perform the operation, print the operands, print the operation (the way the user typed it), and the result. If the second integer input is zero and the desired operation is division, don't print the result, instead print that "Division by zero is not allowed" (See sample run 2). After printing the result, display a line and print out any of the three messages below that is true:

Both operands were negative

Both operands were positive

The result has three or more digits in it

Use the samples below as a guide for developing your program and for the format of the prompts and the outputs. Don't add anything extra. In the sample runs, the user input is shown in bold so you can easily distinguish input from program generated text (it does not have to show up as bold in your program)

### Sample run 1

This program will do simple calculations

Enter the first operand: **12**

Enter the second operand: **100**

Enter the operation: **hello**

hello is not a valid operation

### Sample run 2

This program will do simple calculations

Enter the first operand: 5

Enter the second operand: 0

Enter the operation: **diVide**

Operand 1 is 5

Operand 2 is 0

The operation is diVide

Division by zero is not allowed

### Sample run 3

This program will do simple calculations

Enter the first operand: 4

Enter the second operand: 5

Enter the operation: **aDd**

Operand 1 is 4

Operand 2 is 5

The operation is aDd

The result is 9

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Both operands were positive

### Sample run 4

This program will do simple calculations

Enter the first operand: **-135**

Enter the second operand: **-75**

Enter the operation: **multiPLY**

Operand 1 is -135

Operand 2 is -75

The operation is multiPLY

The result is 10125

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Both operands were negative

The result has three or more digits in it

When you've finished your homework, use the submit command to submit the file.

You must be logged into your account and you must be in the same directory as the file you're trying to submit.

At the Linux prompt, type

```
submit cs201 HW2 hw2.py
```

After entering the submit command shown above, you should get a confirmation that submit worked correctly:

```
Submitting hw2.py...OK
```

If not, check your spelling and that you have included each of the required parts and try again.

You can check your submission by entering:

```
submitls cs201 HW2
```

You should see the name of the file that you just submitted, in this case hw2.py