

CSC 101 Practice In-Class Quiz 3

Logistics

You have 20 minutes to complete this quiz.

On a piece of paper, write your first and last name in the top-right corner.

Each question is divided into separate parts. On your piece of paper, show your work for each part, indicating the question number and part number, and write a solid box around your answer or solution.

When finished, you will turn in your paper at the end of the quiz period.

Question 1: Lists and Iteration

For this question, consider the following Python function definition:

```
def f(l: List[int]) -> int:
    b = 0
    for i in l:
        if (i > 0):
            b += i
    return b
```

Part 1:

This is an example of a which pattern? (map, filter, or fold)

Part 2

Write an appropriate function call for this function, ensuring consistent typing.

Part 3:

What would the following function call evaluate to?

```
f([10, -4, -3, -10, 10])
```

Question 2: Strings

For this question, consider the following Python assignment statement:

```
mochi = "I have a cat named Mochi"
```

Part 1:

Write an expression using only the variable `mochi` and bracket operators that evaluates to the string value: `"Mochi"` (**Note:** the quotation marks here are *not* elements of this string value.)

Part 2:

Write a loop, and any supporting code, that iterates over the string assigned to the variable `mochi` and counts the number of occurrences of the character `"a"`.

Question 3: Dictionaries

Consider the following dictionary:

```
cat_ages = {  
    "mochi": 4,  
    "harvest": 3,  
}
```

Part 1:

Write a single expression to obtain the value `4` from this dictionary.

Part 2:

Write a line of code that adds a new key `"waffles"` to this dictionary containing the value `5`.