

# CSCA48 Exercise 0

Due: Jan 13, 2017. 5:00pm

In this first exercise, we'll practice a few of the fundamental skills that you should have from `cscA08` (or your equivalent previous experience). You will need to complete the following functions in a file called `ex0.py`. These are meant to be fairly simple, but there's a few things to keep in mind:

- The automarker is **picky**. If you spell a function or file name incorrectly, it will be marked as a 0.
- The automarker does not like `print`, `import` or `input` statements. So please don't use these.
- MarkUs is also picky, 4:00:01 is not 4:00, and no late work will be accepted.
- Don't wait until 5 minutes before the exercise is due to discover that you can't log into MarkUs, try it at some point earlier in the week.
- Your TA (and other students) will be able to help you during practicals, but please have at least made an attempt at each function before showing up.

## **greeting**

I told you we'd start easy. The function `greeting` should take a string as a parameter that represents a person's name, and returns a greeting in the form `Hello <name> how are you today?` where `<name>` is replaced by the given name.<sup>1</sup>

## **mutate\_list**

The function `mutate_list` takes a list as a parameter, and modifies that list in the following ways:

- Any element that is an integer is multiplied by 2
- Any element that is a boolean is inverted (True becomes False, False becomes True)
- Any element that is a string has its first and last letters removed
- The 0th element of the list is set to the string `Hello`, regardless of what it was originally

The input list will have at least 1 element in it, and all strings will have at least 2 characters in them. Note that this function modifies the input list, it doesn't create a new list. The function shouldn't return anything.

## **merge\_dicts**

The function `merge_dicts` takes two dictionaries as input, both of the format `{str: list of ints}`. The function returns a new dictionary with all key:value pairs from both dictionaries. If the dictionaries share a key, the resulting value will be the list from the second dictionary appended to the list from the first dictionary.

That is to say it should look something like this:

```
>>> d1 = {'a': [1, 2, 3], 'b': [4], 'c': [5, 6, 7]}
>>> d2 = {'a': [2], 'b': [8, 9, 0], 'd': [10, 11, 12]}
>>> merge_dicts(d1, d2)
{'a': [1, 2, 3, 2], 'b': [4, 8, 9, 0], 'c': [5, 6, 7], 'd': [10, 11, 12]}
>>> merge_dicts(d2, d1)
{'a': [2, 1, 2, 3], 'b': [8, 9, 0, 4], 'c': [5, 6, 7], 'd': [10, 11, 12]}
```

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<sup>1</sup>note that the format has to be exact, there should be 1 space before and after the name.