CSC120H Lab 6

1 Objectives

- Practice looping over lists and nested lists
- Practice creating and modifying lists

2 Nested Lists and Loops Warmup

1. Consider this code:

```
data = [['a', 'b'], [3, 4], ['cat', 'mouse', 'elephant']]
sublist = data[2]
```

For each pair of expressions, circle the one that evaluates to `3`:

(a)	(b)	(c)	(d)
`data[2]`	`data[1]`	`sublist[0]`	`data[2][0]`
`len(data[2])`	`data[1][0]`	`len(sublist[0])`	`len(data[2][0])`

2. Which of the following code fragments does *not* create a nested list (a list that contains at least one other list)?

(a)
```
nums = []
for i in range(4):
    nums = nums + [i]
```

(b)
```
nums = [0, 1, 2, 3]
nums[-1] = [3, 4, 5]
```

(c)
```
nums = []
for i in range(4):
    nums.append([i])
```

(d)
```
nums = [0, 1, 2, 3]
letters = ['a', 'b', 'c', nums]
```

3. Consider this code:

```
teams = [['Canadiens', 'Leafs', 'Senators'], ['Jets'], ['Oilers', 'Canucks']]
```

Which of the following expressions will *not* evaluate to `5`?

(a) `len(teams[0]) + len(teams[-1])`   (b) `len(teams[0] + teams[2])`

(c) `len(teams) - 1`   (d) `len(teams[0][1])`

3   Writing Loops over lists

This part of the lab asks you to write the code for a set of functions that modify and create lists (and nested lists).

1. Download and save the file `lab6_part3.py` on the Labs page of the course website.

2. You will fill out the function bodies as described in the docstrings. Some examples calls may be given, but you should fill in your own examples where asked to in the docstrings.

3. After writing your function bodies, test your docstring examples in the shell.

4. After (and outside) each function, `print` out the function calls of at least three of **your own** test cases (not the ones in the docstring examples).

5. Make sure your test cases give back the correct value.

6. Repeat steps 2-5 for every function.

Switch driver and navigator roles for <u>each</u> function.