CSC 241: Introduction to Computer Science I.

# Lab exercise set 4

## Logistics

These exercises should be completed during lab. In order to receive full credit for the lab, you must attend the session for the required period of time and submit solutions to all the exercises. A grading rubric for lab sessions is available.

You are encouraged to work with your classmates on the lab exercises. If you do work with someone on the lab exercises, please include the name of your collaborators at the top of the file you submit. If you worked alone, please indicate that at the top of your submission. A submission without collaboration information will not receive credit.

## Exercises

Implement the functions below in the file lab6.py which can be found on the D2L sit
You should save the template file I provided and then modify that file by adding the bodies for the functions. When you do, make sure to remove the placeholder pass statements that are currently there.

1. **Write a program, average(ifile), which takes a file as input, counts the number of lines in the file and calculates the average number of words in the file. The return will say 'There are {} lines in this file. There is an average of x words per line.' No error checks.**

```
>>> average('gettys.txt')
'There are 24 lines in this file. There is an average of 11 words per line.'
>>> average('billofrights.txt')
'There are 31 lines in this file. There is an average of 16 words per line.'
>>> average('decind.txt')
'There are 63 lines in this file. There is an average of 21 words per line.'
```

2. Write a program **check(ifile)** which reads a file with one character per line and returns a list of non-negative numbers multiplied by 10. If a negative number or non-numeric is found, it will raise a ValueError and print as shown in the example. It will also check for a non-existent file.

```
>>> check('nums1.txt')
Non-numeric or negative found: -35
Non-numeric or negative found: a

Non-numeric or negative found: -300
Non-numeric or negative found: -10z

[120, 180, 853, 500]
>>> check('nosuchfile.txt')
No such file.
[]
```

# Submitting the exercises

Modify the csc241lab6.py template file provided on D2L and upload it to the dropbox.

# Grading

The lab session is worth 10 points. Five points are associated with lab attendance and five points are associated with the submission of solutions to the exercises listed above. A grading rubric for the lab exercises is available. Please be aware that you are required to stay in the lab for a minimum of 45 minutes in order to earn full credit.

If you complete the lab exercises before the end of the lab session, please work on the second assignment. Remember that the rules for collaboration on assignments is different from labs. Please review the Academic Integrity pledge for more information. If you have questions about the assignment, please ask the teaching assistant for help.