CSE 20
Fall 2021
Quiz 4 **Solutions**

1. (25 Points) Complete the definition of the Python function `wordFreq(s)` below, that takes a string `s` as input and returns a dictionary whose keys are the individual words in `s`, and whose values are the frequencies with which those words appear in s. For instance, the function call

```
wordFreq('one one two one two three one two three four')
```

will return the dictionary

```
{'one': 4, 'two': 3, 'three': 2, 'four': 1}
```

Solution:

```
def wordFreq(s):

   L = s.split()
   D = {}
   for w in L:
      if w not in D:
         D[w] = 1
      else:
         D[w] += 1
      # end if-else
   # end for
   return D

# end wordFreq()
```

2. (25 Points) Write a complete Python program that opens a file called `sample.txt` for reading, and opens a file called `out.txt` for writing. It then reads the contents of `sample.txt` into a single string, counts the number of tokens (i.e. words) in the string, and prints that number on a single line to `out.txt`. Finally, your program will print all of the words from `sample.txt` to the file `out.txt` in alphabetical order, one word to a line. (Note: it is not necessary to place your code inside a `main()` function for this problem.) For instance, if `sample.txt` contains the 3 lines

```
one time
one was what
one was once
```

then `out.txt` will contain the 9 lines

```
8
once
one
one
one
time
was
was
what
```

Solution: (Note to grader: do not deduct points if the code *is* in function `main()`.)

```
# your code begins here

f = open('sample.txt')
g = open('out.txt', 'w')
s = f.read()
L = s.split()
print(len(L), file=g)
L.sort()
for x in L:
   print(x, file=g)
# end for
f.close()
g.close()
```