Name: *(as it would appear on official course roster)*		
Umail address:	**@umail.ucsb.edu**	**section**
Optional: name you wish to be called if different from name above.		
Optional: name of "homework buddy" (leaving this blank signifies "I worked alone"		

h06: String Formats and File I/O

Assigned: Wed. 2/20/19, 9:30 AM
Due: Mon. 2/25/19, 9:30 AM in class
Points: 100

READING ASSIGNMENT: Read 4 in Perkovic and review ALL class notes/slides. Then complete these problems.

- You may collaborate on this homework with AT MOST one person, an optional "homework buddy". MAY ONLY BE TURNED IN THE LECTURE LISTED ABOVE AS THE DUE DATE. There is NO MAKEUP for missed assignments; in place of that, we drop the single lowest score.
- When submitting this homework:
  - **DO NOT USE STAPLES**
  - WRITE YOUR **NAME ON <u>EACH</u> PAGE** IN THE SPACE PROVIDED
  - USE **DARK INK PENS** – PLEASE **DO NOT USE PENCIL**
  - PRINT ON **BOTH SIDES** OF THE PAGE!

1. (10 pts) Finish the code below such that I am printing numbers from 7 to 12 like this (note the use of space character(s) BEFORE the numbers):

```
 7
 8
 9
10
11
12
```

```
for num in range(_____________________________________):

      print(_____________________________________)
```

Name:

(as it would appear on official course roster)

2. (30 pts) Write Python code that will show the square roots of all integers from 0 to 10, printed on ONE line, each separated by a comma and space (except for the last entry, which has a newline at the end), and showing up to 3 places after the decimal point.

   Exactly like this:
   `0.0, 1.0, 1.414, 1.732, 2.0, 2.236, 2.449, 2.646, 2.828, 3.0, 3.162`

Name:

(as it would appear on official course roster)

3. (60 pts) Go to **http://cs.ucsb.edu/~zmatni/cs8w19/itsybitsy.txt.**

   a. Copy the text and save it on your computer on a file using your favorite text editor (example, Notepad or Notepad++ on Windows, or Sublime or TextEdit on MacOS, or vim or emacs on Linux). Be careful to save it as a simple TEXT file only (that is, NOT as a Rich Text File or Microsoft Word File, etc…).

   b. Run the following Python program that reads the file in part (a) **and then explain what it does and why**. Specifically, explain:

      i. Why do the print statements inside the for-loops have the **end=''** option?
      ii. What differences do the strings **f1** and **f2** seem to do?
      iii. How are each of the 3 runs in the program different from one another?

      (write your answers on the next blank page)

```
f1 = '{0:1}'
f2 = '{0:>55}'

InFile = open('itsybitsy.txt', 'r', encoding='utf-8')
LoL = InFile.readlines()

print("***RUN 1***")
for line in LoL:
    print(line, end='')

print("***RUN 2***")
for line in LoL:
    if "and" in line:
        line = line.replace("and", "AND")
    print(f1.format(line), end='')

print("***RUN 3***")
for line in LoL:
    if "spider" in line:
        line = line.replace("spider", "Gaucho")
    print(f2.format(line), end='')

InFile.close()
```

Name:

(as it would appear on official course roster)

Write your answers for question 3 here: