**Student Name/Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Rubric:**

\_\_\_\_\_\_\_/35 All 7 swap functions work the same as the original

(5 points each)

\_\_\_\_\_\_\_/5 Meaningful variable names, comments, overall style

\_\_\_\_\_\_\_/10 File named properly and turned in on time

\_\_\_\_\_\_\_/50 Total

**Description:**

We need a bit more practice with while and for loops. For this project, you have 7 smallish tasks that involve adding to a file I’m sending you. Translate every function that uses a while loop into a function that uses a for loop, and translate every function that uses a for loop into a function that uses a while loop. There are many right answers, and you can approach them in different ways. I just care that they produce the same results. I STRONGLY encourage you to test your code by running your qX\_swap functions right after you run the qX function (I gave you an example at the bottom of the file). If the output from both isn’t identical, then your swap function is wrong.

I’ll grade your projects by calling all your swap functions and comparing them to all of my original functions. You’ll get full points if your output matches exactly.

**Program Requirements**

* Must be written in Python (all or nothing)
* Must compile without modifications to the code (all or nothing)
* The file is named **loop\_swaps\_lastname.py** and turned in on time (10 points)
* At the top of your code, you must include a block comment:
  + Your Name
  + Date
  + Class/Instructor
  + Project number and filename
  + One-line description of the purpose of the file

**What to do with it once you’re done (10 points)**

* Email me a copy of your .py file
  + The subject line MUST be “[ICS] Week 06 LastName” so mine would be “ [ICS] Week 06 Swindle”
  + MUST be turned in by the start of class on 9/18 or it’s late.