ENGR 212 Programming Practice
Practice Session (Week 2)

1. Write a Python program that copies one text file to another text file, omitting any lines that begin with #.

2. Files that hold photographs, videos, zip files, executable programs, etc. are called binary files: they're not organized into lines, and cannot be opened with a normal text editor. Python works just as easily with binary files, but when we read from the file we're going to get bytes back rather than a string. This time, write a Python program that copies one binary file to another. You will need to use rb and wb mode flags where b is for binary.

3. Write a program that searches a directory and all of its subdirectories, recursively, and returns a list of complete paths for all files with a given suffix (like .mp3). Hint: os.path provides several useful functions for manipulating file and path names.

4. Write a function which

    a. Opens the file words.txt

    b. Finds frequency of each letter

    c. Inserts them into the database as (frequency, [letter1, letter2, …, letterN]) pairs

5. Write a function, sumAll(filename), that should read a file containing only integers and return the sum of all these integers.

6. Write a program that reads a file and writes out a new file with the lines in reversed order (i.e., the first line in the old file becomes the last one in the new file.)

7. Write a program that reads a text file and produces an output file which is a copy of the file, except the first five columns of each line contain a four digit line number, followed by a space. Start numbering the first line in the output file at 1. Ensure that every line number is formatted to the same width in the output file. Use one of your Python programs as test data for this exercise: your output should be a printed and numbered listing of the Python program.

8. Write a program that undoes the numbering of the previous exercise: it should read a file with numbered lines and produce another file without line numbers.