Basic python practice

1. Create a string: organism = “Homo sapiens”. Write code that will store the genus and species name as separate variables. Also accomplish this in one line.
2. The user of your script specifies a number of files that they would like to process, which is stored as an integer object called file_num. Create a string that indicates how many files the user would like to process like: “You would like to process 8 files”
3. Store your first name as a variable and your second name as a variable. Create a new variable from these called full_name that contains your first and last name separated by a space. Do this in two ways:
    a. Using the string + operator
    b. Using the join method of the list class
4. Create a variable:
   DNA = “ACgttGTcgtTTgaCCGacACCGGTTAACCGGTACGGTAACAAGGTTTAGGTA”
   Create a list that contains the number of each nucleotide stored as an element.
    a. Do this however you can manage it using multiple lines if necessary
    b. Do this in a single line using a list comprehension
5. Create a variable called phrase = 'If you want to read "Watership Down", I would recommend it.'. Create a list that contains each word of the phrase as an element, removing all punctuation.
6. Create a string called second_phrase = “Its about rabbits.”. Add each word from this string to the previous list. Do it using:
    a. The + operator of list
    b. The append method of list
    c. The extend method of list
7. How many elements does this list contain? Using both a built in function and a magic method of list to answer this.
8. Using this list, print the phrase “Watership Down” by using the slicing operator to access the elements you need.
9. You are asked to write a script that converts a csv file into an excel file. You are given the name of the file which is stored as a string called filename (e.g. filename = “MyFile.csv”.
    a. Determine if the file ends with the appropriate filetype (i.e. .csv)
    b. Create a new name where the .csv is replaced with .xls
10. Count the number of stop codons that are in a DNA sequence stored as a variable called DNA. Do this:
    a. However you want
    b. Using a list comprehension and the sum built in method
11. What is the difference between __add__ and __iadd__ of the list class?