

Problems

1. Write a function that takes a list of any items, and “shuffles” them, that is it takes the original list and completely randomizes the order. Do not use “shuffle” from the random library, only randint is permitted. The function should return the shuffled list, and leave the original list unmodified.
2. Write a function that opens the “temperature.csv” file. This file contains a .csv where the first column contains a minimum daily temperature, and the second column is a maximum daily temperature, both in Fahrenheit. The function should compute and return the average of all temperatures in Celsius, and also write the converted temperatures to a file called “temperatures_celsius.csv”.
3. Write a function called “word_count” that takes in a filename. The function should open that file, and construct a dictionary that contains a word as the key, and the number of times that word appears in the file as a value. You may use the “article.txt” file provided as a test. Note that you may need to process the text a little bit, as you may want to remove punctuation such as periods, commas and hyphens. What is the most frequently occurring word with at least four letters?
4. The “mangrove_swallow.txt” file contains an article about the Mangrove swallow. We’re interested in knowing what countries the Mangrove Swallow lives in. The file “world_cities.csv” is a file that contains cities and their countries as comma delimited data. Write a code that reads in the article, and builds a “set” of countries using the “world_cities.csv” file, and find the countries that appear in the article. Print out which countries the Mangrove Swallow may be found in.