```python
# SE 113 LAB 11 SAMPLE SOLUTION
# filename: lab11.py

# Q1 Starts Here
# part a.
fname = open('q1.txt', 'w+') # 'w' would also be OK.
# w+ opens a file for writing and reading.

fname.write("China 1406008640\n")
fname.write("India 1371567974\n")
fname.write("UnitedStates 330917000\n")
fname.write("Indonesia 269603400\n")
fname.write("Pakistan 220892331\n")
fname.write("Brazil 212545875\n")
fname.write("Belgium 11555790\n")
fname.write("Belarus 9408350\n")

fname.close()

# part b.
fname = open('q1.txt', 'r')

print("The names and populations of the countries that start with letter 'B' and have a population less than 15 million:")
for line in fname:
    if line.startswith('B'):
        words = line.split()
        if int(words[1]) < 15000000:
            print(words[1], "is the population of", words[0] + ".")

fname.close()

print()
# Q1 Ends Here
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# Q2 Starts Here

words = []

file = open('q1.txt', 'r')

for line in file:
    word = line.split()
    # Split the lines to words.
    for s in word:
        words.append(s)
      # Add all splitted words to a list.

print(words)

count = 0
frequent_word = ''
max_count = 0

for i in range(0, len(words)):
    count = 1
    # Count the frequency of every repeated word and find the most frequent one.
    # Assumption: If there are at least two words with the same maximum repetition, the one occurring first in the file will be the answer.
    for j in range(i + 1, len(words)):
        if words[i] == words[j]:
            count = count + 1

    if max_count < count:
        max_count = count
        frequent_word = words[i]

print("The word", frequent_word, "is repeated", max_count, "times in the file.\n")

file.close()

# Q2 Ends Here
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# TO-DO @ Home Starts Here


def find_longest_word(file_name):
    source_file = open(file_name, 'r')
    file_content = source_file.read()
    words = file_content.split()
    # Assumption: If there are at least two words with the same maximum length, the one occurring first in the file will be the answer.
    longest_word = ''
    for word in words:
        if len(word) > len(longest_word):
            longest_word = word

    print("The longest word in the file is: " + longest_word)
    source_file.close()


find_longest_word('q3.txt')

# TO-DO @ Home Ends Here
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