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1. Write a doc string and add comments for the following function:

def score\_probablity(statement):

‘’’

param: statement is a string

return: boolean True or False

Iterate the string, count number of words and occurrences of key words from array key\_words in the string.

Calculate the percentage of key words in the input statement and return True if > 0.7, false othwerwise.

‘’’

key\_words = ['age', 'year', 'born', 'date of birth']

words\_total = 0

occurrences = 0

for word in statement:

words\_total += 1

if (word in key\_words):

occurrences += 1

return (occurrences / words\_total) > 0.7

2. Write three different solutions to the function below. Please use different algorithms.

Please refer here for 3 functions is\_ordered(), is\_ordered\_two() and is\_ordered\_three(): <https://github.com/nyck33/coding_practice/blob/master/kg_researchTest.py>

def is\_ordered(list):

'''

(list[int]) --> boolean

Determine if a list of elements are in ascending order.

>>> is\_ordered([1, 1, 1, 1, 1])

>>> True

>>> is\_ordered([1, 2, 3])

>>> True

>>> is\_ordered([7, -4, 8, 12, 0])

>>> False

'''

pass

3. Given the text file:

1. What is your age?

1. 18 - 34

2. 35- 44

3. 45- 54

4. 55-64

5. Over 65

6. Don't know

2. What province do you live in?

1. Ontario

2. Quebec

3. Manitoba

4. Alberta

5. Other (specify)

Write a function to parse out a file with a text stream of this format to create the following variables:

Questions = ['What is your age?', 'What province do you live in?']

QuestionNumbers = ['1', '2']

Answers = [['18-34', '35-44', '45-54', 'Over 65', 'Don't know'], ['Ontario', 'Quebec', 'Manitoba', 'Alberta', 'Other (specify)']]

AnswerNumbers = [['1', '2', '3', '4', '5', '6'], ['1', '2', '3', '4', '5']]

Please ensure your function works when the questions and answers change! If you need to make any assumptions, please note them.

For question 3, I’m assuming there is ‘?’ at the end of questions.

Otherwise, it should be okay for many questions, different spacings, etc.

Also that the file path is given on the command line as sys.argv[1]

Please refer here for functions main() and make\_q\_vars():

https://github.com/nyck33/coding\_practice/blob/master/kg\_researchTest.py

The variables are available in main().

Please refer here for the assumed input text file: https://github.com/nyck33/coding\_practice/blob/master/kgresearchText.txt