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RandomquizGenerator

Run and test the program. Check the output. Where is it?

Answer : Its in the same directory of which the py file is located.

Add print() statements to display the capitals and capitalsItems variables. Explain how they are similar but different.

Answer : Capitals is a just a dictionary. CapitalItems is a list that includes tuples for each key value pair:

#! python3

# randomQuizGenerator.py - Creates quizzes with questions and answers in

# random order, along with the answer key.

import random

# This is a dictionary of data for the quiz. Keys are states and values are their capitals.

capitals = {'Alabama': 'Montgomery', 'Alaska': 'Juneau', 'Arizona': 'Phoenix', 'Arkansas': 'Little Rock', 'California': 'Sacramento', 'Colorado': 'Denver', 'Connecticut': 'Hartford', 'Delaware': 'Dover', 'Florida': 'Tallahassee', 'Georgia': 'Atlanta', 'Hawaii': 'Honolulu', 'Idaho': 'Boise', 'Illinois': 'Springfield', 'Indiana': 'Indianapolis', 'Iowa': 'Des Moines', 'Kansas': 'Topeka', 'Kentucky': 'Frankfort', 'Louisiana': 'Baton Rouge', 'Maine': 'Augusta', 'Maryland': 'Annapolis', 'Massachusetts': 'Boston', 'Michigan': 'Lansing', 'Minnesota': 'Saint Paul', 'Mississippi': 'Jackson', 'Missouri': 'Jefferson City', 'Montana': 'Helena', 'Nebraska': 'Lincoln', 'Nevada': 'Carson City', 'New Hampshire': 'Concord', 'New Jersey': 'Trenton', 'New Mexico': 'Santa Fe', 'New York': 'Albany', 'North Carolina': 'Raleigh', 'North Dakota': 'Bismarck', 'Ohio': 'Columbus', 'Oklahoma': 'Oklahoma City', 'Oregon': 'Salem', 'Pennsylvania': 'Harrisburg', 'Rhode Island': 'Providence', 'South Carolina': 'Columbia', 'South Dakota': 'Pierre', 'Tennessee': 'Nashville', 'Texas': 'Austin', 'Utah': 'Salt Lake City', 'Vermont': 'Montpelier', 'Virginia': 'Richmond', 'Washington': 'Olympia', 'West Virginia': 'Charleston', 'Wisconsin': 'Madison', 'Wyoming': 'Cheyenne'}

capitalsItems = list(capitals.items())

print(capitals) # This is a dictionary.

print(capitalsItems) # This is a list.

# Generate 35 quiz files.

for quizNum in range(35):

# Create base quiz file and answer file and creating variables.

# Open() function opens or creates a link in memory to the existing file on the hard drive. 'w' is an argument that tells the open function to replace the file or make a new one.

quizFile = open('capitalsquiz%s.txt' % (quizNum + 1), 'w') # 'w' = write, writes the quiz file

answerKeyFile = open('capitalsquiz\_answers%s.txt' % (quizNum + 1), 'w') # Writes the answer sheet.

# Write out the header for the quiz. Makes a name, Date, Period.

quizFile.write('Name:\n\nDate:\n\nPeriod:\n\n')

quizFile.write((' ' \* 20) + 'State Capitals Quiz (Form %s)' % (quizNum + 1)) # Title location is 20 spaces from the left.

quizFile.write('\n\n')

# Making a list of the key states and randomizing it.

states = list(capitals.keys()) # get all states in a list

# Shuffle takes the list and switches around the indexes

random.shuffle(states) # randomize the order of the states

# Loop through all 50 states, making a question for each.

for questionNum in range(50):

# Get right and wrong answers.

correctAnswer = capitals[states[questionNum]] # Capitals dictionary

wrongAnswers = list(capitals.values()) # get a complete list of answers

del wrongAnswers[wrongAnswers.index(correctAnswer)] # remove the right answer

wrongAnswers = random.sample(wrongAnswers, 3) # pick 3 random ones

answerOptions = wrongAnswers + [correctAnswer] # adds the questions together and makes a list of 4 elements

random.shuffle(answerOptions) # randomize the order of the answers in the list

# Write the question and answer options to the quiz file. - Quiz file

# .write essentially takes the information that is being provided and passes it to the quizFile to be written within the file.

quizFile.write('%s. What is the capital of %s?\n' % (questionNum + 1, states[questionNum])) # For questionNum, it finds and writes the state index every iteration.

for i in range(4): # 4 because its only going to be 4 answers.

# ABCD can be considered a list. Therefore you can iterate each letter as a entry.

quizFile.write(' %s. %s\n' % ('ABCD'[i], answerOptions[i]))

quizFile.write('\n')

# Write out the answer key to a file. - Answer File

answerKeyFile.write('%s. %s\n' % (questionNum + 1, 'ABCD'[answerOptions.index(correctAnswer)])) # ABCD can be considered a list. Therefore you can iterate each letter as a entry.

quizFile.close()

answerKeyFile.close() # closes the file

Output





