Complete Python Programming Masterclass Beginner to Advanced

Project #3 – Magic 8 Ball Class

This project will present you with the opportunity to apply the skills that you have learned up to this point with the course.

3.1 READING CONTENT FROM A .CSV FILE

In the first part of this project you will create the basics of the magic8ball class

Step 1

- Build the basic class structure
    - Import the necessary modules
        - Ie. random, sys, csv
    - Name the class “magic8ball”

Step 2

- Create the class __init__ method
    - Pass in the “self” and a “name” argument
    - Include an additional private property called “__mQuestions” and make it equal to an empty list.
        - This will be used later to append the questions asked by the user.

3.2 Adding Game Functionality

In the second part of the project you will build the game loop. The user should be able to ask questions and receive random responses from the magic 8 ball.

Step 1

- Create a new private method called "__start_game"
    - Include the "self" argument
- This method will perform the bulk of the work.
    - Create a loop to continuously prompt the user to ask questions
    - If a question is asked, then a random magic 8 ball response should be printed to the screen. If no question is asked, then the game should exit.
- Each question asked should be appended to the "__mQuestions" list from the __init__ method

3.3 Writing Questions to the magic_questions.csv file

In the third part of this project you will create a method to write all the questions asked to a .csv file.

Step 1

- Create a private method called "__write_questions"
    - Include the "self" argument
- Using the csv module this method should write all the questions to the provided "magic_questions.csv" document when the user exits the game.

********** CODE SPOILER **********

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COMPLETED CODE IS FOUND ON THE NEXT PAGE

CODE EXAMPLE

```
#import modules
import random, sys, csv

class magic8ball:
    #initial function
    def __init__(self, name):
        self.__name = name
        self.__mQuestions = []

        self.__start_game()

#private function to start game
def __start_game(self):
    #list of proper 8 ball responses
    mResponses = ["It is certain", "You may rely on it", "As I see it, yes", "Outlook good", "Most Likely",
         "It is decidely so", "Without a doubt", "Yes definetly"]

    #loop condition
    lQuestions = True

    #print welcome message
    print("Welcome " + self.__name)

    #run continous loop
    while lQuestions:
        #get questions from user
        mQues = input("Please enter a question: ")

        #pick random responce
        mRespond = mResponses[random.randint(0,7)]

        #exit if no question and user presses enter
        #else append quesion to mQuestions
        if mQues == "":
            print("Thank you for playing!")
            #call function to write questions to .csv file
            self.__write_questions()

            sys.exit()
        else:
            print(mRespond)

            self.__mQuestions.append(mQues)


#function writing questions to .csv file
def __write_questions(self):
    f = open("magic_questions.csv", "a", newline="")

    wrt = csv.writer(f)

    for q in self.__mQuestions:
        wrt.writerow([q])

    f.close()
```