



Python Programming Sections 1832 & 1833

Deadline October 2, 2020 by 23:59 PM PST

Programming Assignment 2 (35 Points): Python Trivia Game

Assignment Description:

In assignment 2 we will create a simple question and answer game using **if** statements, **Boolean** expressions, Python I/O for interaction, looping control flow structures and Python's built-in **random module**.

Program Description, Interfaces, and Functionality

Choose a topic and create three questions and answers to ask a player. For each question, the game will decide if the correct answer was chosen. The player must be able to continuously run the game if they did not answer all three questions correctly. If the player answers all questions correctly the game will end. **Refer to the usage on pages 2-3 for implementation details.**

Create an **A02.py** file to submit to Canvas. **A02.py** will have the following:

1. Comments at the top of the **.py** file as shown below
2. At least three multiple choice trivia questions with a topic of your choice (e.g. movies, sports, geography, etc.). Do not reuse the questions from this handout.
3. The use of **input** and **print** to read in data and write out data.
4. Variables and assignment statements to hold the data (i.e. a player's answer) entered in using the **input** function.
5. A game loop to continuously play the game if a player presses 'y' or chooses to exit by typing 'n'. The game exits if all three questions are answered correctly (refer to example usage on pages 2-3).
6. Use the built-in function **randint** in Python's **random module** to display the three questions and answers in a different order for each time the game is played. For example, to choose a number between 1 and 5, **randint** can be used as `n = Random.randint(1,5)` **Refer to the example usage on pages 2-3.**
7. Functionality to check the correct answers and display either 'correct' or 'try again, that is the incorrect answer'.
8. An option for players to quit the game or to **only** retry questions that were previously marked incorrect.

Where to do the assignment

You can do this assignment on your own computer, or from the SMC Virtual labs via Citrix. In either case, ensure the code runs on Windows and in IDLE. Submit one **.py** file named **A02.py**. Do not use any other name or else points will be deducted.

Submitting the Assignment

Include your name, your student id, the assignment number, the submission date, and a program description in comments at the top of your files. Submit the assignment on Canvas (<https://online.smc.edu>) by **uploading your .py file** to the Assignment 2 entry as an attachment. Do not cut-and-paste your script into a text window. Do not hand in a screenshot of your program's output. Do not hand in a text file containing the output of your program. Do not save and turn in the interpreter session (e.g. the one with `>>>`).

Saving your work

Save your work often on a flash-drive or to the cloud (e.g., GoogleDrive, Microsoft OneDrive, Canvas, etc.). Always save a personal copy of your files (e.g. **.py**, etc.). Do not store files on the virtual lab computers.

Skeleton code

```
# Name: Your First Name & Last Name
# SSID: Student ID Number
# Assignment #: 2
# Submission Date: 10/2/2020
#
# Description of program:
# This is a trivia quiz about the COVID-19

from random import randint

print("*****")
print("Welcome to the Science Trivia Quiz.")
print("Win by answering all three questions correctly.")
print("*****")

#...your code here
```

Example usage:

```
#
# Example of answering all answers correct
#
>python A01.py
*****
Welcome to the Science Trivia Quiz.
Win by answering all three questions correctly.
*****
The name of one algorithm to compare genomic sequences is:?
1. CELL_ALIGN
2. SMOKE
3. BLAST
4. GENEFIT
Enter your answer (1,2,3, or 4): 3
Terrific! You've been studying your algorithms!

What type of virus is sars-cov-2?
1. An rna virus
2. A dna virus
3. A parasitic virus
4. A bacteria virus
Enter your answer (1,2,3, or 4): 1
You've done your homework! That is correct.

One protein in the sars-cov-2 virus is named?
1. A razor protein
2. A bent protein
3. A fork protein
4. A spike protein
Enter your answer (1,2,3, or 4): 4
You are right!

Great! You answered all the questions correctly
Thank you for playing. Goodbye
```

```

#
# Example of only answering question two correct
#
>python A01.py
*****
Welcome to the Science Trivia Quiz.
Win by answering all three questions correctly.
*****
One protein in the sars-cov-2 virus is named?
1. A razor protein
2. A bent protein
3. A fork protein
4. A spike protein
Enter your answer (1,2,3, or 4): 2

Better luck next time

The name of one algorithm to compare genomic sequences is:?
1. CELL_ALIGN
2. SMOKE
3. BLAST
4. GENEFIT
Enter your answer (1,2,3, or 4): 3
Terrific! You've been studying your algorithms!

What type of virus is sars-cov-2?
1. An rna virus
2. A dna virus
3. A parasitic virus
4. A bacteria virus
Enter your answer (1,2,3, or 4): 2
that is incorrect, let's try another question

You answered 1 out of 3 questions incorrectly
Do you want to try your incorrect answers again? (y)es or (n)o?: Y

What type of virus is sars-cov-2?
1. An rna virus
2. A dna virus
3. A parasitic virus
4. A bacteria virus
Enter your answer (1,2,3, or 4): 1
You've done your homework! That is correct.

One protein in the sars-cov-2 virus is named?
1. A razor protein
2. A bent protein
3. A fork protein
4. A spike protein
Enter your answer (1,2,3, or 4): 4
You are right!

Great! You answered all the questions correctly
Thank you for playing. Goodbye

```