Yahtzee Project Python Programming

Introduction

You will follow an outline to create a simplified version of Yahtzee where the computer and a player compete.

This project must be an individual effort only and is to reflect your own knowledge.

Requirements

- Download YahtzeeOutline.py and open in Wing
- Write code according to the outlined comments shown in YahtzeeOutline.py. No credit given if the outline is not followed. Note: The comments serve as instructions, so they are worded a bit differently than how a programmer might write them.
- You are required to follow the coding style guidelines presented thus far in the notes. However, no additional comments are needed other than your name as the author.
- For this simplified version of Yahtzee, only 3 dice are rolled and points are earned for a Yahtzee (all 3 dice have the same value); two of a kind (2 of the 3 dice have the same values); and chance (all dice values are different). The points earned for each roll are tallied onto running totals for both the player and the computer.
- 50 points are earned for a Yahtzee, 25 points for two of a kind, and the sum of all three dice are earned for chance. Note that you will need to create "named constants" for numbers other than 0, 1, or 2 that are used in your program. For example, if a Yahtzee is earned, don't add on 50, but rather add a constant such as YAHTZEE_POINTS that stores the value of 50. You will also need a constant for two of a kind as well as any other constants that might be needed.
- The game concludes when the user enters a letter other than "Y" or "y" when prompted if they want to roll again
- Output must match exactly the output shown below; however, your numbers will differ.
- If you wanted to run the program with different point totals for Yahtzee and two of a kind, the program should run correctly by only changing the values stored for those two constants. No other program changes would need to be made.

Submission

- Before class: Print and upload the .py file.
- Beginning of class: Hand in the .py file.

Sample Runs

Run 1

```
Player rolls: 5, 6, 6
Two of a Kind! (+25)
Computer rolls: 6, 2, 2
Two of a Kind! (+25)

============================
Player total points: 25
Computer total points: 25
============================

Roll again (Y or N)? y
Player rolls: 2, 6, 2
Two of a Kind! (+25)
Computer rolls: 1, 1, 6
Two of a Kind! (+25)

============================
Player total points: 50
Computer total points: 50
============================

Roll again (Y or N)? Y
```

```
Player rolls: 5, 1, 2
Chance! (+8)
Computer rolls: 2, 5, 4
Chance! (+11)

============================
Player total points: 58
Computer total points: 61
============================

Roll again (Y or N)? y
Player rolls: 1, 1, 3
Two of a Kind! (+25)
Computer rolls: 2, 4, 6
Chance! (+12)

============================
Player total points: 83
Computer total points: 73
============================

Roll again (Y or N)? n
```

Portion of a run where Yahtzee is rolled

```
=========================
Player total points: 342
Computer total points: 459
=========================

Roll again (Y or N)? y
Player rolls: 2, 3, 1
Chance! (+6)
Computer rolls: 2, 3, 1
Chance! (+6)

=========================
Player total points: 348
Computer total points: 465
=========================

Roll again (Y or N)? y
Player rolls: 1, 3, 1
Two of a Kind! (+25)
Computer rolls: 3, 3, 3
Yahtzee! (+50)

=========================
Player total points: 373
Computer total points: 515
=========================

Roll again (Y or N)? y
Player rolls: 6, 4, 5
Chance! (+15)
Computer rolls: 5, 4, 5
Two of a Kind! (+25)

=========================
Player total points: 388
Computer total points: 540
=========================
```

```
Roll again (Y or N)? n
```

Run3 – changed only the values stored for the Yahtzee (60) and two of a kind (30) constants and reran the code.

```
Player rolls: 1, 4, 3
Chance! (+8)
Computer rolls: 4, 2, 4
Two of a Kind! (+30)

==========================
Player total points: 8
Computer total points: 30
==========================

Roll again (Y or N)? Y
Player rolls: 1, 6, 1
Two of a Kind! (+30)
Computer rolls: 6, 6, 2
Two of a Kind! (+30)

==========================
Player total points: 38
Computer total points: 60
==========================

Roll again (Y or N)? Y
Player rolls: 6, 6, 1
Two of a Kind! (+30)
Computer rolls: 4, 4, 4
Yahtzee! (+60)

==========================
Player total points: 68
Computer total points: 120
==========================

Roll again (Y or N)? N
```

Note, that these numbers also flexibly adjusted even though the only change was to the values stored in the constants.

YahtzeeOutline.py

```
## This program simulates a simplified game of Yahtzee where a player
# plays against the computer.
# @author First Last

# Allow your program to use the randint function

# Create and initialize pre-loop "constants"


# Create any other pre-loop variables you may need


# Continue to roll dice while the user enters an
# uppercase or lowercase Y.
while () :

    # For the player, roll the three dice and display the dice values.
    # You will need to remember each die value.
```

```
    # If the values rolled were all the same, display "Yahtzee!"  and
    # and the number of points for a yahtzee are earned for the player
    # else if two values rolled were the same, display "Two of a Kind!" and
    # the number of points for two of a kind are earned for the player
    # else display chance and the sum of all three dice are earned for
    # the player


    # If you haven't already done so, tack the points earned onto
    # a running total for the player


    # For the computer, roll the three dice and display the dice values.
    # You will need to remember each die value.


    # If the values rolled were all the same, display "Yahtzee!"  and
    # and the number of points for a yahtzee are earned for the computer
    # else if two values rolled were the same, display "Two of a Kind!" and
    # the number of points for two of a kind are earned for the computer
    # else display chance and the sum of all three dice are earned for
    # the computer


    # If you haven't already done so, tack the points earned onto
    # a running total for the computer


    # Show the current totals


    # Prompt whether to roll again
```