CIS 1250 PYTHON PROGRAM2 – PLAY A GAME

Turn in Requirements:

5 pts. Name your project LastnameP2, such as GarnerP2.

Program Requirements:

1. 5 pts. Write the file name, your name, email address and purpose of the program at the top of your source code in a comment.

```
# GarnerP3
# Programmer: Rob Garner
# EMail: Rgarner7 @cnm.edu
# Purpose: provides user capability to find fruit in a string
```

2. 5 pts. Add comments as appropriate. Be sure that your program output is neatly presented to the user.
3. Write a program that does the following:
    a. Display a header
    b. Start a game of rock paper scissors with to user.
        i. The user will play against the computer. A scissor can cut paper, a rock can knock a scissor, and paper can wrap a rock.
        ii. Structure the play loop so the player plays the game until the user or the computer has won twice and then the player is asked if they want to play another round.
        iii. Ask the user to select his/her choice (rock, paper, scissors)
        iv. Validate the user choice. If it is not valid then don't do the rest. Instead display an error message. The play loop should automatically cause the user to try again.
        v. After the user has entered his/her choice, the program uses a random number generator for the computers selection.

vi. Your program will evaluate who won or if there was a tie.
vii. The program reports what the computer chose, the user's choice, who won that round, and game tally. The game tally shows number of rounds, wins/losses for the player and number of ties.
viii. Ask the player if the user wants to play again.

c. When done display a goodbye message.

4. The game should look something like this:

Welcome to super RPS 3000, the best rock paper scissors game in the world.

Please select rock, paper, or scissors: rock
Player chose rock. Computer chose scissors.
The game's score is: Player 1 - Computer 0.

Please select rock, paper, or scissors: paper
Player chose paper. Computer chose scissors.
The game's score is: Player 1 - Computer 1.

Please select rock, paper, or scissors: blah
Invalid input, please try again.

Please select rock, paper, or scissors: paper
Player chose paper. Computer chose rock.
The game's score is: Player 2 - Computer 1.
Congratulations you won!
Do you want to play another round of rock paper scissors? (y/n)y

Please select rock, paper, or scissors: scissors
Player chose scissors. Computer chose paper.
The game's score is: Player 1 - Computer 0.

Please select rock, paper, or scissors: scissors
Player chose scissors. Computer chose scissors.
The game's score is: Player 1 - Computer 0.

Please select rock, paper, or scissors: rock
Player chose rock. Computer chose paper.
The game's score is: Player 1 - Computer 1.

Please select rock, paper, or scissors: rock
Player chose rock. Computer chose rock.
The game's score is: Player 1 - Computer 1.

Please select rock, paper, or scissors: rock
Player chose rock. Computer chose paper.

The game's score is: Player 1 - Computer 2.
The computer won!
Do you want to play another round of rock paper scissors? (y/n)n
Thank you for playing rock, paper, and scissors.

You should have functions that do the following:

display_header: displays a welcome message to the user

get_user_choice: asks the user for their choice. Make sure the user asks either rock, paper or scissors. Loop until the user provides a valid choice.

validate_user_choice: pass in the user's choice. Function returns true if the users choice is valid.

get_computer_choice: randomly selects and returns computer's choice

display_choices: Pass in the computer and player's choices. Just prints them in a nicely formated way.

determine_winner: Pass in the player's and computer's choices. Determines who won and returns "player","computer" or "tie". You could also just return 1,2,3 if you want to instead.

display_score: Pass in the player score and the computer's score to this function. Display the score in a nicely formated way.

display_who_won: Pass in the player_score and the computer's score to this function. Display who won. This is called only after either the player or the computer wins 2 rounds. And before you ask the player if they want to play another.

display_goodbye: Display a nicely formated goodbye method.

Hints:

You may need to use an if/elif/else block that will look something like:

If

elif

elif

elif

else

Remember to indent the blocks of code that come after and are associated with your while, if, elif and else statements.

To generate random numbers use the random library.

Example:

```
import random

doanother = 'y'

while doanother == 'y':
    someValue = random.randrange(3)
    print(someValue)
    doanother = input ('Again y/n: ').strip().lower()[0]
```

Example of using Random:

```
>>> import random

>>> random.randrange(3)

0

>>> random.randrange(3)

1

>>> random.randrange(3)

2

>>> choices=['rock','paper','scisors']

>>> compchoice = choices[random.randrange(3)]

>>> compchoice

'scisors'

>>>
```