CS1400 -- HW#5 – the Joke's on you

CS1400

Objective

Further mastery of conditional statements and loops. Additionally, we will be looking at validation of user input and exception handling.

Reminder:

As in HW 4, you will need to include docstrings in your code. See pep 257

repeat.py – requirements (mandatory while loop)

Repeat.py will tell the following joke, utilizing a while loop and conditional statements:

- Tell this joke:
  - Pete, Pete and Repeat went out on the lake in their boat. Pete and Pete fell out. Who is left in the boat?
    - If the user answers "Repeat" or "repeat" then tell the joke again (hint: what does [Rr]epeat do?)
    - If the user answers "Quit" or "quit" then display the message "Goodbye, thank you for playing" and then be done with the joke.
    - If the user answers anything else, then display the message "Nice try. Now, listen closely this time." And then tell the joke again.

random_walk.py – Requirements (mandatory while loops)

You are going to take the user on a "directed" Random Walk. You will be using while loops – and probably nested while loops – to achieve this goal.

- First, ask the user for a lowest value (integer), but it can't be lower than 0. Call the result low_val
  - Validate the input (can't be lower than 0)
  - If the conversion to integer fails,
    - Give the user a message "please give an integer response" and ask again for the low value
- Then, ask the user for a highest value (integer). This highest value must be at least 20, but less than 1,000. Name the variable high_val:
  - Validate the input (make sure the response is between 20 and 1,000)
  - If the conversion to integer fails,
    - Give the user a message "please give an integer response" and ask again for the high value
- Initialize a variable name cur_position to an integer half way between the low and high value ((low + high)/2)
  - Display the value of cur_position and prompt the user to see if he/she wants to go up or down.
    - If the user responds "up" then add a random number (between low and high) to currentPosition
    - If the user responds "down" then subtract a random number (between low and high) from currentPosition
    - If the user responds "quit" then exit the random walk

        - For all other input, give the user a message telling them to choose up, quit or down.
    - Exit Conditions -- Exit the loop when one of the following occurs
        - The user chooses “quit” or
        - cur_position > high_val
        - cur_position < low_val

new_guess.py – Requirements (mandatory for loop)

Play the “guess a number” game again from HW4 – but use a for loop to give the user to 5 tries to get it right

- You will also validate the user response and handle any non-integer input using an exception and give the user the message “Invalid input. Please try again” – the code will NOT exit out with the error, but will continue running.

Summary

You will also write up a summary (**HW5summary.txt**) of the assignment and answer the following question(s).

1. What gave you trouble in this assignment?
2. What do you wish you could do differently?

Turn in:

- repeat.py
- random_walk.py
- new_guess.py
- HW4summary.txt