

Guessing Game Version Requirements

Extended Version of the Guessing Game

In this version, you will:

- Add a score system that tracks the number of guesses.
- Introduce a limited number of attempts to increase the difficulty.
- Use nested loops to allow the player to play multiple rounds.
- Add a function to encapsulate game logic to improve code organization and readability.

Instructions to Create the Guessing Game Program:

1. Import the Random Module:

- Begin by importing the random module, which will be used to generate random numbers for the guessing game.

```
import random
```

Define the Function `play_single_round`:

- Create a function named `play_single_round()` that contains the logic for a single round of guessing.
- Inside this function, initialize the following variables:
 - `random_number`: Use `random.randint(1, 100)` to generate a random number between 1 and 100.
 - `attempts`: Set this to 0 to track the number of guesses made by the player.
 - `max_attempts`: Set this to 10, as the player will have up to 10 guesses.
 - `guess`: Initialize this to `None` to store the player's guesses.
- Print a message informing the player that they have 10 attempts to guess the number.

Create a Loop for Guessing:

- Use a while loop that runs until the player either guesses the correct number or uses all their attempts (i.e., `attempts < max_attempts`).
- Inside the loop:
 - Use a try-except block to handle the player's input:
 - Ask the player to enter their guess with `input()`.
 - Convert the input to an integer (`int()`).
 - Increment the attempts counter by 1 after each guess.

- Use if, elif, and else statements to check whether the guess is too low, too high, or correct:
 - If the guess is lower than the random number, print "Too low!".
 - If the guess is higher than the random number, print "Too high!".
 - If the guess is correct, print a success message and return the number of attempts it took to guess the number.
- If a non-numeric input is entered, catch it with the except ValueError and print an error message to prompt the user for a valid number.

Provide Feedback on Attempts:

- After each incorrect guess, print the remaining number of attempts using `max_attempts - attempts`.
- If the player uses all 10 attempts without guessing correctly, print a message that the game is over and reveal the correct number.
- Return `max_attempts` as the score if the player fails to guess the number within 10 attempts.

Define the `play_game` Function to Manage Multiple Rounds:

- Create a new function `play_game()` that handles multiple rounds of the game.
- Set the total number of rounds (`total_rounds = 3`) and a variable to track the total score (`total_score = 0`).
- Print a welcome message to the player.

Loop Through Multiple Rounds:

- Use a for loop to iterate through each round. For each round:
 - Display the current round number.
 - Call the `play_single_round()` function to play one round and store the result (score).
 - Add the score of the current round to the total score.

Display the Final Score:

- After completing all the rounds, print a message stating that the game is over.
- Display the player's total score (sum of all attempts across rounds).
- Provide feedback based on the player's performance:
 - If the total score is less than or equal to 7 attempts per round, print "Excellent guessing skills!".
 - If the score is between 7 and 9 attempts per round, print "Good job!".
 - Otherwise, print "Better luck next time!".

Create a Main Function to Start the Game:

- At the end of the program, add a main guard using `if __name__ == "__main__":` to call the `play_game()` function and start the game when the script is run.