

Number Guessing Game

Summary:

The Number Guessing Game has several issues, including potential crashes and incorrect behavior.

Steps to Reproduce:

1. Run the program.
2. Enter various guesses to determine the correct number.

Expected Behavior:

1. The program should correctly prompt the user to guess a number between 0 to 100.
2. User inputs should be validated to ensure they fall within the specified range.
3. The program should provide feedback to the user indicating whether their guess is too high, too low, or correct.
4. The game should end when the correct number is guessed, displaying the number of attempts taken.

Observed Behavior:

1. If the user inputs a non-integer value, the program crashes.
2. The program does not handle cases where the user inputs a number outside the range of 0 to 100 gracefully. Instead, it prints an error message but allows the game to continue.
3. There is a missing variable `name` when printing the congratulatory message for guessing the number correctly, resulting in a NameError.
4. The program does not provide an option for the user to exit the game without playing again.
5. The prompt "May I ask you for your name." is misleading since it's necessary for the program's operation, not optional.

Environment:

- Operating System: [Windows]
- Python Version: [Python 3.10.7]

Additional Notes:

- Implement input validation to handle non-integer inputs gracefully and prevent program crashes.
- Provide a mechanism to handle incorrect guesses outside the range of 0 to 100.
- Fix the NameError by ensuring the variable `name` is defined before using it in the congratulatory message.
- Consider adding an option for the user to exit the game without playing again to improve user experience.
- Clarify the prompt for the user's name to indicate it is required for the game to proceed.