

Documentation

Number Guessing Game Documentation

Description

This is a simple number guessing game implemented in Python. The game allows a user to input an upper bound, and then guess a random number generated between 1 and the upper bound. The game provides feedback on whether the guess is too high or too low and counts the number of guesses.

How the Code Works:

1. **Welcome Screen:**
 - A welcome message is displayed using print statements to make the game feel more interactive.
2. **Upper Bound Input:**
 - The user is asked to provide a number as an upper bound for the random number to guess. If the input is not a number, the program quits.
3. **Generating a Random Number:**
 - The program uses Python's random module to generate a random number between 1 and the upper bound provided by the user.
4. **Game Loop:**
 - The user is prompted to guess the number.
 - If the guess is incorrect, feedback is given ("too low" or "too high"), and the number of guesses is tracked.
 - If the guess is correct, the game ends with a congratulatory message showing the number of attempts taken.
5. **Input Validation:**
 - The game ensures that the user's input is a valid number.
6. **End of Game:**
 - The program prints the total number of guesses the user made before getting the correct answer.

Code Breakdown:

- `import random`: Imports the random module to generate random numbers.
- `input()`: Takes user input for the upper bound and guesses.

- `random.randint(0, top_of_range)`: Generates a random integer between 1 and the upper bound.
 - `while True`: Creates an infinite loop that continues until the user guesses correctly.
 - `if __name__ == "__main__":`: Ensures the game runs only if the script is executed directly.
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Instructions to Run the Game:

1. Clone this repository:

bash

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```
git clone <repository-url>
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```
cd <repository-directory>
```

2. Ensure you have Python installed (preferably Python 3.x).
3. Run the Python script:

bash

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```
python number_guessing_game.py
```

4. Follow the prompts in the terminal to play the game.