**guessing_game.py**

```python
1   ############## (PROJECT 2) NUMBER GUESSING GAME ##############
2
3   import random  # Import the random module to generate a random number
4
5   def main():
6       count = 0  # Initialize the attempt counter
7       random_num = random.randint(1, 100)  # Generate a random number between 1 and 100
8
9       # Introduction message to the player
10      print("Welcome to the Number Guessing Game!\nTry to guess the number between 1 and 100.\n")
11
12      # Infinite loop to keep asking for user input until the correct guess
13      while True:
14          try:
15              count += 1  # Increment the attempt counter with each guess
16              guess_num = input("Enter your guess: ")  # Take user input as a guess
17
18              # Check if the input is a valid number
19              if not guess_num.isdigit():
20                  raise ValueError  # Raise a ValueError if input is not a number
21              else:
22                  int_guess_num = int(guess_num)  # Convert the input to an integer
23
24                  # Compare the user's guess with the random number
25                  if int_guess_num < random_num:
26                      print("Too low!\n")  # Inform the user that the guess is too low
27                      continue  # Continue to the next iteration
28                  elif int_guess_num > random_num:
29                      print("Too high!\n")  # Inform the user that the guess is too high
30                      continue  # Continue to the next iteration
31                  else:
32                      # If the guess is correct, congratulate the user and display the attempt
                         count
33                      print(f"Congratulations! You've guessed the number in {count} attempts.\n")
34                      break  # Exit the loop once the correct number is guessed
35
36          # Handle invalid input (i.e., if the input is not a number)
37          except ValueError:
38              print("Please enter a number (1,3,6,2,...etc) only!\n")  # Inform the user to enter
                 valid numbers
39
40  # This ensures that the game starts when the script is run directly
41  if __name__ == "__main__":
42      main()
```