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### Batch : S1

### Roll no. : IT2201

Topic : Number guessing game

Code:

import random

def number\_guessing\_game():

    print("🎮 Welcome to the Ultimate Number Guessing Game! 🎉")

    print("Choose your difficulty level:")

    print("1. Easy   (Range: 1-50, Attempts: 10)")

    print("2. Medium (Range: 1-100, Attempts: 7)")

    print("3. Hard   (Range: 1-200, Attempts: 5)")

    print("4. Custom (Choose your own range and attempts!)")

    # Get difficulty choice

    while True:

        try:

            difficulty = int(input("Enter the difficulty level (1-4): "))

            if difficulty not in [1, 2, 3, 4]:

                print("⚠️ Please choose a valid option (1-4).")

                continue

            break

        except ValueError:

            print("⚠️ Invalid input! Please enter a number (1-4).")

    # Set parameters based on difficulty

    if difficulty == 1:

        lower\_bound, upper\_bound = 1, 50

        max\_attempts = 10

    elif difficulty == 2:

        lower\_bound, upper\_bound = 1, 100

        max\_attempts = 7

    elif difficulty == 3:

        lower\_bound, upper\_bound = 1, 200

        max\_attempts = 5

    else:

        while True:

            try:

                lower\_bound = int(input("Enter the lower bound of the range: "))

                upper\_bound = int(input("Enter the upper bound of the range: "))

                if lower\_bound >= upper\_bound:

                    print("⚠️ Lower bound must be less than upper bound.")

                    continue

                max\_attempts = int(input("Enter the number of attempts: "))

                if max\_attempts <= 0:

                    print("⚠️ Number of attempts must be greater than zero.")

                    continue

                break

            except ValueError:

                print("⚠️ Invalid input! Please enter valid numbers.")

    print(f"\nGreat! Your range is [{lower\_bound}, {upper\_bound}], and you have {max\_attempts} attempts.")

    number\_to\_guess = random.randint(lower\_bound, upper\_bound)

    attempts = 0

    # Fun prompts

    fun\_prompts = [

        "Not even close. Try harder! 🤷",

        "Ouch! That’s way off. 😅",

        "Getting warmer, but still no. 🌡️",

        "Are you guessing blindly? 🎯",

        "You’re not psychic, are you? 🔮",

    ]

    while attempts < max\_attempts:

        try:

            print(f"\n🔍 Current Range: [{lower\_bound}, {upper\_bound}]")

            guess = int(input(f"Attempt {attempts + 1}/{max\_attempts}: What's your guess? "))

            if guess < lower\_bound or guess > upper\_bound:

                print("🚫 Out of bounds! Stay within the range.")

                continue

            attempts += 1

            if guess == number\_to\_guess:

                print(f"🎉 Woohoo! You guessed it in {attempts} attempts!")

                break

            else:

                if abs(guess - number\_to\_guess) <= 5:

                    print("🔥 So close, yet so far! You're within 5 of the correct number.")

                elif abs(guess - number\_to\_guess) <= 10:

                    print("🌟 You're within 10! Keep going.")

                else:

                    print(random.choice(fun\_prompts))

                # Shrink the range

                if guess < number\_to\_guess:

                    print("Hint: It's higher! 📈")

                    lower\_bound = max(lower\_bound, guess + 1)

                else:

                    print("Hint: It's lower! 📉")

                    upper\_bound = min(upper\_bound, guess - 1)

        except ValueError:

            print("⚠️ Invalid input! Please enter a valid number.")

    if attempts == max\_attempts:

        print(f"😞 You've used all your attempts! The correct number was {number\_to\_guess}. Better luck next time!")

    print("Game Over! Thanks for playing. 🎮")

# Run the game

number\_guessing\_game()

Output:

