PYTHON PROJECT

PROJECT NAME: Guess the Number with Hints: Write a number guessing game where the computer gives hints like "too high" or "too low," and track the number of attempts.

AIM: python project to write a number guessing game where the computer gives hints like "too high" or "too low," and track the number of attempts

DISCRIPTION:

1. **Imports**:

o   The random module is imported to generate a random number for the game.

2. **Game Logic (guess_the_number function)**:

o **Introduction**:

▪ Displays a welcome message and explains the game rules.

o **Generate Random Number**:

▪ Uses random.randint(1, 100) to select a random number between 1 and 100.

o **Gameplay Loop**:

▪ The game repeatedly asks the user for a guess until the correct number is guessed:

▪ **User Input**:

▪ The program prompts the user to input a number.

▪ Input is validated to ensure it's an integer within the range of 1–100.

▪ **Feedback**:

▪ If the guess is too low, the user is informed with the message "Too low! Try again."

▪ If the guess is too high, the message "Too high! Try again." is displayed.

▪ **Success**:

▪ When the correct number is guessed, the program congratulates the user and displays the number of attempts taken.

o **Error Handling**:

- If the user enters invalid input (e.g., a non-numeric value), a ValueError is caught, and the user is prompted to "Please enter a valid number."

3. **Program Entry Point**:

   o The if __name__ == "__main__": block ensures that the game runs only when the script is executed directly, not when it is imported as a module

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TEAM MEMBERS ROLE

Sandhyarani: Collecting all information about project& worked as a team leader

Kavya: Testing the program and debugging the errors.

Mery: -Make the file by gathering description

PROGRAM:

```
import random
import logo_art

def guess_the_number():

 lower_bound = 1
 upper_bound = 100
 number_to_guess = random.randint(lower_bound, upper_bound)
 print(logo_art.logo)
 print(f"I'm thinking of a number between {lower_bound} and {upper_bound}.")

 attempts = 0

 while True:
   try:

     guess = int(input("Enter your guess: "))
     attempts += 1


     if guess < lower_bound or guess > upper_bound:
       print(f"Please guess a number between {lower_bound} and {upper_bound}.")
```

```python
            continue

        if guess < number_to_guess:
            print("Too low! Try again.")
        elif guess > number_to_guess:
            print("Too high! Try again.")
        else:
            print(f"Congratulations! You've guessed the number {number_to_guess} in {attempts} attempts.")
            break
    except ValueError:
        print("Invalid input! Please enter a number.")

if __name__ == "__main__":
    guess_the_number()
```

OUTPUT:

I'm thinking of a number between 1 and 100.

Enter your guess: 70

Too high! Try again.

Enter your guess: 60

Too high! Try again.

Enter your guess: 50

Too high! Try again.

Enter your guess: 30

Too high! Try again.

Enter your guess: 20

Too high! Try again.

Enter your guess: 10

Too high! Try again.

Enter your guess: 5

Too low! Try again.

Enter your guess: 8

Too low! Try again.

Enter your guess: 9

Congratulations! You've guessed the number 9 in 9 attempts.