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BRANCH:- CSE

SECTION:- C

ASSIGNMENT 2

Write a Python program for a **Number Guessing Game** where the computer randomly selects a number between 1 and 100, and the user has to guess it.

Instructions:

1. The program should generate a random number between 1 and 100.
2. The user should be prompted to enter their guess.
3. If the guess is too high, print **"Too high! Try again."**
4. If the guess is too low, print **"Too low! Try again."**
5. If the guess is correct, print **"Congratulations! You guessed the number in X attempts."**
6. The program should keep running until the user guesses the correct number.
7. Use a while loop to continue asking for guesses until the correct number is found.

Bonus Challenge:

- Limit the number of attempts to **7** and display **"Game Over! The number was X."** if the user doesn't guess correctly within the limit.
- Display the number of attempts taken by the user to guess correctly.

CODE:-

✓
11s



```
import random

number = random.randint(1, 100)
attempts = 0
max_attempts = 7

print("Welcome to the Number Guessing Game!")
print("Guess a number between 1 and 100. You have 7 attempts.")

while attempts < max_attempts:
    guess = input("Enter your guess: ")

    if guess.isdigit():
        guess = int(guess)
        attempts += 1

        if guess < number:
            print("Too low! Try again.")
        elif guess > number:
            print("Too high! Try again.")
        else:
            print("Congratulations! You guessed the number in", attempts, "attempts.")
            break
    else:
        print("Invalid input! Please enter a number.")
else:
    print("Game Over! The number was", number)
```

OUTPUT:-

```
➡ Welcome to the Number Guessing Game!  
Guess a number between 1 and 100. You have 7 attempts.  
Enter your guess: 12  
Too low! Try again.  
Enter your guess: 54  
Too high! Try again.  
Enter your guess: 34  
Congratulations! You guessed the number in 3 attempts.
```

```
➡ Welcome to the Number Guessing Game!  
Guess a number between 1 and 100. You have 7 attempts.  
Enter your guess: 78  
Too high! Try again.  
Enter your guess: 56  
Too high! Try again.  
Enter your guess: 54  
Too high! Try again.  
Enter your guess: 41  
Too high! Try again.  
Enter your guess: 35  
Too high! Try again.  
Enter your guess: 21  
Too low! Try again.  
Enter your guess: 27  
Too low! Try again.  
Game Over! The number was 33
```
