

This homework will give you practice using while loops and generating random numbers.

Write a complete Java program that allows the user to play a number-guessing game.

1. The program should generate a random number between 1 and 100 (inclusive) as the target number for the user to guess.
2. Create a while loop that repeatedly prompts the user to guess the target number. The loop should continue until the user guesses the correct number.
3. Within the while loop, prompt the user to enter their guess. Read the user's input.
4. Implement conditional statements to check if the user's guess is correct, too low, or too high. Display an appropriate message to the user after each guess.
5. If the user guesses the correct number, display a congratulatory message along with the number of attempts made.
6. If the user's guess is too low or too high, inform the user and prompt them to try again.
7. Track and display the number of attempts made by the user. This should increase by 1 after each guess.

Sample:

Welcome to the Number Guessing Game!

I have selected a number between 1 and 100. Can you guess it?

Enter your guess: 50

Too high! Try again.

Enter your guess: 25

Too low! Try again.

Enter your guess: 40

Too high! Try again.

Enter your guess: 35

Too high! Try again.

Enter your guess: 32

Too high! Try again.

Enter your guess: 27

Congratulations! You guessed the number in 6 attempts.