

Java Loop Quiz: For or While?

Instructions: For each of the problems below, read the description and decide whether a for loop or a while loop would be the better choice. In your answer, state your choice and provide a brief explanation of why you chose that loop.

Problem 1

You need to print the phrase "Hello, World!" exactly 15 times on separate lines.

Your Answer:

- **Loop Choice: For**
- **Explanation: For loops are used to do code exactly as many times as we have to as while loops go on until the boolean is false which would not make sense here**

Problem 2

Write a program that repeatedly asks the user for their name until they type the word "quit".

Your Answer:

- **Loop Choice: While**
- **Explanation: When the boolean is true for the user that's when the program should stop asking therefore while is better.**

Problem 3

Calculate the sum of all integers from 1 to 100.

Your Answer:

- **Loop Choice: While**
- **Explanation: This only runs until 100 which could be more simple with while.**

Problem 4

You are creating a simple game. The main game loop should continue to run as long as a player's health variable is greater than 0.

Your Answer:

- **Loop Choice: While**
- **Explanation: This should run as long as the players health is above 0 therefore it is not running for a defined period of time**

Problem 5

Your program needs to iterate through a range of numbers from 20 to 50, checking if each number is even.

Your Answer:

- **Loop Choice: Loop**
- **Explanation: For loops are used to do code exactly as many times as we have to as while loops go on until the boolean is false which would not make sense here.**

We only have to do this 30 times and not more