Loop\_problems

Here are some **Java programming questions** focused on **loops (for loop, while loop, and do-while loop)**. These questions range from basic to advanced levels.

### **Basic Loop Questions**

1. **Print numbers from 1 to 10 using a loop.**
2. **Print even numbers from 1 to 50 using a loop.**
3. **Print odd numbers from 1 to 50 using a loop.**
4. **Find the sum of the first N natural numbers using a loop.** *(Input: N, Output: Sum of first N numbers)*
5. **Find the factorial of a number using a loop.** *(Input: N, Output: N! factorial)*
6. **Print the multiplication table of a given number using a loop.** *(Input: N, Output: Table of N)*

### **Intermediate Loop Questions**

1. **Reverse a number using a loop.** *(Input: 12345, Output: 54321)*
2. **Check if a number is a palindrome using a loop.** *(Input: 121, Output: Palindrome)*
3. **Find the sum of digits of a number using a loop.** *(Input: 123, Output: 6)*
4. **Count the number of digits in a number using a loop.** *(Input: 7865, Output: 4 digits)*
5. **Find the Greatest Common Divisor (GCD) of two numbers using a loop.**
6. **Print Fibonacci series up to N terms using a for loop.** *(Input: N=7, Output: 0, 1, 1, 2, 3, 5, 8)*

### **Advanced Loop Questions**

1. **Check if a number is prime using a loop.** *(Input: 7, Output: Prime)*
2. **Print all prime numbers between 1 and 100 using a loop.**
3. **Check if a number is an Armstrong number using a while loop.** *(Input: 153, Output: Armstrong Number)* *(153 = 1³ + 5³ + 3³)*
4. **Find the sum of all prime numbers between 1 and 100 using a loop.**
5. **Convert a decimal number to binary using loops.** *(Input: 10, Output: 1010)*
6. **Write a program to reverse a given number.**

Tab 2