**Loop Exercise**

1. **Print Numbers:** Use a loop to print numbers from 1 to N.
2. **Factorial Calculator:** Calculate the factorial of a given number using a loop.
3. **Fibonacci Sequence:** Generate and print the Fibonacci sequence up to a specified number.
4. **Sum and Average of Numbers:** Read a series of numbers and calculate their sum and average using a loop.
5. **Multiplication Table:** Print the multiplication table for a given number.
6. **Pattern Printing:** Use loops to print various patterns such as stars, numbers, or alphabets.
7. **Palindrome Checker:** Implement a loop to check if a given string is a palindrome.
8. **Prime Numbers:** Print prime numbers up to a specified limit using loops.
9. **Sum of Digits:** Calculate the sum of digits of a given number using a loop.
10. **Reverse a Number:** Reverse the digits of a given number using a loop.
11. **Power of a Number:** Implement a loop to calculate the power of a number.
12. **GCD and LCM Calculator:** Calculate the Greatest Common Divisor (GCD) and Least Common Multiple (LCM) of two numbers using loops.
13. **Number Guessing Game:** Implement a loop-based number guessing game where the user guesses a random number.
14. **Table of Powers:** Print a table of powers for a given base and range.
15. **Factorization:** Factorize a given number and print its prime factors using loops.
16. **Binary to Decimal Conversion:** Convert a binary number to its decimal equivalent using loops.
17. **Digital Clock:** Simulate a digital clock using loops to update the time.
18. **Array Operations:** Use loops to perform various operations on arrays, such as finding the maximum/minimum value, sum, and average.
19. **Chessboard Pattern:** Print a chessboard pattern using loops.
20. **Calendar Generator:** Generate a calendar for a given month using loops.