Assignment-4: Practice

1. Print all odd and even numbers from 1 to 20:
   Use a loop from 1 to 20. For each number, check if it is divisible by 2 (for even numbers). If not, it's odd.

2. Generate all multiples of 12:
   Use a loop to iterate through numbers. For each number, check if it is divisible by 12 and display the multiples.

3. Generate a table of numbers given by taking input:
   Take a number from the user and use a loop to print its multiplication table, multiplying it by 1 through 10 (or any other range).

4. Check if a number is prime or not:
   Take a number from the user and check whether it is only divisible by 1 and itself (use a loop to check divisibility).

5. Sum of generated numbers from start to end points:
   Take two numbers from the user as the start and end points. Use a loop to iterate through this range and sum up the numbers.

6. Multiply generated numbers from start to end points:
   Similar to task 5, but instead of summing, multiply all the numbers in the range.

7. Generate the Fibonacci sequence up to a specified number of terms:
   Take the number of terms from the user and use a loop to generate the Fibonacci sequence.

8. Generate the factorial of a number given by the user:
   Take a number from the user and use a loop to multiply all integers up to that number to get the factorial.

10. Display all letters except 'm' and 'i' from "Dreamer infotech":
   Loop through each character in the string "Dreamer infotech" and display the characters that are not 'm' or 'i'.

11. Print alternate characters of a given string:
   Take a string input from the user and use a loop to display every other character (i.e., at even indexes).

12. Reverse the string entered by the user:
Take a string input and loop through it in reverse order to display the characters.

13. Count the total number of strings given by the user:
Split the input string into an array (using space or other delimiters) and count the number of resulting strings.

14. Check if the string is a palindrome or not:
Take a string input and check if it reads the same forwards and backwards.

15. Search for a character within a given string:
Take a string and a character as input. Loop through the string to see if the character exists.

16. Filter out vowels and consonants from a given string:
Iterate through the string and separate vowels (a, e, i, o, u) from consonants.

17. Filter out duplicate characters of a string given by the user:
Loop through the string, and for each character, check if it has already been encountered. If not, display it.

18. Display possible pairs of 3 (e.g., 1:3, 2:3, 3:3):
Use a loop to generate pairs of numbers, where one number remains constant (e.g., 3), and the other is iterated.

20. Check duplicate letters between two strings:
Take two strings, and for each character in the first string, check if it also exists in the second string.

21. Display the square of numbers from 1 to 10:
Loop through the numbers 1 to 10, square each one, and display the result.