Functions

1. Define a Sum Function which accepts variable number of integers as an arguments.
2. WAF to find factorial of a positive number. Return -1 if input to the function is any invalid input.
3. Using for loop
4. Using while loop
5. Using recursive function (note: recursive function are computationally expensive)
6. WAF to swap two numbers.
7. WAF to implement basic calculator.
8. Write a lambda function which find square of a number
9. Declare a List with Numbers from 1 to 100 using List Comprehension. Use the lambda and filter function to filter all even numbers.
10. ['male','female','male','female','male','female','female','female'] => Replace 'male' with 0 and 'female' with 1 using lambda function and map function
11. Find Fibonacci series for given length using lambda and reduce function
12. Find intersection of two arrays using lambda and filter function
13. WAF to check the type of the data with the signature as follow: def find_type(var):
    i. Examples
        1. Input1: var = True=> output1 = Bool type
        2. Input2: var = 4 => output2 = int type
        3. Input3: var = [3, 4, 5, 6]=> output3 = list

14. WAF to check if a number is even or odd using lambda expression.

15. WAF to return appropriate message as follows:
    If the sequence is in ascending order: return "Ascending order"
    If the sequence is in descending order: return "Descending order"
    Else: "Random order"

    Test case sequences:
    (10,10,20,30,20,20)
    (20,20,30,30,30,40,40,40)

(20,20,30,30,30,29,40,40,40)
(20,20,30,30,30,40,40,40,10)
(20,20,20,30,30,30,40,40,40)
(20,20,30,30,30,40,40,40,31)
(40,40,40,30,20,20,20)
(40,40,40,30,20,20,20,10)
(40,40,40,30,10,20,20)