ASSIGNMENT 1
FUNCTIONS AND LISTS

NOTE:

- **No need to submit anywhere, just keep track of all the PDF you made in a specific folder.**
- **Compare your solution with the solution I'll provide, in case of doubts, kindly reach out to me.**

Q1. Write a function named celsius_to_fahrenheit that converts Celsius to Fahrenheit and prints the result. (Formula: (Celsius * 9/5) + 32 = Fahrenheit)

Q2. Create a function named simple_calculator that takes three parameters: two numbers and an operation (addition or subtraction represented by '+' or '-'), and prints the result of the operation.

Q3. Write a function named check_number that takes a number and prints whether it is positive, negative, or zero.

Q4. Write a function named is_odd_even that determines if a number is odd or even without using the modulo operator (%). Hint: Use division or subtraction.

Q5. Write a function named calculate_interest that takes the principal, rate of interest, and time as parameters and prints the simple interest calculated.

Q6. Create a function that takes three numbers as parameters and returns the largest among them. Also if no arguments are passed, make sure the parameters take default value as **None** and return answer as **-1**.

```
# Make a function largest as per the
# question requirement

print(largest(3, 4, 1))  # Output 4
print(largest())  # Output -1
```

Q7. Implement a function that takes two parameters, **base** and **exponent**, and **returns** the result of raising the base to the power of the exponent.

Q8. Ask 3 numbers from user. Make a function which returns the **middle** of those 3 numbers. Then make a function to check if that **middle number** is divisible by both 3 and 4. Make 2 functions for reusability.

Q9. Write a Python program that takes four numbers from the user. Implement a function to find the average of the first three numbers. Then, create another function to check if the average is greater than or equal to the fourth number. Make sure to use these two functions to determine and print whether the average is greater than or equal to the fourth number or not.

```
Enter the first number: 1
Enter the second number: 54
Enter the third number: 23
Enter the fourth number: 47

# Output
The average of 1, 54, and 23 is: 26.0
The average is less than 47.
```

Q10. Make a list of your own. Print the whole list in reverse using FOR loop and WHILE loop.

Q11. Make a list of your own. Print all the numbers divisible by 3 and 4 in that list.

Q12. Make a list of your own. Count how many numbers are divisible by 5.

Q13. Make a list of your own. Calculate the length of that list **without using len()** function.

Q14. Create a function **countOddEven** that accepts an List of Integers and print how many even and odd numbers are there.

```
my_list = [34, 11, 91, 59, 33, 22]

countOddEven(my_list)

# Output
Total even numbers = 2
Total odd numbers = 4
```

Q15. Create a function **sumCountOddEven** that accepts an List of Integers and calculate sum of even and odd numbers.

```
my_list = [34, 11, 91, 59, 33, 22]
sumCountOddEven(my_list)

# Output
Even numbers sum = 56
Odd numbers sum = 194
```

Q16. Create a function **findLargest** that accepts an List of Integers and returns the largest number from the list.

```
my_list = [34, 11, 91, 59, 33, 22]

x = findLargest(my_list)
print(x)

# Output
91
```

Q17. Create a function **findSmallest** that accepts an List of Integers and returns the smallest number from the list.

```
my_list = [34, 11, 91, 59, 33, 22]

x = findSmallest(my_list)
print(x)

# Output
11
```