Basic Level Set

1. Write a program in Python to perform the following operation:
   - If a number is divisible by 3 it should print "Brudite" as a string
   - If a number is divisible by 5 it should print "Python Training" as a string
   - If a number is divisible by both 3 and 5 it should print "Brudite - Python Training" as a string.
2. Write a program that accepts a string as an input from the user and calculate the number of digits and letters.
   Hello123
   Alph -> 5 and number -> 3

3. Write a Python program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:
   Percentage >= 90% : Grade A
   Percentage >= 80% : Grade B
   Percentage >= 70% : Grade C
   Percentage >= 60% : Grade D
   Percentage >= 40% : Grade E
   Percentage < 40% : Grade F
4. Write a Python program to find the sum of all odd numbers between two given numbers.
   Start = 1, stop = 10
   Sum of odd numbers: 25
5. Write a Python program to check if a given number is a perfect number.
6. Write a Python program to check if a string is an anagram of another string.
   string1 = "listen", string2 = "silent"
   Output: True
7. Write a Python program to calculate the LCM (Least Common Multiple) of two numbers.
   number1 = 12, number2 = 18
   LCM of 12 and 18 is: 36
8. Write a Python program to count the frequency of each element in a list.
   input_list = [1, 2, 3, 2, 4, 1, 2, 4, 5]
   Frequency count: {1: 2, 2: 3, 3: 1, 4: 2, 5: 1}
9. Write a Python program to reverse the order of words in a given sentence.
   input_sentence = "Hello, World! Welcome to Python programming."
   Output after reverse = "programming. Python to Welcome World! Hello,"
10. Write a Python program to calculate the sum of digits of a given number until the sum becomes a single-digit number.
    Sample Input: num = 9876
    Sample Output: Sum_of_digits = 3
11. Write a Python program to reverse a number using a while loop.
    Sample Input: num = 12345
    Sample Output: revnum = 54321

Medium Level Set

1. Write a Python program to find the common elements between two lists.
    Sample Input: l1 = [1, 2, 3, 4, 5] and l2 = [4, 5, 6, 7, 8]
    Sample output: [4, 5]

2. Create a function that takes a list and returns a new list with unique elements of the first list.
    Sample Input: list1 = [1, 2, 2, 3, 4, 4, 5, 5]
    Sample Output: list2 = [1, 2, 3, 4, 5]

3. Given an array of N integers, and an integer K, find the number of pairs of elements in the array whose sum is equal to K.
    Sample Input: arr = [1, 2, 3, 4, 5], k = 6
    Sample Output: Pair count: 2

4. Given an array of size N The task is to rotate array by D elements towards right
    Sample Input: arr = [1, 2, 3, 4, 5], D = 2
    Sample Output: arr after rotation = [4, 5, 1, 2, 3]

5. You are developing a program that analyzes weather data. Write a Python function that takes a list of temperature readings for a specific location and determines the average temperature, highest temperature, and lowest temperature.
    Input
    temperature_readings = [25, 28, 21, 24, 27]
    Output:
    Average Temperature: 25.0
    Highest Temperature: 28
    Lowest Temperature: 21

6. Write a Python program to check if a number is a power of two using recursion.

7. Write a Python function that finds the median of a list of numbers.
    Sample Input: number_list = [7, 2, 5, 1, 9, 3]
    Sample Output: Median: 4.5

8. Write a Python function that counts the number of vowels in a given string.
    Sample Input: string = "Hello, World!"
    Sample Output: Number of vowels: 3

9. Write a Python program that executes an operation on a list and handles an IndexError exception if the index is out of range.

10. We are making n stone piles! The first pile has **n** stones. If **n** is even, then all piles have an even number of stones. If **n** is odd, all piles have an odd number of stones. Each pile must have more stones than the previous pile but as few as possible. Write a Python program to find the number of stones in each pile.

Sample Input: n = 7
Sample Output: Stones in a single pile = [2, 4, 6]

11. Write a Python program to create a list of given strings individually of the list using Python map function.
    Eg.
    Input:
    ['Red', 'Blue', 'Black', 'White', 'Pink']
    Output:
    [['R', 'e', 'd'], ['B', 'l', 'u', 'e'], ['B', 'l', 'a', 'c', 'k'], ['W', 'h', 'i', 't', 'e'], ['P', 'i', 'n', 'k']]

12. Create a login page backend to ask users to enter the username and password. Make sure to ask for a Re-Type Password and if the password is incorrect give chance to enter it again but it should not be more than 3 times.

13. Write a Python program to find if a given string starts with a given character using Lambda.
    Sample input: input_string = "Hello, World!", given_char = "H"
    Sample Output: True