



Q. 1 Write a Python program to multiply two numbers by repeated addition  
e.g.  $6*7 = 6+6+6+6+6+6+6$

Q.2 Write a Python function that takes a string as parameter and returns a strings with every successive repetitive character by? e.g. school may become scho?l.

Q. 3 Write a Python program which takes list of numbers as input and finds:

- a) The largest number in the list
- b) The smallest number in the list
- c) Product of all the items

Q. 4 Write a Python function that takes two lists and returns True if they have at least one common item.

Q. 5 Write a Python function that takes a string as parameter and returns a string with every successive repetitive character replaced by & e.g. Parameter may become Par&met&r.

Q. 6 Write a Python function to find the sum of all numbers between 100 and 500 which are divisible by 2.

Q. 7 Write a Python function to get two matrices and multiply them. Make sure that number of columns of first matrix = number of rows of second

Q. 8 Write a Python program to print all the prime numbers in the given range. An Internet. A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself.

Q. 9 Write a Python function which takes list of integers as input and finds:



- a) The largest positive number in the list
- b) The smallest negative number in the list
- c) Sum of all positive number in the list

Q. 10 Write a python program to print the sum of series  $1^3+2^3+3^3+4^3+.....+n^3$  till n-th term. N is the value given by the user

Q. 11 Write a python program to find the successor and predecessor of the largest element in and array.

Q. 12 Write a python program that takes list of numbers as input from the user and produces a cumulative list where each element in the list at any position n is sum of all elements at positions upto n-1.

Q. 13 Write a program to print all Armstrong numbers in a given range. Note : An Armstrong number is a number whose sum of cubes of digits is equal to the number itself e.g.  $370 = 3^3+7^3+0^3$

Q. 14 write a functions to obtain sum n terms of the following series for any positive integer value of X  $X+X^3/3! +X^5/5!! +X^7/7!+.....$

Q. 15 Write a program to multiply two numbers by repeated addition e.g  $6*7 = 6*6*6*6*6*6*6$

Q. 16 Write a function to obtain sum n terms of the following series for any positive integer value X  $1+x/1!+x^2/2!+x^3/3+....$



Q. 17 Accept the name of the laborer and no. of hours worked. Calculate and display the wages. The program should run for N number of laborers as specified by the user.

Q. 18 Write a program to compute the wages of a daily laborer as per the following rules:-

Hours worked rate applicable upto first 8 hrs rs 100/-

a) For next 4 hrs Rs 30/ per hr extra

b) For next 4 hrs Rs 40/ per hr extra

c) For next 4 hrs Rs 50/ per hr extra

a) For rest 60/ per hr extra

Q. 19 Write a function that takes a string as parameter and returns a string with every successive repetitive character replaced by? e.g. school may become scho?l.

Q.20 Write a program that takes in a sentence as input and displays the number of words, number of capital letters, no. of small letters and numbers of special symbols.

Q. 21 Write a python program that takes list of numbers as input from the user and produces a cumulative list where each element in the list at any position n is sum of all elements at positions upto n-1.

Q. 22 Write a Python function that takes two lists and returns True if they have at least one common item.



Q. 23 Write a python program to combine two dictionary adding values for common keys.

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d1 = { 'a':100, 'b' :200, 'c' :300} d2 = {'a':300, 'b':200 'd':400}
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Sample output Counter({'a':400, 'b':400, 'd':400, 'c':300})

Q.24 Write a program which takes list of numbers as input and finds:

- a) The largest numbers in the list
- b) The smallest numbers in the list
- c) Product of all the items in the list

Q. 25 Write a program that takes sentence as input from the user and computes the frequency of each letter. Use a variable of dictionary type to maintain and show the frequency of each letter.

Q.26 Write a program to input two numbers as input and compute the greatest common divisor

Q. 27 Apply recursive cell to do following

- a) Product of two numbers using repetitive addition
- b) Print Fibonacci series up to term n

Q. 28 Write a function that takes two filenames f1 and f2 as input. The function should read the contents of f1 line by line and write them onto f2.

Q. 29 Write a function that reads the contents of the f3.txt and counts the number of alphabets, blank spaces, lowercase letters, number of words starting with a vowel and number of occurrences of a word "hello".



Q.30 Write a program to replace 'a' with 'b', 'b' with 'c' , .....,'z' with 'a' and similarly for 'A' with 'B', 'B' with 'C', ..... , 'Z' with 'A' in a file. The other characters should remain unchanged.

Q. 31 Write a NumPy program to find the most frequent value in an array.

Q.32 Take two NumPy arrays having two dimensions. Concatenate the arrays on axis 1.

Q.33 Python Program for n-th Fibonacci number.

Q. 34 Write a program to print all Armstrong number in given range.

Q.35 Write a function that takes a string as parameter and returns a string with every successive repetitive character replaced by '!'

Example: SCHOOL may become SCH!!L

Q.36 (i) Write a program to check if an element in the list or not. If that element does not exist then add that particular element in the list.

(ii) Write a program to check if there is a duplicate element present in the list or not. If that is present in the list then remove it from the list.

Q. 37 Create a list variable L and ask the user to input 10 integer elements into the list. Write Python code to perform below given operations on the list( Do not use built-in list functions):

a) Create a new list L1 by adding a number 10 to every element in the lists L using list comprehension. Say L contains 5,15,25 then L1 contains 15,25,35

b) Find total no. of positive and negative integers in the list



c) Remove the repetitive items from the list by storing all the unique elements in a new list.

d) Create a new dictionary by counting the frequency of every element in the list. Store the list elements as keys of dictionary and their frequencies as the value.

Q. 38 (i) Write a python program to display Fibonacci Sequence (First 20 term) using Recursion.

(ii) Write a python program to find factorial of a number using Recursion.

Q. 39 Write a Python program to sort python Dictionaries by Key or Value.

Q. 40 Write a python to find the power of a number using recursion.

Q. 41 Write a python program to multiply two numbers by repeated addition.

Example:  $6*3 = 6+6+6$

Q. 42 Write a python program to compute Fibonacci Series using function.

Q. 43 Write a python program to that takes a sentences as input and displays the number of words, number of capital letter, number of small letter and number of special symbol in the inputted sentence.

Q. 44 Write a python function that takes two lists and returns True if they have at least one common item.

Q. 45 Write a python program to find whether a given number is Armstrong number or not.



Q. 46 Write Python program

- (i) To find sum of all odd numbers till 100.
- (ii) To find the sum of any five integers.
- (iii) To find the sum of square root of any three numbers.

Q. 47 Write a python program to calculate number of days between two dates.

Sample dates: ( 2023,7,23) , (2023,7,30)

Q. 48 Write a python program to enter a number in python and print its octal and hexadecimal equivalent.

Q. 49 Write a python program to test whether a given year is leap year or not.

Q.50 Write a python program to calculate number of days between two dates.

Sample dates: (2023,6,23) , (2023,7,13)

Q. 51 Write a Python program to print the sum of series  $1^3+2^3+3^3+4^3+??..+n^3$  till n-th term. N is the value given by the user.

Q. 52 Write a program in Python to find the maximum and minimum K elements in Tuple.

Q. 53 Write a Python program to find a factorial of a given number.

Q. 54 Write a Python Program to:

- (i) sort Python Dictionaries by value.
- (ii) find the sum of all items in a dictionary

Q. 55 Write a python function to find the sum of all numbers between 100 and 500 which are divisible by 2.



Q . 56 Write a python program to :

- i. Find factorial of given number with recursion.
- ii. Find the power of a number using recursion.

Q. 57 Write a python program to:

- i. Find the odd numbers in a array.
- ii. Write a python program to find the sum of the digits of an integer while loop.

Q. 58 Write a python function to get two matrices and multiply them. Make sure that number of columns of first matrix = number of rows of second.

Q. 59 By using Python functions design a small calculator program having four operations like addition, subtraction, multiplication and divisions.

Q.60 Write a python program to calculate number of days between two dates.

Sample dates : (2023,7,14) , (2023,7,25)

Q. 61 Given two strings, write a Python program to get a single string where the two strings will be separated by a space after swapping the first two characters of each string.

For Example:

Sample Strings: 'abc', 'xyz'

Expected Result : 'xyc abz'

Q. 62 Write a Python program to print following pyramid patterns in Python.

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Q. 63 Write a python function to find the sum of all numbers between 100 and 500 which are divisible by 2.

Q. 64 Write a Python program to reverse a string.

Q. 65 Write a python program to print digit pattern for a given input

For Example

Input : 41325

Output

```
| ****
| *
| ***
| **
| *****
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Q. 66 Write a Python program to print the sum of series  $1^3+2^3+3^3+4^3+??..+n^3$  till n-th term. N is the value given by the user.

Q. 67 Write a program to count even and odd numbers in a list; for example:

Input: list1 = [4,7,5,64,13,18,22,29,37] the output is count of even numbers is 4 and odd numbers is 5.



Q. 68 Write a Python program to show the character and count of its repetition count repeated characters in a string.

Sample String : 'thequickbrownfoxjumpoverthelazydog'

o 4  
e 3  
u 2  
h 2  
r 2  
t 2

Q. 69 Write a python program that takes a sentence as input and display the number of words number of capital latter, number of small letter and number of special symbols in the inputted sentence.

Q.70 Write a Python program to reverse a list.

For example:

Input: list = [10,11,12,13,14,15]

Output : [15,14,13,12,11,10]

Q.71 Write a Python Program to multiply two matrices using nested loops and also perform transpose of the resultant matrix.

72. Write a Python program to prompt for a score between 0.0 and 1.0. if the score is out of range, print an error. If the score is between 0.0 and 1.0 print a grade using the following table:

Score	Grade
$\geq 0.9$	A
$\geq 0.8$	B
$\geq 0.7$	C
$\geq 0.6$	D
$< 0.6$	F