PROBLEM 1

Read an integer N. For all non-negative integers i < N, print i^2.

Test Case 1

Input: 5

Output : [0, 1, 4, 9, 16]

Test Case 2

Input: 4

Output: [0, 1, 4, 9]

PROBLEM 2

You have been given a string. You need to remove all the duplicates from the string. The final output string should contain each character only once. The respective order of the characters inside the string should remain the same. You can traverse the string only once.

Test Case 1:

Input: abaabbbacd

Output: abcd

Test Case 2:

Input: ddeefggh

Output: defgh

PROBLEM 3

Write a program to display only those numbers from a list that satisfy the following conditions

- **The number must be divisible by five**

- **If the number is greater than 150, then skip it and move to the next number**
- **If the number is greater than 500, then stop the loop**

Test Case 1:

Input : 12, 75, 150, 180, 145, 525, 50

Output : [75, 150, 145]

Test Case 2:

Input : 14, 85, 625, 75

Output : [85]

PROBLEM 4

Write a program to count the total number of digits in a number using a while loop

Test Case 1:

Input: 75869

Output: 5

Test Case 2:

Input: 654

Output: 3

PROBLEM 5

Write a program to calculate the sum of series up to n term. For example, if n = 5 the series will become 2 + 22 + 222 + 2222 + 22222 = 24690

Test Case 1:

Input : 5

Output : 24690

Test Case 2:

Input: 6

Output: 246912

PROBLEM 6

Write a program to Reverse below given numbers without slicing

Test Case 1:

Input: 745633

Output: 336547

Test Case 2:

Input: 65346

Output: 64356

PROBLEM 7

Write a program to Use a loop to display elements from a given list present at odd index position

Test Case 1:

Input: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Output: [20, 40, 60, 80, 100]

Test Case 2:

Input: 23, 46, 69, 92, 115

Output: [46, 92]

PROBLEM 8

Write a Python program to find the median of three values.

Test case 1:

Input:

Input first number: 15

Input second number: 26

Input third number: 29

Output : 26

Test case 2:

Input:

Input first number: 10

Input second number: 20

Input third number: 5

Output : 10

PROBLEM 9

Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.

Test case 1:

Input = 4

output = 24

Test case 2:

Input = 2

output = 2

PROBLEM 10

Define a function which counts vowels and consonants in a word.

Test case 1:

Input : pythonlobby

Output :

vowel : 2

Consonants: 9

Test case 2:

Input : sabudhfoundation

Output :

vowel : 7

Constants: 9