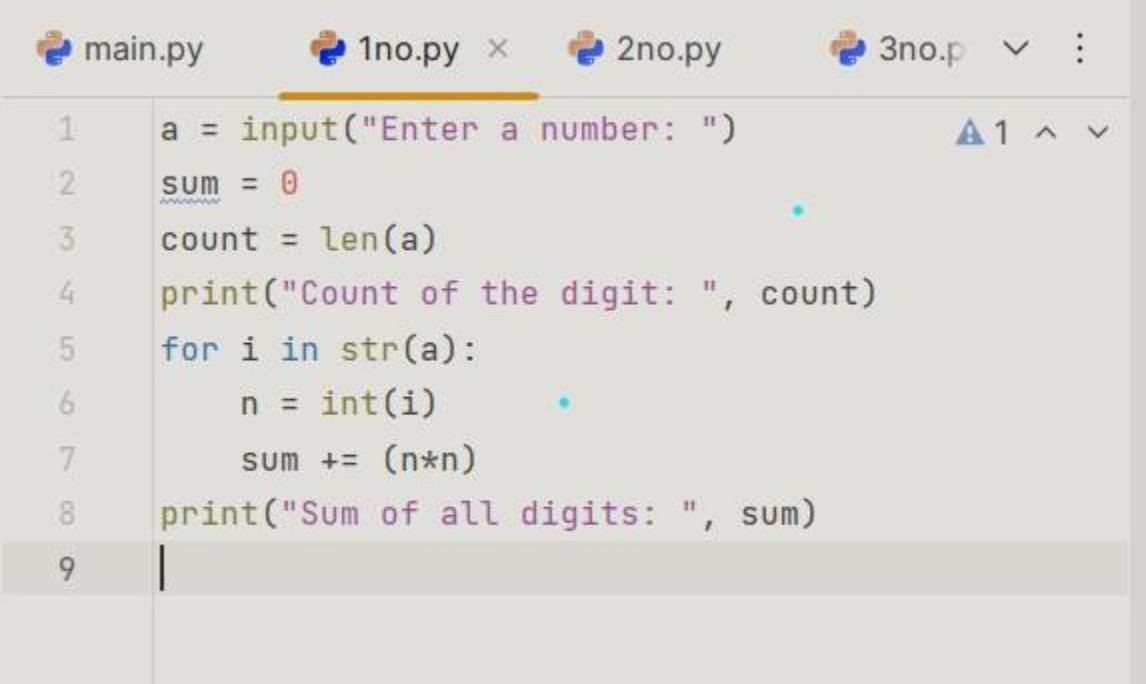
Problem 1

Problem Name: Count the digit then separate all numbers and multiply them in same number and sum all of them number.

Code:



Output:

```
C:\Users\Asus\PycharmProjects\pythonProject\venv\Scripts\python
Enter a number: 122343
Count of the digit:  6
Sum of all digits:  43

Process finished with exit code 0
```

Discription:

1. At first take a string input.
2. Count the size of the string, by this we can know how many digits are in there.
3. Then in a loop we count the square of each int value of string and sum it.
4. Lastly print the total sum of all digits.

Problem 2

Problem Name: Given a number. Find the divisor of the number. Then multiply the divisor with 10. If divisors are even then sum them, and if divisors are odd then subtraction of them. And print the final summation of the number.

Code:

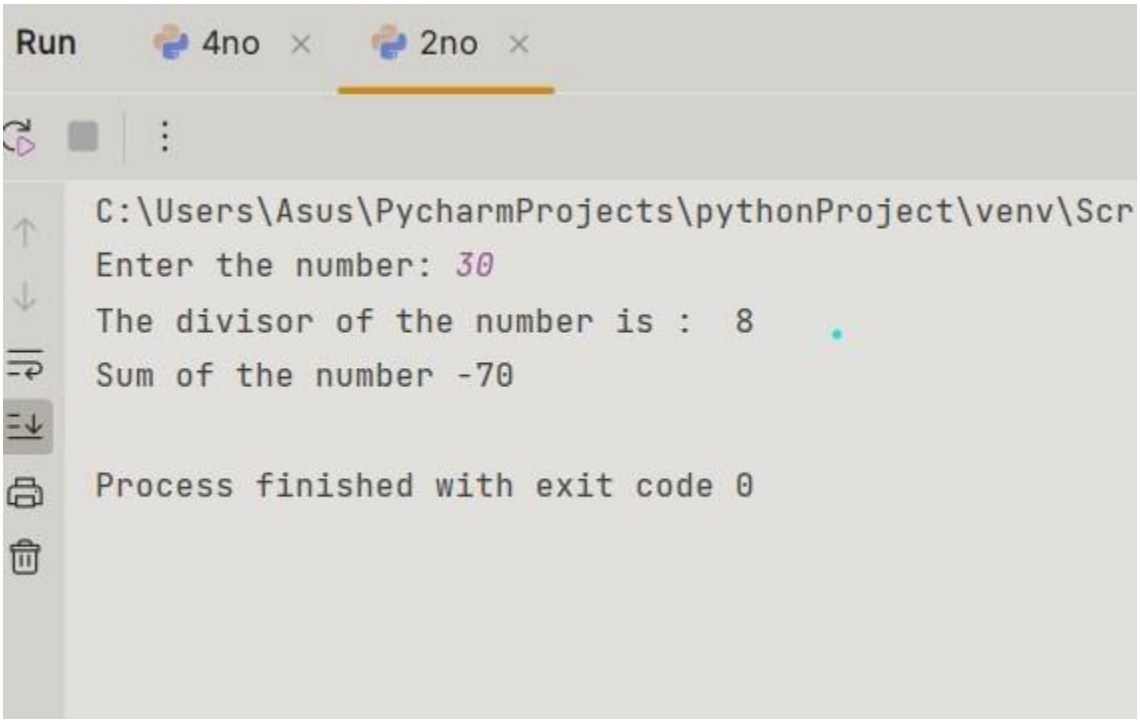
main.py | 1no.py | 2no.py | 3no.py | 4no.py

```
x = int(input("Enter the number: "))
sum = 0
count = 0
divisor = []
for i in range(1, int(x/2)+1):
    if(x%i==0):
        count += 1
print("The divisor of the number is : ",count+1)
j = 0
for i in range(2, x):
    if(x%i==0):
        if (j % 2 == 0):
            sum += i * 10
            j+=1
        else:
            sum -= i * 10
            j+=1;

print("Sum of the number",sum)

```

Output:



Discription:

1. At first take an int value.
2. Then count the divisor of the number using a loop and store the value in count.
3. Without divisor 1 and the x(number) we calculate the value of the index is odd or even. If it is odd, then we multiply it with 10 and subtract from the sum. Else we add the value with multiply by 10.
4. Then print the total summation after all operations.

Problem 3

Problem Name: Given a string. Find the distinct number and count the distinct number in the string. Print them in a list.

Code:

main.py 1no.py 2no.py 3no.py

```
1  list = [0] * 15
2  a = int(input("Enter a number: "))
3  while a!=0:
4      b = a % 10
5      a = a // 10
6      list[b] += 1
7  print("The list is: ", list)
```

Output:

Run 4no 3no

```
C:\Users\Asus\PycharmProjects\pythonProject\venv\Scripts\python
Enter a number: 124356
The list is:  [0, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0]

Process finished with exit code 0
```

Discription:

1. Take a list with 15 elements, each initialize to 0.
2. Then take a user input number.
3. Inside the loop, the line b = a % 10 calculates the remainder when n is divided by 10, giving us the last digit of n.
4. The line a = a // 10 uses integer division to update n by removing the last digit. The corresponding element in list1 at index x is incremented by 1 using the line list1[b] += 1. This counts the occurrence of digit a in the number.
5. Then simply print the list.

Problem 4

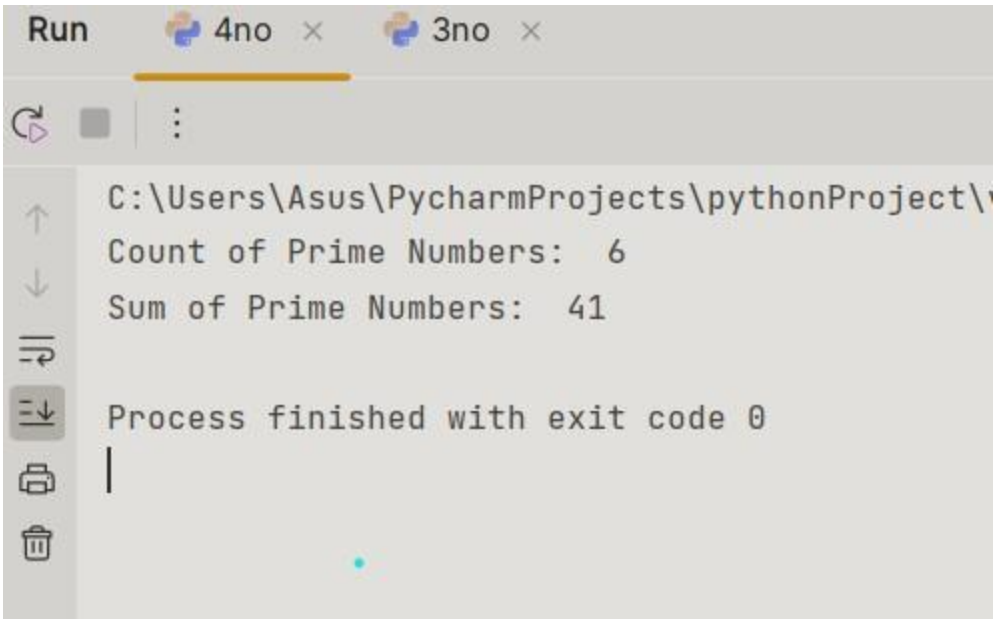
Problem Name: Given a list. Count prime number in the given list. Then print the sum all prime number in the list.

Code:

main.py | 1no.py | 2no.py | 3no.py | 4no.py | 5no.py

```
num = [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
1 usage
def prime(n):
    if(n <= 1):
        return False
    for i in range (2, int(n**0.5)+1):
        if(n%i==0):
            return False
    return True
1 usage
def count_sum(n):
    count = 0;
    sum = 0;
    for n in num:
        if(prime(n)):
            count += 1;
            sum += n;
    return count, sum
count, sum = count_sum(num)
print("Count of Prime Numbers: ",count)
print("Sum of Prime Numbers: ",sum)
```

Output:



Discription:

1. Firstly, we take a list of numbers.
2. Then create prime function and count_sum function.
3. For each number, it calls the prime function to check if it is prime.
4. If it is prime, then incrementing the value of count and add to sum the number.
5. The count_and_sum function is called with the list, and the returned count and sum of prime numbers are stored in count and sum variables, respectively.
6. Then print the count and sum.

Problem 5

Problem Name: Given a string list. Check the list to find if the string is palindrome or not. And the length of the string is Greater than 3.

Code:

main.py 1no.py 2no.py 3no.py 4no.py 5no.py test1.py

```
1 usage
def palindrom(l):
    z = len(l)
    for i in range(z):
        n = len(l[i])
        m = n - 1
        x = int(n / 2)
        flag = 0
        if(n>3):
            for j in range(x):
                if (l[i][j] != l[i][m]):
                    flag = 1
                m = m - 1
            if (flag):
                l2.append(l[i])
            else:
                l1.append(l[i])
        else:
            l3.append(l[i])
    print("Palindromes :",l1)
    print("Not Palindromes :",l2)
    print("String is not greater than 3 :", l3)
l = ["17171", "13121", "55355","MEUE", "11111", "EMON", "AAA", "151", "777", "123567" ]
l1 = []
l2 = []
l3 = []
palindrom(l)
```

Output:

Run 5no 3no

```
C:\Users\Asus\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\As
Palindromes : ['17171', '55355', '11111']
Not Palindromes : ['13121', 'MEUE', 'EMON', '123567']
String is not greater than 3 : ['AAA', '151', '777']

Process finished with exit code 0
```

Discription:

1. At first create a palindrome function.

2. Then input a user list of string.
3. Then checking the string is greater than 3 and the string is palindrome or not.
4. If the string is palindrome the append it to the l1.
5. If the string is not palindrome, then append to the l2.
6. If the string length is less than or equal to 3 then append it to l3.
7. Then simply call the function and print the lists.