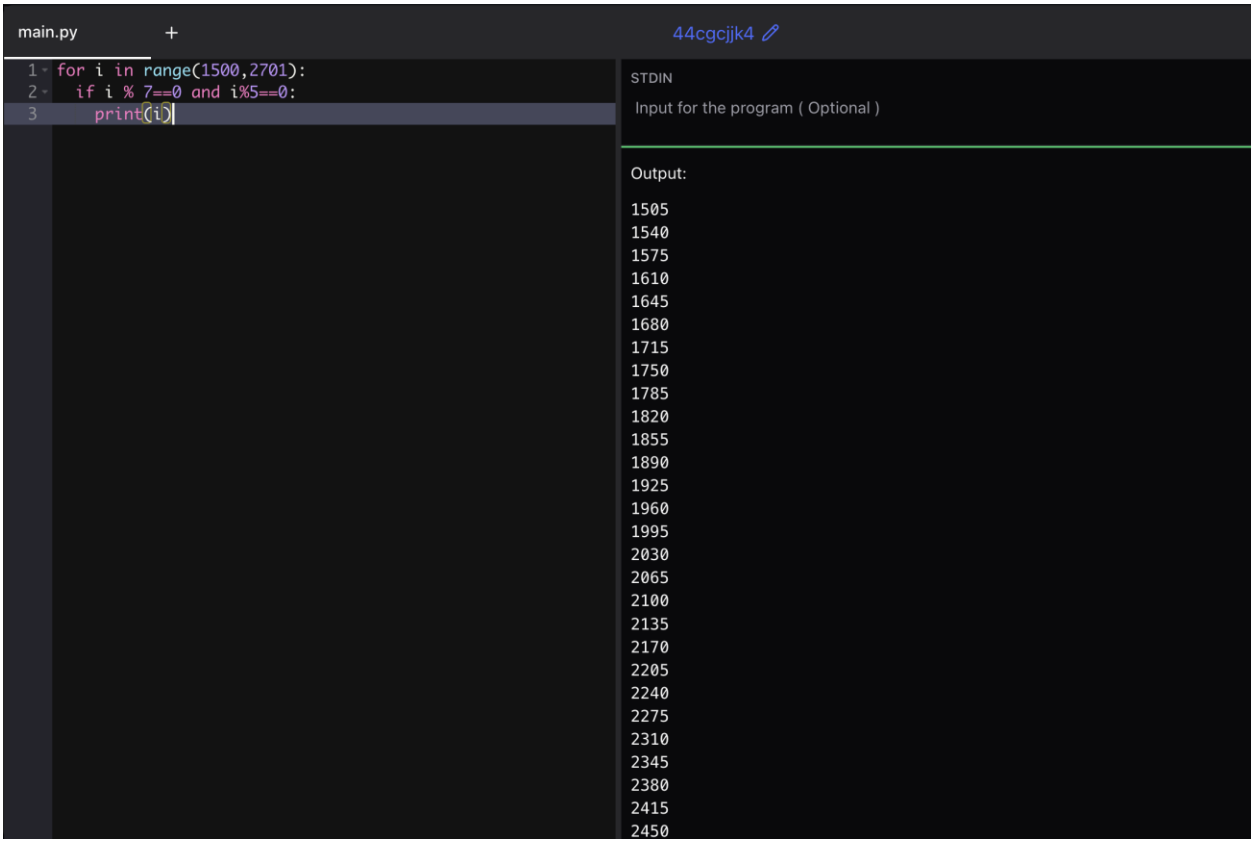
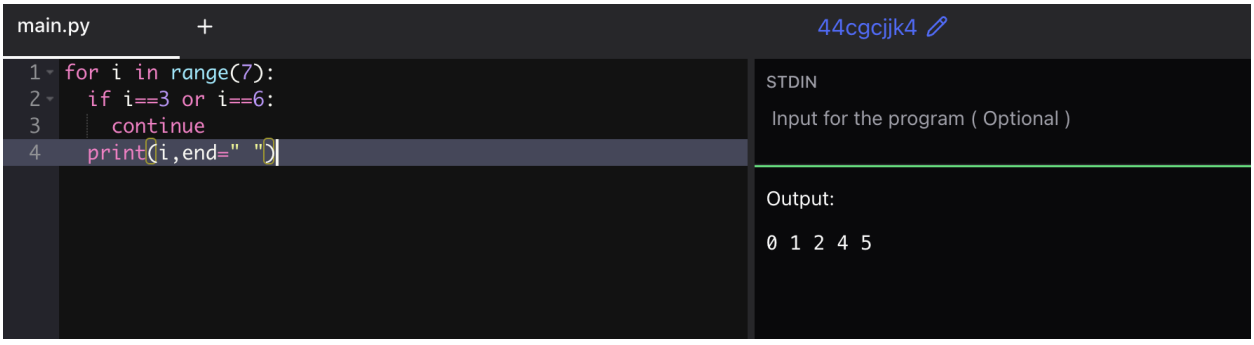
1. Write a Python program to find those numbers which are divisible by 7 and multiple of 5, between 1500 and 2700 (both included)



2. Write a Python program that prints all the numbers from 0 to 6 except 3 and 6. Note : Use 'continue' statement. Expected Output : 0 1 2 4 5



3. Write a Python program which iterates the integers from 1 to 50. For multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz". Sample Output : fizzbuzz 1 2 fizz 4 Buzz

main.py +

44cgcjjk4

```
for i in range(1,51):
  if i%3==0 and i% 5==0:
    print("FizzBuzz")
  elif i%3==0:
      print("Fizz")
  elif i%5==0:
      print("Buzz")
  else:
    print(i)
```

STDIN

Input for the program (Optional)

Output:

```
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
Fizz
22
23
Fizz
Buzz
26
Fizz
28
```

4. Write a Python program to check a triangle is equilateral, isosceles or scalene. Note : An equilateral triangle is a triangle in which all three sides are equal. A scalene triangle is a triangle that has three unequal sides. An isosceles triangle is a triangle with two equal sides. Expected Output: Input lengths of the triangle sides: x: 6 y: 8 z: 12 Scalene triangle

main.py +

44cgcjjk4

```
x=int(input("x: "))
y=int(input("y: "))
z=int(input("z: "))
if x==y==z:
  print("equilateral triangle")
elif x==y or y==z or x==z:
  print("isosceles triangle")
else:
  print("scalene triangle")
```

STDIN

```
6
8
12
```

Output:

```
x: y: z: scalene triangle
```

5. Write a Python program to calculate the sum and average of n integer numbers (input from the user). Input 0 to finish

main.py +

44cgcjjk4

```
total = 0
count = 0
while True:
    try:
        num = int(input())
        if num == 0:
            break
        total += num
        count += 1
    except EOFError:
        break
print(total)
if count > 0:
    print(total/count)
else:
    print(0)
```

STDIN

55

Output:

55
55.0

6. Write a Python program to construct the following pattern, using a nested loop number. 1 22 333 4444 55555 666666 7777777 88888888 999999999

main.py +

44cgcjjk4

```
for i in range(1,10):
  print(str(i)*i)
```

STDIN

55

Output:

1
22
333
4444
55555
666666
7777777
88888888
999999999

7. Write a Python program that counts the number of elements within a list that are greater than 30.

main.py +

44cgcjjk4

```
1 list=[1,34,29,40,15,67]
2 count=0
3 for i in list:
4   if i>30:
5     count+=1
6 print(count)
```

STDIN

Input for the program (Optional)

Output:

3

8. Take values of length and breadth of a rectangle from user and check if it is square or not

main.py +

44cgcjjk4

```
1 x=int(input())
2 y=int(input())
3 if x==y:
4   print("square")
5 else:
6   print("Not square")
```

STDIN

4
4

Output:

square

9. A shop will give discount of 10% if the cost of purchased quantity is more than 1000. Ask user for quantity Suppose, one unit will cost 100. Judge and print total cost for user.

main.py +

44cgcjjk4

```
1 quantity=int(input())
2 cost=quantity*100
3 discount=cost*0.10
4 if cost>1000:
5   print("you have a discount:",discount)
6   print("total prise:",cost-discount)
7 else:
8   print("No discount")
```

STDIN

11

Output:

```
you have a discount: 110.0
total prise: 990.0
```

10. A company decided to give bonus of 5% to employee if his/her year of service is more than 5 years. Ask user for their salary and year of service and print the net bonus amount.

main.py +

44cgcjjk4

```
1 salary=int(input())
2 year=int(input())
3 bonus=salary*0.05
4 if year>5:
5   print("bonus:",bonus)
6 else:
7   print("No bonus")
8 print("updated salary:",bonus+salary)
```

STDIN

```
3000
6
```

Output:

```
bonus: 150.0
updated salary: 3150.0
```

11. A school has following rules for grading system: a. Below 25 - F b. 25 to 45 - E c. 45 to 50 - D d. 50 to 60 - C e. 60 to 80 - B f. Above 80 - A Ask user to enter marks and print the corresponding grade.

main.py +

44cgcjjk4

```
1  marks = int(input())
2  if marks < 25:
3      print("F")
4  elif marks <= 45:
5      print("E")
6  elif marks <= 50:
7      print("D")
8  elif marks <= 60:
9      print("C")
10 elif marks <= 80:
11     print("B")
12 else:
13     print("A")
14
```

STDIN

```
85
```

Output:

```
A
```

12. A student will not be allowed to sit in exam if his/her attendence is less than 75%. Take following input from user Number of classes held Number of classes attended. And print percentage of class attended Is student is allowed to sit in exam or not.

main.py + 44cgcjjk4

```
held = int(input())
attended = int(input())
per=(attended/held)*100
if per>=75:
  print("student is allowed to sit in exam")
else:
  print("student is not allowed to sit in exam")
```

STDIN
100
55

Output:
student is not allowed to sit in exam

13. Take 10 integers from keyboard using loop and print their average value on the screen.

main.py + 44cgcjjk4

```
nums = list(map(int, input().split()))
average = sum(nums) / len(nums)
print(average)
```

STDIN
1 2 3 4 5 6 7 8 9 10

Output:
5.5

14. Print multiplication table of 24, 50 and 29 using loop.

main.py + 44cgcjjk4

```
num=[24,50,29]
for n in num:
  print(" ")
  for i in range(1,11):
    print(n,"x",i,"=",n*i)
```

STDIN

Output:

```
24 x 1 = 24
24 x 2 = 48
24 x 3 = 72
24 x 4 = 96
24 x 5 = 120
24 x 6 = 144
24 x 7 = 168
24 x 8 = 192
24 x 9 = 216
24 x 10 = 240

50 x 1 = 50
50 x 2 = 100
50 x 3 = 150
50 x 4 = 200
50 x 5 = 250
50 x 6 = 300
50 x 7 = 350
50 x 8 = 400
50 x 9 = 450
50 x 10 = 500

29 x 1 = 29
29 x 2 = 58
29 x 3 = 87
29 x 4 = 116
29 x 5 = 145
```

15. Take integer inputs from user until he/she presses q (Ask to press q to quit after every integer input). Print average and product of all numbers.

main.py + 44cgcjjk4

```
total = 0
product = 1
count = 0
while True:
    try:
        val = input()
        if val == 'q':
            break
        num = int(val)
        total += num
        product *= num
        count += 1
    except EOFError:
        break
if count > 0:
    print("Average:", total / count)
    print("Product:", product)
```

STDIN
3
q

Output:

```
Average: 3.0
Product: 3
```

16. Take inputs from user to make a list. Again take one input from user and search it in the list and delete that element, if found. Iterate over list using for loop.

main.py + 44cgcjjk4

```
list=[]
n=int(input())
for i in range(n):
  list.append(i)
key=int(input())
for i in list:
  if i==key:
    list.remove(i)
print(list)
```

STDIN
11
5

Output:

```
[0, 1, 2, 3, 4, 6, 7, 8, 9, 10]
```

17. Using range(1,101), make three list,
    one containing all even numbers
    one containing all odd numbers
    One containing only prime numbers.

main.py 44cdnewsh AI PYTHON RUN

```
even=[]
odd=[]
prime=[]
for i in range(1,101):
  if i%2==0:
    even.append(i)
  if i%2==1:
    odd.append(i)
  if i > 1:
        count = 0
        for j in range(1, i + 1):
            if i % j == 0:
                count += 1
        if count == 2:
            prime.append(i)
print("even:",even)
print("odd:",odd)
print("prime:",prime)
```

STDIN
Input for the program (Optional)

Output: 10 ms | 9.5 MB

```
even: [2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52,
odd: [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 5
prime: [2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97]
```

18. From the two list obtained in previous question, make new lists, containing only numbers which are divisible by 4, 6, 8, 10, 3, 5, 7 and 9 in separate lists.

main.py 44cgcjjk4 AI PYTHON RUN

```
nums = range(1, 101)
for d in [4, 6, 8, 10, 3, 5, 7, 9]:
    print([i for i in nums if i % d == 0])
```

STDIN
Input for the program (Optional)

Output: 10 ms | 9.6 MB

```
[4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100]
[6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96]
[8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96]
[10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
[3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 9
[5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100]
[7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98]
[9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99]
```

19. From a list containing ints, strings and floats, make three lists to store them separately

main.py 44cdnewsh

```
list=[1,2,"leelanjan",3.14,"hi",1.1,"rakesh"]
int_list=[]
str_list=[]
float_list=[]
for i in list:
  if type(i)==int:
    int_list.append(i)
  if type(i)==str:
    str_list.append(i)
  if type(i)==float:
    float_list.append(i)
print("int:",int_list)
print("str:",str_list)
print("float:",float_list)
```

STDIN
Input for the program (Optional)

Output:

```
int: [1, 2]
str: ['leelanjan', 'hi', 'rakesh']
float: [3.14, 1.1]
```

20.You are given with a list of integer elements. Make a new list which will store square of elements of previous list

main.py +

44cdnewsh

```python
list=[1,2,3,4,5]
square=[]
for i in list:
  square.append(i**2)
print("square:",square)

```

STDIN

Input for the program (Optional)

Output:

```
square: [1, 4, 9, 16, 25]
```