```
#1. Write python program that takes list of integers as per requirement and
returns the sum of the list ,total number integers entered by user.

list = []
count=0
sum = 0
n = int(input('Do you want to give input [Yes(1) / No(0)]: '))
if n == 1:
    num = int(input('Please enter integers, and if you wish to stop then
just type "0": '))
    list.append(num)
    while (num != 0):
        num = int(input())
        list.append(num)
else:
    print("You have total 0 integer(s) and total of 0 sum.")

list.pop(-1)

print('Your list: - ',list)

for i in list:
    count += 1

for j in list:
    sum += j



print('You have total {0} integer(s) and total {1} sum.'.format(count,sum))
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED
SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --
mode=client --port=11632

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

Do you want to give input [Yes(1) / No(0)]: >? 1

Please enter integers, and if you wish to stop then just type "0": >? 1

2

3

4

5

6

7

0

Your list: - [1, 2, 3, 4, 5, 6, 7]

You have total 7 integer(s) and total 28 sum.

```
#2. Write a Python program which accepts a sequence of comma separated 4
digit binary numbers as its input and print the numbers that are divisible
by 5 in a comma separated sequence.
```

```
items = []
print('Please enter the binary numbers using "," to split then(like
0100,1100,0110): ')
num = [x for x in input().split(',')]
for p in num:
    x = int(p, 2)
    if not x%5:
        items.append(p)
print('The numbers divisible by 5 are: ')
print(','.join(items))
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=11669

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

Please enter the binary numbers using "," to split then(like 0100,1100,0110):

1010,0101,1010,0011,1100

The numbers divisible by 5 are:

1010,0101,1010

```
#3. Write a Python program to construct the following pattern, using a
nested loop number.

n = int(input("Please enter number of rows: "))
```

```
for i in range(1,n+1):
    for j in range(1, i+1):
        print(i, end="")
    print()
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=9716

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

Please enter number of rows: >? 7

1

22

333

4444

55555

666666

7777777

```
#4. Python program to display numbers from 20 to 26 and break the loop when
a number about to display is 5.

for i in range(20,27):
    if (i == 25):
        continue
```

```
    print(i)
    i+=1
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=9750

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

20

21

22

23

24

26

```
#5. Python program to display numbers from 1 to 15 using continue
statement.

for i in range(1,16):
    if i < 16:
        print(i)
```

```
    else:
        continue
```

Output:

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

```
#6. Python program to retrieve only negative numbers from a list of
numbers(using pass).

list = [x for x in range(-25,26)]
list2 = []
for i in list:
    if i >= 0:
```

```
        pass
    else:
        list2.append(i)
print(list2)
```

Output:

[-25, -24, -23, -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1]

```
#7. A python program to handle the Assertion Error exception that is given
by assert statement.

num1 = 1
num2 = 0
assert num2 != 0, "Invalid Operation, the denominator cannot be taken as
zero(0)."
print(x / y)
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=14382

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

Traceback (most recent call last):

  File "<input>", line 1, in <module>

  File "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev_pydev_bundle\pydev_umd.py", line 197, in runfile

    pydev_imports.execfile(filename, global_vars, local_vars) # execute the script

  File "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev_pydev_imps_pydev_execfile.py", line 18, in execfile

    exec(compile(contents+"\n", file, 'exec'), glob, loc)

  File "D:/CODING/PYTHON/venv/program12.py", line 235, in <module>

    assert num2 != 0, "Invalid Operation, the denominator cannot be taken as zero(0)."

AssertionError: Invalid Operation, the denominator cannot be taken as zero(0).

```
#8. Python program to create an integer type array.

import numpy as np

array = np.array([1,2,3,4,5,6,7])

print(array)
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=14871

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

[1 2 3 4 5 6 7]

```
#9. Python program to create an array with group of elements.

list = [1,2,3,4,5,6]
list1 = list[:len(list)//2]
list2 = list[len(list)//2:]
list3 = []

list3.append(list1)
list3.append(list2)

print(list3)
```

Output:

C:\Users\patel\AppData\Local\Programs\Python\Python39\python.exe "D:\INSTALLED SOFTWARES\PYCHARM\PyCharm 2020.3.3\plugins\python\helpers\pydev\pydevconsole.py" --mode=client --port=14942

import sys; print('Python %s on %s' % (sys.version, sys.platform))

sys.path.extend(['D:\\CODING\\PYTHON', 'D:/CODING/PYTHON'])

PyDev console: starting.

Python 3.9.4 (tags/v3.9.4:1f2e308, Apr 6 2021, 13:40:21) [MSC v.1928 64 bit (AMD64)] on win32

runfile('D:/CODING/PYTHON/venv/program12.py', wdir='D:/CODING/PYTHON/venv')

[[1, 2, 3], [4, 5, 6]]