1. class div\_generator:

def \_\_init\_\_(self,in\_num):

self.in\_num = in\_num

def get\_numbers(self):

for ele in range(0,self.in\_num+1):

if ele%7 == 0:

yield ele

output = div\_generator(350)

for ele in output.get\_numbers():

print(ele,end=' ')

Output:

0 7 14 21 28 35 42 49 56 63 70 77 84 91 98 105 112 119 126 133 140 147 154 161 168 175 182 189 196 203 210 217 224 231 238 245 252 259 266 273 280 287 294 301 308 315 322 329 336 343 350

1. def checkFrequency():

in\_string = input("Enter the Input String: ")

frequency = {}

for ele in in\_string.split(" "):

if(frequency.get(ele) == None):

frequency[ele] = 1

else:

frequency[ele] += 1

for ele in sorted(frequency):

print(f'{ele}:{frequency[ele]}',end=" ")

checkFrequency()

Output:

Enter the Input String: New to Python or choosing between Python 2 and Python 3? Read Python 2 or Python 3.

2:2 3.:1 3?:1 New:1 Python:5 Read:1 and:1 between:1 choosing:1 or:2 to:1

1. class Person():

def getGender():

pass

class Male(Person):

def getGender():

print("Male")

class Female(Person):

def getGender():

print("Female")

Male.getGender()

Female.getGender()

Output:

Male

Female

1. def generateSentences():

subject = ['I','You']

verb = ['Play','Love']

object = ['Hockey','Football']

for s in subject:

for v in verb:

for o in object:

print(f'{s} {v} {o}')

generateSentences()

Output:

I Play Hockey

I Play Football

I Love Hockey

I Love Football

You Play Hockey

You Play Football

You Love Hockey

You Love Football

1. def compress(in\_string):

output = in\_string[0]

count = 1

for ele in range(len(in\_string)-1):

if in\_string[ele] == in\_string[ele+1]:

count +=1

else:

if count > 1:

output += str(count)

output += in\_string[ele+1]

count = 1

if count > 1:

output += str(count)

print(output)

def decompress(in\_string):

output = ''

for ele in range(len(in\_string)):

if in\_string[ele].isdigit():

output += output[-1]\*(int(in\_string[ele])-1)

else:

output += in\_string[ele]

print(output)

compress("hello world!hello world!hello world!hello world!")

decompress("hel2o world!hel2o world!hel2o world!hel2o world!")

compress('ineuron full stack datascience')

decompress('ineuron ful2 stack datascience')

Output:

hel2o world!hel2o world!hel2o world!hel2o world!

hello world!hello world!hello world!hello world!

ineuron ful2 stack datascience

ineuron full stack datascience

1. sorted\_list = [1,2,3,4,5,6,7,8,9,10]

def binary\_search(in\_list,in\_num):

low = 0

high = len(in\_list)-1

while low <= high:

mid = high+low//2

if in\_list[mid] < in\_num:

low = mid+1

elif in\_list[mid] > in\_num:

high = mid-1

else:

return mid

else:

return 'Input Element not in the list'

print(binary\_search(sorted\_list,8))

print(binary\_search(sorted\_list,100))

Output:

7

Input Element not in the list