**CO1 Programs**

1.Display future leap years from current year to a final year entered by user.

s=int(input("enter start year:"))

e=int(input("enter end year:"))

if (s<e):

print ("leap years are:",end=" ")

for i in range(s,e):

if i%4==0 and i%100!=0:

print(i,end=" ")

Output

enter start year:2021

enter end year:2050

leap years are: 2024 2028 2032 2036 2040 2044 2048

2.List comprehensions:

* Generate positive list of numbers from a given list of integrs.

list1=[-10,20,35,-67,70]

re=[num for num in list1 if num>=0]

print(re)

Output

[20,35,70]

* Square of N number

n=int(input("enter limit:"))

squarelist=[i\*\*2 for i in range(1,n+1)]

print("Square of N numbers:",squarelist)

Output

enter limit:5

Square of N numbers: [1, 4, 9, 16, 25]

* From a list of vowels selected from a given word

word =str(input("Enter the word:"))

print("The original string is:"+word)

print("The vowel are:",end="")

for i in word:

if i in 'aeiouAEIOU':

print([i],end=" ")

Output

Enter the word:python programming

The original string is:python programming

The vowel are:['o'] ['o'] ['a'] ['i']

* List of ordinal values of each element of a word

w=input("Enter a word:")

print("Ordinal values corresponding to each element is:")

for i in w:

print(i,end=":")

print(ord(i),end=" ")

Output

Enter a word:python

Ordinal values corresponding to each element is:

p:112 y:121 t:116 h:104 o:111 n:110

4. Count the occurences of each word in a line of text.

str1=input ("enter a string :")

wordlist =str1.split()

count =[]

for w in wordlist:count.append(wordlist.count(w))

print ("count of the occurrence:"+str(list(zip(wordlist,count))))

Output

enter a string:Python is a programming language

count of the occurrence:[('Python', 1), ('is', 1), ('a', 1), ('programming', 1), ('language', 1)]

5. Prompt the user for a list of integers.For all values greater than 100,store ‘over’ instead.

n=[]

s=int(input("enter a limit:"))

print("enter {s} values")

for i in range(0,s):n.append(int(input()))

print("\n the list after assigning:\n")

for i in range(0,len(n)):

if n[i]>=100:print("over")

else:print(n[i])

Output

enter a limit:2

enter {s} values

24

199

The list after assigning:

24

Over

6. Store a list of first names. Count the occurences of ‘a’ within the list.

a\_list = ["a", "b", "a"]

occ = a\_list.count("a")

print("count of occurrences of a :",occ)

Output

count of occurences of a : 2

7. Enter 2 lists of integers. Check (a) Whether list are of same length (b) whether list sums to same value (c) whether any value occur in both.

lst=[1,3,5,7,9,11,34]

lst1=[5,13,45,7,20,65,1]

s=int(0)

c=int(0)

if len(lst)==len(lst1):

print("Lists are of same length")

else:

print("Lists have different length")

for i in range(0,len(lst) and len(lst1)):

s=s+lst[i]

c=c+lst1[i]

if(s==c):

print("equal sum")

else:

print("not same sum")

print("Elements that matched are:")

l=[]

for i in range(0,len(lst)):

for j in range(0,len(lst1)):

if lst[i]==lst1[j]:

l.append(lst[i] and lst1[j])

else:

continue

print(l)

Output

Lists are of same length

not same sum

Elements that matched are:

[1, 5, 7]

8. Get a string from an input string where all occurences of first characters replaced with ‘$’, except first character.

str1="malayalam"

char=str1[0]

str1=str1.replace(char,'$')

str1=char+str1[1:]

print(str1)

output

malayala$

9. Create a string from given string where first and last characters exchanged.

str = input("Enter a string:")

new\_str = str[-1:] +str[1:-1] + str[:1]

print("New string : ",new\_str)

Output

Enter a string: python

New string: nythop

10. Accept the radius from user and find area of circle.

pi=3.14

r=float(input("input the radius of the circle:"))

result=3.14\*r\*\*2

print("the area of the circle with radius is:",result)

Output

input the radius of the circle:6

the area of the circle with radius is: 113.04

11. Find biggest of 3 numbers entered.

x=int(input("enter first no:"))

y=int(input("enter second no:"))

z=int(input("enter third no:"))

if(x>y) and (x>z):largest=x

elif(y>x) and (y>z):largest=y

else:largest=z

print("the largest no is",largest)

Output

enter first no:56

enter second no:34

enter third no:78

the largest no is 78

12. Accept a file name from user and print extension of that.

file=input("enter file name:")

f=file.split(".")

print("extension of the file is:"+f[-1])

Output

Enter file name:abc.java

Extension of the file is :java

13. Create a list of colors from comma-separated color names entered by user.Display first and last colors.

a=[]

for i in range(3):

b=input("enter the color:")

a.append(b)

print(a)

print("first",a[0])

print("second",a[2])

Output

enter the color:red

enter the color:green

enter the color:blue

['red', 'green', 'blue']

first red

second green

14.Accept an integer n and compute n+nn+nnn.

n=int(input("enter a number:"))

x=int("%s"%n)

y=int("%s%s"%(n,n))

z=int("%s%s%s"%(n,n,n))

print("n+nn+nnn:",x+y+z)

Output

enter a number:5

n+nn+nnn: 615

15.Print out all colors from color-list1 not contained in color-list2.

color\_list\_1=set(["white","pink","red","blue"])

color\_list\_2=set(["red","green","pink"])

print(color\_list\_1.difference(color\_list\_2))

Output

{'white', 'blue'}

16. Create a string seprated with space from two stings by swapping the character at position 1.

a="python"

b="java"

p1=a[0]

p2=b[0]

c=b[0]+a[1:len(a)]+""+a[0]+b[1:len(b)]

print(c)

Output

Jythonpava

19.Find gcd of 2 numbers.

x=int(input("enter first no:"))

y=int(input("enter second no:"))

i=1

while(i<=x and i<=y):

if(x%i==0 and y%i==0):

gcd=i

i=i+1

print("GCD:",gcd)

Output

enter first no:120

enter second no:5

GCD: 5

20.From a list of integers,create a list removing even numbers.

num=[7,8,120,25,44,20,27]

print( "original list:",num)

num=[x for x in num if x%2!=0]

print("list after removing even nos:",num)

Output

original list: [7, 8, 120, 25, 44, 20, 27]

list after removing even nos: [7, 25, 27]