**CO1 PROGRAMS**

1. Familiarizing Text Editor, IDE, Code Analysis Tools etc // Use any IDE

2. 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

3.**List comprehensions:**

* **Generate positive list of numbers from a given list of integers**

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]

* **Form 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 ordinal value of each element of a word (Hint: use ord() to get ordinal values)**

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:80 Y:89 T:84 H:72 O:79 N:78

4.**Count the occurrences 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("\nThe list after assinging:\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 assinging:

24

over

**6. Store a list of first names. Count the occurrences 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 occurrences 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 occurrences of first character replaced with ‘$’, except first character. [eg: onion -> oni$n]

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. [eg: python -> nythop]**

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 : 2

The area of the circle with radius is: 12.56

11. Find biggest of 3 numbers entered

x = int(input("Enter 1st number: "))

y = int(input("Enter 2nd number: "))

z = int(input("Enter 3rd number: "))

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

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

else:largest = z

print("The largest number is",largest)

**OUTPUT:**

Enter 1st number: 3

Enter 2nd number: 2

Enter 3rd number: 10

The largest number is 10

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

file= input("Enter filename : ")

f=file.split(".")

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

**OUTPUT:**

Enter filename: 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(a[0])

print(a[2])

**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 single string separated with space from two strings 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:**

jython pava

**17.Sort dictionary in ascending and descending order.**

import operator

d = {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}

print('Original dictionary : ',d)

sorted\_d = sorted(d.items(), key=operator.itemgetter(1))

print('Dictionary in ascending order by value ',sorted\_d)

sorted\_d = dict( sorted(d.items(), key=operator.itemgetter(1),reverse=True))

print('Dictionary in descending order by value : ',sorted\_d)

**OUTPUT:**

Original dictionary : {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}

Dictionary in ascending order by value : [(0, 0), (2, 1), (1, 2), (4, 3), (3, 4)]

Dictionary in descending order by value : {3: 4, 4: 3, 1: 2, 2: 1, 0: 0}

**18.Merge two dictionaries**

d1 ={ 'a': 100, 'b': 200}

d2 ={'x' : 300, 'y': 200}

print ("Dict ionary 1=:", d1)

print ("Dictionary 2-: ", d2)

d =d1. copy ()

d.update (d2)

print ("Merged Dictionary: ", d)

**OUTPUT:**

Dictionary 1=: {'a': 100, 'b': 200}

Dictionary 2-: {'x': 300, 'y': 200}

Merged Dictionary: {'a': 100, 'b': 200, 'x': 300, 'y': 200}

**19.Find gcd of 2 numbers.**

x= int(input("Enter 1st number: "))

y= int(input("Enter 2nd number: "))

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 1st number: 120

Enter 2nd number: 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 numbers:",num**)**

**OUTPUT:**

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

list after removing Even numbers: [7, 25, 27]