**CO1 PROGRAMS**

**Q2)** **Display future leap years from current year to a final year entered by user.**

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

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

if(a<b):

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

for i in range(a,b):

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

print(i,end=" ")

**OUTPUT:**

enter start year:2000

enter end year:2010

leap year are:2004 2008

**Q3)** **List comprehensions:**

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

for i in [-19,20,90,-56,87]:

if i>=0:

print(i)

**OUTPUT:**

20

90

87

**b)** **Square of N number**

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

for i in range(1,n+1):

s=i\*i

print(s)

**OUTPUT:**

enter the limit:5

1

4

9

16

25

**c)** **Form a list of vowels selected from a given word**

c=str(input("enter a word:"))

print("orginal word:",c)

print("vowels are")

for i in c:

if i in "aeiouAEIOU":

print([i])

**OUTPUT:**

enter a word:sithara

orginal word: sithara

vowels are:

['i']

['a']

['a']

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

word=input("Enter a word:")

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

for i in word:

print(i,end=":")

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

**OUTPUT**

Enter a word:sithara

Ordinal values corresponding to each element is:

s:115 i:105 t:116 h:104 a:97 r:114 a:97

**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 : sithara

count of the occurrence:[('sithara', 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:3

Enter {s} values

56

90

32

The list after assinging:

56

90

32

**Q6)** **Store a list of first names. Count the occurrences of ‘a’ within the list**

List=["a","b","c"]

p=List.count("a")

print(p)

**OUTPUT:**

1

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

lst = ["a","b","c","a"]

occ = lst.count("a")

print("Occurrences of 'a' :",occ)

**OUTPUT**

Occurrences of 'a' : 2

**Q7.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]

**Q8)** **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$

**Q9) Create a string from given string where first and last characters exchanged. [eg: python -> nythop]**

str=input("enter a string:")

newstr=str[-1:]+str[1:-1]+str[:1]

print(newstr)

**OUTPUT:**

enter a string:python

nythop

**Q10)** **Accept the radius from user and find area of circle.**

r=float(input("Enter the radius:"))

area=3.14\*r\*r

print("area=",area)

**OUTPUT:**

Enter the radius2

area= 12.56

**Q11)** **Find biggest of 3 numbers entered**

a=int(input("enter 1st no:"))

b=int(input("enter 2nd no:"))

c=int(input("enter 3rd no:"))

if(a>b and a>c):

print(a,"is the largest")

elif(b>c):

print(b,"is the largest")

elif(c>a):

print(c,"is the largest")

**OUTPUT:**

enter 1st no:56

enter 2nd no:12

enter 3rd no:4589

4589 is the largest

**Q12)** **Accept a file name from user and print extension of that**

n1=input("Enter file name:")

f=n1.split(".")

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

**OUTPUT:**

Enter file name:python.java

extension of file is: java

**Q13)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])

**OUTPUT:**

Enter the color:red

Enter the color:blue

Enter the color:yellow

['red', 'blue', 'yellow']

red

yellow

**Q14)** **Accept an integer n and compute n+nn+nnn**n=input("enter a number:")

a=int("%s" %n)

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

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

print("n + nn + nnn:",a+b+c)

**OUTPUT:**

enter a number:5

n + nn + nnn :615

**Q15)** **Print out all colors from color-list1 not contained in color-list2.**

l1=set(["red","blue","green","white"])

l2=set(["red","blue","green","orange"])

print(l1.difference(l2))

**OUTPUT:**

{'white'}

**Q16)** **Create a single string separated with space from two strings by swapping the character at position 1.**a="python"

b="java"

q=a[0]

p=b[0]

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

print(c)

**OUTPUT:**

jython pava

**Q17.Sort dictionary in ascending and descending order**.

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

print("orginal list",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:**

orginal list {7: 2, 3: 4, 9: 3, 2: 12, 0: 0}

Dictionary in ascending order by value [(0, 0), (7, 2), (9, 3), (3, 4), (2, 12)]

Dictionary in descending order by value : {2: 12, 3: 4, 9: 3, 7: 2, 0: 0}

**Q18.Merge two dictionaries**

m={'p':200,'q':600}

n={'l':500,'s':100}

print("dictionary 1:",m)

print("dictionary 2:",n)

m1=m.copy()

m1.update(n)

print("merged dictionary:",m1)

**OUTPUT:**

dictionary 1: {'p': 200, 'q': 600}

dictionary 2: {'l': 500, 's': 100}

merged dictionary: {'p': 200, 'q': 600, 'l': 500, 's': 100}

**Q19)** **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: 10

Enter 2nd number: 8

GCD : 2

**Q20)** **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]