**CO1 PROGRAMS**

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

The term "IDE" comes from **Integrated Development Environment**. It is intended as a set of tools that all work together: text editor, compiler, build or make integration, debugging, etc. ... An editor is simply that, a tool that is designed to edit text.

Some IDE’s are:

* Eclipse PyDev. ...
* IDLE. ...
* Wing. ...
* Emacs. ...
* Visual Studio Code. ...
* Sublime Text:

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

PROGRAM

y1=int(input("enter the year1 :"));

y2=int(input("enter the year2 :"));

print("Future leap years:")

for i in range(y1,y2):

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

print(i)

OUTPUT:

enter the year1 :2021

enter the year2 :2060

Future leap years:

2024

2028

2032

2036

2040

2044

2048

2052

2056

3.**List comprehensions:**

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

PROGRAM

list1=[]

l=[2,-2,45,65,-64,32,-111]

print("positive numbers are :")

for i in range(len(l)):

if(l[i]>0):

list1.append(l[i])

print(list1)

OUTPUT:

positive numbers are :

[2, 45, 65, 32]

* **Square of N number**

PROGRAM

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

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

print(s)

OUTPUT

enter the limit

7

[1, 4, 9, 16, 25, 36, 49]

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

PROGRAM

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

print("The vowels in the word is: ",end="")

for i in word:

if i in 'aeiouAEIOU':

print([i],end=" ")

OUTPUT

Enter the word :hai World

The vowels in the word is: ['a'] ['i'] ['o']

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

PROGRAM

w=input("Enter a word:")

print("Ordinal values for each elements:")

for i in w:

print(i,end=":")

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

OUTPUT

Enter a word:Anandhu

Ordinal values for each elements:

A:65 n:110 a:97 n:110 d:100 h:104 u:117

4.**Count the occurrences of each word in a line of text.**

PROGRAM

s= input("Enter a string : ")

word = s.split()

count= []

for w in word:

count.append(word.count(w))

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

OUTPUT

Enter a string : This is python

count of the occurrence:[('This', 1), ('is', 1), ('python', 1)]

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

PROGRAM

lt=[]

n1=int(input("Enter a limit:"))

print("Enter values")

for i in range(0,n1):

lt.append(int(input()))

print("\nThe list is:\n")

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

if lt[i]>=100:

print("over")

else:

print(lt[i])

OUTPUT

Enter a limit:3

Enter values

23

456

1000

The list is:

23

over

over

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

PROGRAM

list1=['a','a','b','a']

N=list1.count('a')

print("occurance of a:",N)

OUTPUT

occurance of a: 3

**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**

PROGRAM

l1=[1,3,5,7,9,11,34]

l2=[5,13,45,7,20,65,1]

s=int(0)

c=int(0)

if len(l1)==len(l2):

print("same length")

else:

print("different length")

for i in range(0,len(l1)):

s=s+l1[i]

for i in range(0,len(l2)):

c=c+l1[i]

if(s==c):

print("equal sum")

else:

print("not same sum")

print("Same elements are:")

l=[]

for i in range(0,len(l1)):

for j in range(0,len(l2)):

if l1[i]==l2[j]:

l.append(l1[i] and l2[j])

else:

continue

print(l)

OUTPUT

different length

not same sum

Same elements are:

[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]

PROGRAM

str="onion";

str1=str[0];

str2=str[1:];

str3=str2.replace(str1,"$")

print("Before replace:",str)

print("After replace:")

print(str1+str3);

OUTPUT

Before replace: onion

After replace:

oni$n

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

PROGRAM

str=input("enter the string: ");

s1=str[0];

s2=str[-1];

print("after swap")

print(s2+str[1:-1]+s1);

OUTPUT

enter the string: javascript

after swap

tavascripj

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

PROGRAM

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

print("Area=",3.14\*r\*r);

OUTPUT

enter the radius of the circle: 2

Area= 12.56

**11**. Find biggest of 3 numbers entered

PROGRAM

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

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

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

large=x

if (large<y) and (y>z):

large = y

elif (large< z) and (y <z):

large = z

print("The largest number is",large)

OUTPUT

Enter 1st number: 3

Enter 2nd number: 2

Enter 3rd number: 15

The largest number is 15

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

PROGRAM

s1=input("enter the string with extension: ")

s2=s1.split(".")

print("extension is:")

print(s2[1])

OUTPUT

enter the string with extension: first.py

extension is:

py

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

PROGRAM

a=[]

for i in range(3):

b=input("enter the color:")

a.append(b)

print("first color:",a[0])

print("last color:",a[2])

OUTPUT

enter the color:red

enter the color:blue

enter the color:black

first color: red

last color: black

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

PROGRAM

n=input("enter n :");

n1=n\*2;

n2=n\*3;

print("n+nn+nnn:")

print(int(n)+int(n1)+int(n2));

OUTPUT

enter n :5

n+nn+nnn:

615

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

PROGRAM

color\_list\_1 = set(["White", "pink", "Red","Blue"])

color\_list\_2 = set(["Red", "Green","pink"])

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

OUTPUT

{'Blue', 'White'}

**16.Create a single string separated with space from two strings by swapping the character at position 1.**

PROGRAM

str1=input("enter string 1: ")

str2=input("enter string 2: ")

s1=str1[0]

s2=str2[0]

print(s2+str1[1:]+" "+s1+str2[1:])

OUTPUT

enter string 1: javascript

enter string 2: Python

Pavascript jython

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

PROGRAM

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: 5

Enter 2nd number: 3

GCD : 1

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

PROGRAM

l=[2,27,54,33,45]

l2=[]

for i in l:

if(i%2!=0):

l2.append(int(i))

print("after removing even no.s")

print(l2)

OUTPUT

after removing even no.s

[27, 33, 45]