**Program 2**

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

**s=int(input("enter the 1st year"))**

**l=int(input("enter the last year"))**

**if(s<l):**

**print("laep yera is",end=" ")**

**for i in range(s,l):**

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

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

**output**

**enter the 1st year2000**

**enter the last year2020**

**laep yera is 2004 2008 2012 2016**

**program 3**

**A – vowels**

**word=str(input("enter the word"))**

**print("the orginal word is",word)**

**print("the vowels is",end=" ")**

**for i in word:**

**if i in 'aeiouAEIOU':**

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

output

**enter the word sana lakshmi**

**the orginal word is sana lakshmi**

**the vowels is a a a i**

**B- sqare of n numbers**

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

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

**print("square of n numbers",s)**

**output**

**enter the limit 4**

**square of n numbers [1, 4, 9, 16]**

**c-comprehensions**

**list=[-12,45,-45,27,95,-1]**

**re=[num for num in list if num>=0]**

**print(re)**

**output**

**[45, 27, 95]**

**Program 4**

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

**str1=str(input("enter the string"))**

**word= str1.split()**

**count=[]**

**for w in word:**

**count.append(word.count(w))**

**print("count occurence is",str(list(zip(word,count))))**

**output**

**enter the string sanalakshmi**

**count occurence is [('sanalakshmi', 1)]**

**program 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:5**

**Enter {s} values**

**Program 6**

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

**a\_list=["asha","beena","asha"]**

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

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

**output**

**count of occurrences of: 2**

**program 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]**

**Program 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$**

**program 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:english**

**new string: hnglise**

**program 10**

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

**pi=3.14**

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

**result=3.14\*r\*\*2**

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

**output’**

**input in the radius of the circle:3**

**the area of a circle with radius is: 28.26**

**program 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: 34**

**Enter 2nd number: 76**

**Enter 3rd number: 66**

**The largest number is 76**

**Program 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:sana**

**extension of the file is:sana**

**program 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)**

**output**

**enter the color:red**

**enter the color:blue**

**enter the color:black**

**['red', 'blue', 'black']**

**red**

**black**

**program 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:4**

**n+nn+nnn: 492**

program 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**

***{'blue', 'white'*}**

Program 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

program 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: 3**

**Enter 2nd number: 5**

**GCD : 1**

Program 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]**

**program 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

Dict ionary 1=: {'a': 100, 'b': 200}

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

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

Program 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}