Program-6

Object

Write a program to cnt the no. of character in the string and store them in a dict. data stutructure.

Code

```
str = input (" entry string:")
  f = { }

  for i in str

  # print (i)

 if i in f :
                f [i] + = 1
        else
                F [i] = 1
          print (f)
```

Output

```
entry string = Shikha
{'S':1 , 'h':2 , 'i':1 , 'k':1 , 'a':1}
```

Program- 6.2

Object

Write program to use split and join method in the string and trace a birthday of a person with a DS.

Code

```
bdaystr = input ("Entr data of birth :\n")
bdaylist = bdaystr. split("/")

print( bdaylist)
bday =' - ', join (bdaylist)
bdaydict = {" birthday ": bday }

req = input [" entry bday to match ")
 if ( bdaydict [" birthday "] == req :

        print(" yes. Birthday match ")
  else
        prit ("No")
```

Output

```
Enter date of birth
02/08/2005
['02', '08','2005']
02-08.2005
enter bday to match 23-04.2020
No
```

Program - 7

Object

Write a program to cnt frequency of character a given file can you use charact frequency to tell whether the given file is a python.

Code

```
f = " D:" mfile\demofile. txt""
file =  open(f, "r")
  a = []
  b = { }

for i   in file :
             for i in range (0, len(i));
               a. append  (i[j])
               print (a)
             for i in a
                     if i in b
                     b[i]+= 1
                 else
                       b[i] = 1
                         print  (b)
                    c=f. split (" . ")
               if c[i] = = " txt":
                 printf "\n this is a txt file"
                 else  c[i] = = " cpp"
```

Output

```
['w','o','o','p','s',' ',' ','h','a','v','e
'd','e','l','c','e','d']

{'w': 1, 'o'; 3, 'p': 1, 'S': 1, ' ': 2}

It is a text file
```

```
print("\n unit is a c++ file"]
   else
        print("\n\n it is c file)
```

Program - 8.1

Object

Write a program to print each line of a file in rever order.

Code

```
ofile = open (" D : \\ myfile \ demo file .txt","
  K = ofile. read lines ()
 t = reversed (K)

for  i  in  t ;
              print (i. rstrip ())
              oflile . close()
```

Output

```
This is my first file
World
hello
```

Program - 8.2

object: Write a program to compute the no. of characters, word, lines in file.

Code

```
file = open(' D:\\myfile\demofile.txt","r")

number_of_lines=0
number_of_words=0
number_of_characters=0

for line in file:
            line = line.strip()
            words= line.split()
          number_of_lines += 1
          number_of_word + = len(word)
          number_of_character +=len(line)
 file.close()
     print("lines:" number_of_lines,"word",
             number_of_word" character, number_of
-characters)
```

Output

```
lines : 7    words : 30    characters : 200
```

Program - 9.1

Object-
Write a function nearly equal to test wether two string are nearly equal. Two string a and b are nearly equal when a can be generated by a single nutation on

Code

```
String 1 = input (" Enter first string :")
string 2= input ("Enter second String :")

if String 1 == String 2

print ("\n Both string are equal to each")
print ( string 1,"==", string 2) ;

else
print("\n strings are not equall")
print( String 1, "!=". string2);
```

Output

```
Enter first String : Harshit
Enter second string : Harshit
Both Strings are equal to each
Harshit == Harshit
```

Program 9.2

object

Write a fn^n to compute gcd, lcm of two no. Each fn' should not exceed one line

Code

```
def gcd (x,y);
        while(y);
            x, y = y. x%y
        return x

def lcm (x,y)
            lcm = (x*y)//gcd(x,y)
            return lcm
        num1 = 60
        num2 = 48

print ("LCm is", lcm(num1, num2))
print(" GCd of " gcd (num1, num2))
```

Output

```
LCm is   240

GCD of is   12
```

Program-10.1

Object
Write a program to implement merge sort

Code

```
def merge (arr, l, m, r )

n1 = m - l + 1
n2 = r - m

L = [0] * (n1)
R = [0] * (n2)

for i in range (0, n1):
      L[i] = arr[l+i]

 for j  in range (0, n2)
        R[j] = arr[m+1+j]
    i=0
    j= 0
     k=0

 while i<n1   and j<n2
        if L[i] <= R[j] :
                arr[K] = L[i]
                    i+ + 1
        else :
                arr[k] =  R[j]
```

Output

```
Given array is
12  11  13  5  6  7

Sorted array is
5  6  7  11  12  13
```

```
            j+=1
            k+=1
while i<n1:
                arr[k] = L[i]
                i +=1
                k+=1
while   j<n2
            arr[k] = R[j]
                j+ =1
                k+ =1

def  merge sort  (arr,l,r) :

  if l<r:
            m = l+ (r-1)/2
        mergesort (arr, l, m)
        mergesort (arr, m+1, r)
      merge (arr, l, m, r)
arr = [12, 11, 13, 5, 6, 7]
n = len (arr)
print ("Given array is")
for i in range(n):
                print("%d" % arr[i], end=" ")
   mergesort (arr, 0, n-1)
     print ("\n\n Sorted array is")
for i in range(n):
                print ("%d %arr[i] end=" ")
```

Program 10.2

object

write a program to implement selection sort, insertion sort.

Code

```
a = [16,19, 11, 15, 10 , 12, 14]

for i in a:

    j = a. index (i)

    while j>0:
            if a[j-1] > a[j]:
                    a[j-1], a[j]= a[j], a[j-1]
         else
                break
                    j=j-1
                    print(a)

a = [16, 19, 11, 15, 10, 12, 14]
i = 0
while i< len(a);
            smallest = min (a[i])
      index of smallest= a. index (smallest)

      1 =i + 1
      print (a)
```

output

```
[ 10, 11, 12, 14, 15 ,16, 19 ]
[10 ,11, 12, 14, 15, 16, 19]
```