**Welcome to the Python Coding**

-----------------------------------------------------------------

1. **Accept two numbers and print the greatest between them\*\***

a =input("Enter 1st number : ")

b = input("Enter your 2nd Number : ")

if( a > b ):

print(f"{a} is grater than {b}" )

elif( b > a ):

print(f"{b} is grater than {a}")

else:

print(f"{a} and {b} both are equal")

-----------------------------------------------------

1. **Accept the gender from the user as char and print the respective greeting message**

**Ex - Good Morning Sir (on the basis of gender)**

gender = input("Enter Your Gender (Male/Female) : ")

if (gender == "Male" or gender == "m"):

print("Good Morning,sir..!!")

elif(gender == "Female" or gender == "f"):

print("Good Morning,mam..!!")

else:

print("Wrong Text..!!")

--------------------------------------------

1. **Accept an integer and check whether it is an even number or odd.**

int = int(input("Enter a integer : "))

if ( int % 2 == 0):

print("Number is Even")

if ( int % 2 != 0):

print("Number is odd")

------------------------------------------------

1. **Accept name and age from the user. Check if the user is a valid voter or not.**

Name = input("Enter Your Name : ")

age = int(input("Enter Your Age : "))

if age < 18:

print("You are not valid for Vote..!!")

else:

print("You are valid for Vote..!!")

-----------------------------------------------------

1. **Accept a year and check if it a leap year or not**

year = int(input("Enter any Year : "))

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

print(f"{year} is Leap Year..!!")

elif year%100 == 0 and year%400 == 0:

print(f"{year} is Leap Year..!!")

else:

print(f"{year} is not Leap Year..!!")

----------------------------------------------------------

1. **Accept an English alphabet from user and check if it is a consonant or a vowel**

z = (input("Enter any Alphabet : "))

if z in "aeiouAEIOU0":

print(f"{z} is a vowel..!!")

else:

print(f"{z} is NOT a vowel..!!")

**------------------------------------------------------------------------**

**Loops question**

**------------------------------------------------------------------------**

**# 1) Print natural number up to n.**

n = int(input("Enter a number: "))

for i in range (0,n+1):

print(i)

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**2) Reverse for loop. Print n to 1.**

n = int(input("Enter a number: "))

for i in range (n+1,0,-1):

print(i)

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**3) Take a number as input and print its table**

**5 \* 1 = 5**

**5 \* 2 = 10 ... up to 10 terms.**

n = int(input("Enter a number: "))

for i in range (1,11):

print(f"{n} \* {i} = {n\*i} )

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**4) Factorial of a number.**

n = int(input("Enter a number: "))

fac = 1

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

fac\*=i

print(fac)

------------------------------------------------------------------------

**5) Sum up to n terms.**

n = int(input("Enter a number: "))

sum = 0

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

sum+=i

print(sum)

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**6) print all factors of a given number:**

n = int(input("Enter a number : "))

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

if n % i == 0:

print(i)

------------------------------------------------------------------------

**7) Accept a number and check if it a perfect number or not.**

**A number whose sum of factors(excluding number itself)**

**= Number**

**Ex - 6 = 1, 2, 3 = 6**

n = int(input("Enter a number: "))

sum = 0

print(f"All the factors of {n} are: ")

for i in range (1,n):

if n%i==0:

sum+=i

print(i , end=" ")

print("\nsum of factors is :",sum)

if sum == n:

print(f"\n{n} is a perfect number")

else:

print(f"\n{n} is not a perfect number")

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**8) Check if the number is Prime or not.**

**///////////////////////////////////////////////**

**i> using count :**

n = int(input("Enter a number : "))

count= 0

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

if n % i == 0:

count= count + =1

if count == 2:

print(f"{n} is a prime number.")

else:

print(f"{n} is not a prime number.")

//////////////////////////////////////////////

**ii> using sum method :**

n = int(input("Enter a number : "))

sum = 0

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

if n % i == 0:

sum = sum + i

if sum == (1+n):

print(f"{n} is a prime number.")

else:

print(f"{n} is not a prime number.")

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**9) Seprate each digit of a number and print it on the new line**

n = 256

while n>0:

a = n % 10

n = n // 10

print(a)

------------------------------------------------------------------------

**10) Accept a number and check if it is a palindromic number**

**(If number and its reverse are equal)**

**Ex - 12321 - Reverse - 12321**

# a = int(input("enter a number : "))

a = "121"

temp = a[::-1]

if temp == a:

print("y")

else:

print("n")

b=121

c=b

p=0

while(b>0):

k=b%10

p= p\*10+k

b = b//10

if c == p:

print("palindrome")

else:

print("not palindrome")

------------------------------------------------------------------------

**\*\*User Define Functions :**

**=========================**

1. Check the Given number is odd or Even::

def oddeven(a):

if (a%2) == 0:

print(f"{a} is Even Number.")

else:

print(f"{a} is Odd Number.")

a = int(input("Enter a number : "))

oddeven(a)

> We can use “**return”** for getting value from the function , to where function call.

def oddeven(a):

if (a%2) == 0:

return("Even")

else:

return("odd")

a = int(input("Enter a number : "))

print(oddevrn(a))

n =oddeven(a)

print(n)

1. Write a Python function that takes an integer as input and determines the type of numbers present in it. The function should count the number of odd and even digits in the input number and print one of the following messages:

* "Even numbers" if all digits in the number are even.
* "Odd numbers" if all digits in the number are odd.
* "Mixed numbers" if the number contains a mix of odd and even digits.

def oddeven(x):

x = str(x)

odd = 0

even = 0

for i in range(len(x)):

if int(x[i]) % 2 == 0:

even +=1

else:

odd +=1

if odd == 0:

print("all even numbers")

elif even == 0:

print("all odd numbers")

else:

print(f"mix numbeers\n ncount of odd numbers : {odd}\n count of even numbers : {even}")

oddeven(123)

Output : mix numbers

count of odd numbers : 2

count of even numbers : 1

def oddeven(x):

odd = 0

even = 0

for i in str(x):

if int(i) % 2 == 0:

even +=1

else:

odd+=1

if odd == 0:

print("All even numbers")

elif even == 0:

print("All odd numbers")

else:

print(f"count of odd numbers : {odd}\ncount of even numbers : {even}")

a = int(input("Enter a number : "))

oddeve (a)

Output :

Enter a number : 12123

count of odd numbers : 3

count of even numbers : 2

**\*\*\* Advance Level Questions ::**

**\*\* Strings ::**

**=========**

**—------------------------------------------------------------------------**

1)Print string in reverse, its length, in uppercase, lowercase and copy into another string.

a = "AjaY"

# we use .upper method for convert any string in to Upper case

print(a.upper())

Output : AJAY

**# we use .lower method for convert any string into Lower case**

print (a.lower())

Output : ajay

**# we use slicing for print a reverse string**

print(a[::-1])

Output : YajA

**#we use for loop for print reverse string**

b=""

for i in a[::-1]: ## use indexing

b+=i

print(b)

Output : YajA

**//MostIMP//**

**# reverse a string in Python without using slicing by iterating through the string in reverse order and appending each character to a new string**

**c=""**

**for i in range(len(a)-1 ,-1,1): ## using length indexing**

**c+=a[i]**

**print(c)**

**Output : YajA**

**# for copy a string into another string using "="**

b = a

print(b)

Output : AjaY

**# for finding length of a**

print("Length of a : ",len(a))

Output : 4

**# Merge / join / add / concatenate 2 string :**

a = "Mango"

b = "Orange"

c=a+b #using concatenation "+"

print(c)

d = " ".join([a,b]) #using .join Method

print(d)

**—------------------------------------------------------------------------**

2) Arrange string characters such that lowercase letters should come first in another string.

# Mearge / join / add / concatenate 2 string :

a = "yoo BrotHER How Are You"

b = ""

c = ""

for i in a:

# if i == i.lower(): #it also works but give space in the ans.(yoo rot ow re ouBHERHAY)

if i.islower(): ##.islower check the case of element

b+=i

elif i.isupper():

c+=i

d = b+c

# d= “”.join([a,b]) # it also works for join

print(d)

Output : yoorotowreouBHERHAY

**—------------------------------------------------------------------------**

3)Count all letters, digits, and special symbols from a given

string

Given: str1 = "P@#yn26at^&i5ve"

Expected Outcome: \* Pull up for

Total counts of chars, digits, and symbols

Chars = 8 ,Digits = 3, Symbol = 4

str1 = "P@#yn26at^&i5ve"

chars = ""

digits = ""

symbols = ""

for i in str1:

if i.isalpha() :

chars += i

elif i.isdigit():

digits +=i

else:

symbols +=i

print("Chars : ",len(chars))

print("digits : ",len(digits))

print("symbols : ",len(symbols))

OutPuts:

Chars = 8

Digits = 3

Symbol = 4

########## or ############

str1 = "P@#yn26at^&i5ve"

chars = 0

digits = 0

symbols = 0

for i in str1:

if i.isalpha() :

chars +=1

elif i.isdigit():

digits +=1

else:

symbols +=1

print(f"Chars : {chars} \ndigits : {digits} \nsymbols : {symbols} \n")

OutPut: Chars = 8

Digits = 3

Symbol = 4

**—------------------------------------------------------------------------**

4)Count Vowels from given string

str1 = "my name is Khan"

vowel = 0

const= 0

for i in str1:

if i in "aeiouAEIOU" :

vowel +=1

elif i == " ":

pass

else:

const+=1

print(f"vowel : {vowel} \nconst : {const}")

Output : vowel : 4

const : 8

**# Using Def function:**

def vowelconst(x):

vowel = 0

const= 0

for i in str1:

if i in "aeiouAEIOU" :

vowel +=1

elif i == " ":

pass

else:

const+=1

return print(f"vowel : {vowel} \nconst : {const}")

str1 = "my name is Khan"

vowelconst(str1)

Output : vowel : 4

const : 8

**—------------------------------------------------------------------------**

5)Check string is Palindrome or not>>

def palindrome(x):

b=""

for i in range(len(x)-1,-1,-1):

b += x[i]

if b == x:

print(f"string {a} is palindrome.")

else:

print(f"string {a} is not palindrome.")

a = "naman"

palindrome(a)

Output : string naman is palindrome.

def palindrome(x):

a=x[::-1]

if x == a:

print(f"string {a} is palindrome.")

else:

print(f"string {a} is not palindrome.")

a = "naman"

palindrome(a)

Output : string naman is palindrome.

**—------------------------------------------------------------------------**

**\*\* List ::**

**=========**

**1) Accept List elements and reprint it**

l = []

a = int(input("How many number You want in a list : "))

for i in range(a):

z = (input("Write an Element and press Enter : "))

l.append(z)

print(f"Yor list with {a} element: {l} ")

**Output :**

**How many number You want in a list : 56**

**Write an Element and press Enter : 12**

**Write an Element and press Enter : ada**

**Write an Element and press Enter : asc**

**Write an Element and press Enter : 55**

**Write an Element and press Enter : 32**

**Yor list with 5 element: ['12', 'ada', 'asc', '55', '32']**

**—------------------------------------------------------------------------**

**2) Print List elements in reverse order**

**l = []**

**a = int(input("How many number You want in a list : "))**

**for i in range(a):**

**z = int(input("Write an Element and press Enter : "))**

**l.append(z)**

**k=l[::-1]**

**print(f"list with {a} element in reverse order: {k} ")**

**Output :**

**How many number You want in a list : 5**

**Write an Element and press Enter : 1**

**Write an Element and press Enter : 2**

**Write an Element and press Enter : 3**

**Write an Element and press Enter : 4**

**Write an Element and press Enter : 5**

**list with 5 element in reverse order : [1,2,3,4,5]**

**a = [1,2,3,4,5,6]**

**b = []**

**For i in a[::-1]: #w.c.u for i in range(len(a)-1,-1,-1):**

**b.append(i) # b.append(a[i])**

**print(f"list {a} in reverse order: {b} ")**

**Output :**

**list [1, 2, 3, 4, 5, 6] in reverse order: [6, 5, 4, 3, 2, 1]**

**—------------------------------------------------------------------------**

**3) Print positive and negative elements of an List in separate lists**

**a = [1,-2,-3,4,-5,6]**

**b = []**

**c = []**

**for i in a:**

**if i >= 0:**

**b.append(i)**

**else:**

**c.append(i)**

**print(f" list of positive integer : {b} \n list of negative integer : {c} " )**

**Output :**

**list of positive integer : [1, 4, 6]**

**list of negative integer : [-2, -3, -5]**

**—------------------------------------------------------------------------**

**4) Find the greatest element and print its index too.**

**[2, 96, 69, 77, 145, 20] = Max element = 145 found at 4 index**

**—------------------------------------------------------------------------**

**l = [2, 96, 69, 77, 145, 20]**

**max = 0**

**index = 0**

**for i in range(len(l)):**

**if l[i] > max:**

**max = l[i]**

**index =i**

**else:**

**pass**

**print(f"Greatest number of list {l} is {max} on iedex {index}")**

**Output :**

**Greatest number of list [2, 96, 69, 77, 145, 20] is 145 on iedex 4**

**We can use the max method but it’s not recommended.!**

**a = max(l)**

**print(f"Greastest number of list {l} is {a}**

**Output : Greatest number of list [2, 96, 69, 77, 145, 20] is 145**

**5) Find the second greatest element and print its index too.**

**{2, 96, 69, 77, 145, 20} Max element = 145 at index 4**

**# Find the 2nd greatest element and print its index too.**

**l = [2, 96, 69, 77, 145, 20]**

**max = 0**

**max2= 0**

**index = 0**

**for i in range(len(l)):**

**if l[i] > max:**

**#getting 2nd largest element**

**max2 = max**

**index2 = index**

**#getting largest element**

**max = l[i]**

**index =i**

**elif l[i] > max2:**

**max2 =l[i]**

**index2 = i**

**print(f" 2nd Greatest number of list {l} is {max2} on ledex {index}")**

**Output :**

**2nd Greatest number of list [2, 96, 69, 77, 145, 20] is 96 on Iedex 4**

**—------------------------------------------------------------------------**

**6)Check if List is sorted or not.**

**l = [1,2,3,4,5,6]**

**a = True**

**b = False**

**for i in range(len(l)-1):**

**if l[i] <= l[i+1]:**

**continue**

**else:**

**print("Your list is not shorted")**

**break**

**else:**

**print("Your list is sHorted")**

**Output : Your list is Shorted**

**—------------------------------------------------------------------------**

**7)Palindromic List - Write a program to check if elements of an List are same or not it read from front or back**

**Example: arr = [2,3, 15, 15,3,2]**

**def palindrome(x):**

**a = x[::-1]**

**if x == a:**

**print(f"Your list {x} ia palindrome")**

**else:**

**print(f"Your list {x} ia palindrome")**

**l = [1,2,1]**

**palindrome(l)**

**Output : Your list [1,2,1] is palindrome**

**a = [1,2,3,4,3,2,1]**

**b=[]**

**for i in range(len(a)-1,-1,-1):**

**b.append(a[i])**

**if a == b:**

**print("Your list is palindrome")**

**else:**

**print("Your list is not palindrome")**

**Output : Your list is palindrome**

**—------------------------------------------------------------------------**

**8) how many separate elements are there in the list excluding Repetition.**

**a = [1,2,3,4,3,2,1]**

**b = set(a)**

**print(b)**

**Output : (1,2,3,4)**

**—------------------------------------------------------------------------**

**\*\* Dictionary::**

**===========**

**1) Write a Python script to merge two Python dictionaries.**

**a = {1:"Jay",2:"Vijay"}**

**b = {3:"Ajay",4:"Digvijay"}**

**c = a**

**c.update(b)**

**print(c)**

**Output : {1: 'Jay', 2: 'Vijay', 3: 'Ajay', 4: 'Digvijay'}**

**—------------------------------------------------------------------------**

**2) Write a Python program to sum all the values in a dictionary.**

**a ={1:5,2:15,3:25}**

**sum = 0**

**for i in a:**

**sum = sum + a[i]**

**print(f"The Sum of all values of {a} is {sum} ")**

**Output : The Sum of all values of {1: 5, 2: 15, 3: 25} is 45**

**OR::**

**a ={1:5,2:15,3:25}**

**sum = 0**

**for i in a.values():**

**sum += i**

**print(f"The Sum of all values of {a} is {sum} ")**

**Output : The Sum of all values of {1: 5, 2: 15, 3: 25} is 45**

**3) count the frequency of each elements in a list**

**a = [1,2,2,3,3,4,4,5,5,5,5,5,6,1,1,2,2,3,4,5]**

**b = {}**

**for i in a:**

**if i in b.keys():**

**b[i] = b[i] + 1**

**else:**

**b[i] = 1**

**print(b)**

**Output : {1: 3, 2: 4, 3: 3, 4: 3, 5: 6, 6: 1}**

**—------------------------------------------------------------------------**

**4) Write a Python program to combine two dictionaries by adding values for common keys.**

a = {1:10,2:20,3:40}

b = {3:10,1:20,4:40}

for i in b:

if i in a:

a[i]+=b[i]

else:

a[i]=b[i]

print(a)

**Output : {1: 30, 2: 20, 3: 50, 4: 40}**

**—------------------------------------------------------------------------**

**### ULTIMATE CODING###**

**=====================**

**#PALINDROME #**

**1) Check if the given string is palindrome or not!!**

**Method : 1) using reverse string function a[::-1]**

**##BEST APPROACH**

**def palindrome(x):**

**a = x[::-1]**

**if x == a:**

**print("it's palindrome")**

**else:**

**print("it's not palindrome")**

**b = "nitin"**

**palindrome(b)**

**Output : palindrome**

**—------------------------------------------------------------------------**

**Method : 2) using INDEXING or length function (len(a))**

**def palindrome(b):**

**for i in range(len(b)):**

**if b[i] == b[len(b) - i - 1]:**

**return "it's palindrome"**

**else:**

**return "it's not palindrome"**

**x = "12121"**

**print(palindrome(x))**

**Output : it's palindrome**

**—------------------------------------------------------------------------**

**Method : 3) using REVERSE (reversed(x)) and JOIN function (“”.join(y))**

**def palindrome(x):**

**z = reversed(x)**

**y = "".join(z)**

**if x == y:**

**print("it's palindrome")**

**else:**

**print("it's not palindrome")**

**a = "nitin"**

**palindrome(a)**

**Output : It’s Palindrome**

**—------------------------------------------------------------------------**

**Method : 4) using WHILE LOOP or CONDITIONAL LOOP**

**def palindrome(x):**

**f = 0**

**l = len(x)-1**

**while(f<l):**

**if x[f]==x[l]:**

**f+=1**

**l+=1**

**return "It's Palindrome"**

**else:**

**return "It's not Palindrome"**

**p = "nitin"**

**print(palindrome(p))**

**Output : It’s Palindrome**

**—------------------------------------------------------------------------**

**2) Check if the Given NUMBER is palindrome or not!!**

**Method 1 ) ##NOT Preferred**

**n = 12321**

**s = str(n)**

**r = s[::-1]**

**if s==r:**

**print("The number is Palindrome")**

**else:**

**print("The number is not Palindrome")**

**Output : The number is palindrome**

**—------------------------------------------------------------------------**

**Method: 2) Use WHILE LOOP: ## MOST IMP**

**##BEST APPROACH**

**def palindrome(n):**

**r = 0**

**temp = n**

**while (temp>0):**

**digit = temp % 10**

**temp = temp // 10**

**r = r\*10 +digit**

**if r == n:**

**print("The number is palindrome")**

**else:**

**print("The number is not palindrome")**

**t =121**

**palindrome(t)**

**Output : The number is palindrome**

**—------------------------------------------------------------------------**

**# FIBONACCI #**

**1) Finding Sum of fibonacci numbers to the given number:**

**def Fibonacci(x):**

**a=0**

**b=1**

**sum = 0**

**total = 1**

**if x == 0:**

**print(a)**

**total = 0**

**else:**

**print(a)**

**print(b)**

**total = 1**

**for i in range(x-2): or while (b<x-2):**

**sum = a+b**

**a=b**

**b=sum**

**total = total + sum**

**print(sum)**

**print(f"sum of first {x} Fibonacci numbers is {total}")**

**z=int(input("enter a number for get Fibonacci Number : "))**

**Fibonacci(z)**

**Output :**

**enter a number for get Fibonacci Number : 5**

**0**

**1**

**1**

**2**

**3**

**sum of first 5 Fibonacci numbers is 7**

**—------------------------------------------------------------------------**

**METHOD :2) use only 2 verriabe**

**def Fibonacci(x):**

**a=0**

**b=1**

**print(a)**

**while (b<x-1):**

**print(b)**

**a , b = b , a+b**

**# swapping method of python**

**z=int(input("enter a number for get Fibonacci Number : "))**

**Fibonacci(z)**

**OUTPUT :**

**enter a number for get Fibonacci Number : 5**

**0**

**1**

**1**

**2**

**3**

**—------------------------------------------------------------------------**

**METHOD : 3) use RECURITION : ## MOST IMP**

**##BEST APPROACH**

**def Fibonacci(n):**

**if n<=1:**

**return n**

**else:**

**return (Fibonacci(n-1)+Fibonacci(n-2))**

**n = int(input("Enter a number:"))**

**if n<=0:**

**print("invalid")**

**else:**

**for i in range(n):**

**print(Fibonacci(i))**

**Output : Enter a number : 5**

**0**

**1**

**1**

**2**

**3**

**—------------------------------------------------------------------------**

**# COMPRESS STRING#**

**1) Compress a given string:**

**INPUT : aabbcccddefffi**

**OUTPUT : a2b2c3d2f3i1**

**METHOD : 1) Use FOR LOOP: ## MOST IMP**

**##BEST APPROACH**

**def compress(x):**

**news=""**

**count = 1**

**for i in range(len(x)-1):**

**if x[i] == x[i+1]:**

**count+=1**

**else:**

**news = news + x[i] + str(count)**

**count=1**

**news = news + x[len(x)-1] + str(count)**

**print(news)**

**a=str(input("Enter any string for compress : "))**

**compress(a)**

**Output : Enter any string for compress : aabbbcceegg**

**a2b3c2e2g2**

**—------------------------------------------------------------------------**

**METHOD : 2) Use WHILE LOOP:**

**def compress(x):**

**news=""**

**i=0**

**while(i<len(x)-1):**

**count = 1**

**while(i<len(x)-1 and x[i] == x[i+1]):**

**count+=1**

**i+=1**

**i+=1**

**news = news+ x[i-1]+ str(count)**

**print("compressed string : ",news)**

**z = str(input("Enter a string : " ))**

**compress(z)**

**Output :**

**Enter a string : aaaavbbbvv**

**compressed string : a4v1b3v2**

**—------------------------------------------------------------------------**

**#FizzBuzz Problem#**

**1) If Number divisible by 3 - print Fizz**

**If Number divisible by 5 - print Buzz**

**If Number divisible by 15 - print FizzBuzz**

**else print the number**

**1 - 1**

**2 - 2**

**3 - Fizz**

**4 - 4**

**5 - Buzz**

**6 - Fizz**

**.**

**.**

**15 - FizzBuzz**

**METHOD : 1) Use FOR LOOP: ## MOST IMP**

**##BEST APPROACH**

**def fizzbuzz(i):**

**for x in range(1,i+1):**

**if x % 15 == 0:**

**print(f"{x} = FizzBuzz")**

**elif x % 3 == 0:**

**print(f"{x} = Fizz")**

**elif x % 5 == 0:**

**print(f"{x} = Buzz")**

**else:**

**print(f"{x} = {x}")**

**i =20**

**fizzbuzz(i)**

**Output : 1 = 1**

**2 = 2**

**3 = Fizz**

**4 = 4**

**5 = Buzz**

**6 = Fizz**

**7 = 7**

**8 = 8**

**9 = Fizz**

**10 = Buzz**

**11 = 11**

**12 = Fizz**

**13 = 13**

**14 = 14**

**15 = FizzBuzz**

**16 = 16**

**17 = 17**

**18 = Fizz**

**19 = 19**

**20 = Buzz**

**—------------------------------------------------------------------------**

**METHOD : 1) Use Dictionary :**

**def fizzbuzz(n):**

**d = {3: "Fizz", 5: "Buzz"}**

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

**result = ""**

**for k in d.keys():**

**if i % k == 0:**

**result += d[k]**

**if not result:**

**result = i**

**print(result)**

**s = 15**

**fizzbuzz(s)**

**Output:**

**1**

**2**

**Fizz**

**4**

**Buzz**

**Fizz**

**7**

**8**

**Fizz**

**Buzz**

**|11  
|fizz  
|13  
|14  
|fizzbuzz**

**—-----------------------------------------------------------------------**

**#Character Occurence#**

**1. Least Repeating character in a string**

**Method : 1) Using Dictionary :**

**def loc(a):**

**d={}**

**for i in a:**

**if i in d:**

**d[i]+=1**

**else:**

**d[i]=1**

**print(d) #To Print No Of Occurence Of All Char**

**result = min(d,key=d.get)**

**print("Minimum occurred Character is : ",result)**

**b = str(input("Enter a string : "))**

**loc(b)**

**Output :**

**Enter a string : ababa**

**{'a': 3, 'b': 2}**

**Minimum occurred Character is : b**

**—-----------------------------------------------------------------------**

**Method : 2 ) Using Inbuilt Function COUNTER :**

**from collections import Counter**

**a = "ababaa"**

**c = Counter(a)**

**print(c)**

**result = min(c , key=c.get)**

**print("Minimum occurred Character is : " , result)**

**Output:**

**Counter({'a': 4, 'b': 2})**

**Minimum occurred Character is : b**

**—-----------------------------------------------------------------------**

**#Count Particular element #**

**Method 1 : using inbuilt Method “.count”**

**#count in string**

**s = "ababaa"**

**print(s.count("a")) === 4**

**#count in string of list**

**l = [ "a","b","a","b","a"]**

**print(l.count("a")) === 3**

**#count in integer of list**

**l2 = [1,2,3,4,1,2,3,4,2,3]**

**print(l2.count(2)) === 3**

**—-----------------------------------------------------------------------**

**Method 2 : Without using inbuilt Method // using Dicionary**

**def oc(s,c):**

**d = {}**

**for i in s:**

**if i in d:**

**d[i]+=1**

**else:**

**d[i]=1**

**print(d)**

**try:**

**print(f"the count of {c} in {s} is ",d[c])**

**except:**

**print(0)**

**z = str(input("Enter a string : "))**

**x = str(input("Enter a element which you want to find: "))**

**oc(z,x)**

**Output :**

**Enter a string : ababaa**

**Enter a element which you want to find: a**

**{'a': 4, 'b': 2}**

**the count of a in ababaa is 4**

**—-----------------------------------------------------------------------**

**#Count all element #**

**def oc(s):**

**d={}**

**for i in s:**

**if i in d:**

**d[i] += 1**

**else :**

**d[i] = 1**

**print("count of all element is : ",d)**

**z = str(input("Enter a string : "))**

**oc(z)**

**Output :**

**Enter a string : ababa**

**count of all element is : {'a': 3, 'b': 2}**

**—-----------------------------------------------------------------------**

**#Prime Number#**

**Method : 1) Using FLAG:**

**def prime(n):**

**flag = False**

**if n>1:**

**for i in range(2,n):**

**if n%i==0:**

**flag = True**

**break**

**if flag :**

**print("It's not a prime number")**

**else :**

**print("It's a prime number")**

**a = 7**

**prime(a)**

**Output : It's a prime number**

**—-----------------------------------------------------------------------**

**Method : 2 ) Using For and Else :**

**def prime(n):**

**if n>1:**

**for i in range(2,n):**

**if n%i==0:**

**print("no Prime")**

**break**

**else:**

**print("prime")**

**else:**

**print("prime")**

**prime(12)**

**Output : no prime**

**—-----------------------------------------------------------------------**

**#List of Prime Number#**

**Method : 1) Using For Else:**

**def prime(a,b):**

**for n in range(a,b):**

**if n>1:**

**for i in range(2,n):**

**if n%i == 0:**

**break**

**else:**

**print(n)**

**prime(2,10)**

**Output :**

**2**

**3**

**5**

**7**

**—-----------------------------------------------------------------------**

**Method : 2) Using Flag:**

**def prime(a,b):**

**for n in range(a,b):**

**flag = False**

**if n>1:**

**for i in range(2,n):**

**if n%i==0:**

**flag = True**

**break**

**if flag:**

**pass**

**else:**

**print(n)**

**prime(1,10)**

**—-----------------------------------------------------------------------**

**#Modify String Format#**

**Input = I\_Am\_Coder**

**Output = i.aM. a.cODER**

**Input = This\_Is\_A \_Good\_Morning**

**Output = tHIS.iS.a. gOOD.mORNING**

**first\_upper\_letter = first\_lower\_letter**

**remaining\_lower\_letter = remaining\_upper\_letter**

**—-----------------------------------------------------------------------**

**Method : 1) Using list :**

**def m(s):**

**temp = s.split("\_")**

**l = []**

**for i in temp:**

**l.append(i[0].lower() + i[1:].upper())**

**z = ".".join(l)**

**print(z)**

**a = "This\_Is\_A\_Good\_Morning"**

**m(a)**

**Output = tHIS.iS.a. gOOD.mORNING**

**—-----------------------------------------------------------------------**

**Method : 2) Using string :**

**def mod(s):**

**temp=s.split("\_")**

**st = ""**

**for i in temp:**

**st = st + i[0].lower() + i[1:].upper() + "."**

**st = st[:-1]**

**print(st)**

**a = "This\_Is\_A\_Good\_Morning"**

**mod(a)**

**Output = tHIS.iS.a. gOOD.mORNING**

**#Modify String Format#**

**def arm(n):**

**a=str(n)**

**temp = n**

**sum = 0**

**while temp>0:**

**d = temp % 10**

**sum += d\*\*(len(a))**

**temp //= 10**

**if sum == n:**

**print(f"{n} is an Armstrong number")**

**else:**

**print(f"{n} is not an Armstrong number")**

**x = (int(input("Enter a number : ")))**

**arm(x)**

**Output :**

**Enter a number : 1634**

**1634 is an Armstrong number**

**#strings are anagram or not#**

* **Anagram strings:**

**An anagram of a string is another string that contains the same characters, only the order of characters can be different.**

**For example, “abcd” and “dabc” are an anagram of each other.**

**def anagram(s1,s2):**

**if (sorted(s1) == sorted(s2)):**

**print(f"strings {s1} and {s2} are anagram")**

**else:**

**print(f"strings {s1} and {s2} are not anagram")**

**a = (input("Enter first string : "))**

**b = (input("Enter second string : "))**

**anagram(a,b)**

**Output :**

**Enter first string : abcd**

**Enter second string : abdc**

**strings abcd and abdc are anagram**

**#Unpack a Collection#**

**If you have a collection of values in a list, tuple etc. Python allows you to extract the values into variables. This is called unpacking.**

**a = [1,2,3,4,5]**

**x,y,z,b,c = a**

**print(x,y,z,b,c,a)**

**Output : 1 2 3 4 5 [1, 2, 3, 4, 5]**

**#Random Number#**

**If you want to generate random number from the particular range then import “random” and print**

**It with according to syntax :**

**print(random.randrange(start,end)**

**import random**

**print(random.randrange(1,6))**

**Output : 5**

**#Casting#**

**Specify a Variable Type:**

**a = int(2.5)**

**b = float(3)**

**c = str(25)**

**print(a,type(a))**

**print(b,type(b))**

**print(c,type(c))**

**Output :**

**2 <class 'int'>**

**3.0 <class 'float'>**

**25 <class 'str'>**