**Python programs executed in Lab:**

Q1)Write a function that accepts string arguments & display(return) the same string in reversed format.

Solution:

def reverse(ii):

i=len(ii)

j=""

for i in range(i-1,-1,-1):#for loop to reverse the given string

j=j+ii[i]

return j

print("reversed string is =",reverse(input("enter the string=")))

Q2) Write a function to accept an integer as default argument that accepts temperature in celcius and converts it to corresponding temperature in Fahrenheit scale.

Solution:

def temp\_convert(hi=0):#here function has default argument

far=hi\*(9/5)+ 32

return far

hi=int(input("enter the temperature in degrees"))

#function call with given temperature as the argument

print("corresponding temperature in farenhite is {0}".format(temp\_convert(hi)))

#function call when functon has no arguments,function will take the default value(that is 0(zero)) for

#converting the temperature into farenhite

print("value of 0 degree celcius in farenhite is = {0}".format(temp\_convert()))

**Output:**

enter the temperature in degrees120

corresponding temperature in farenhite is 152

value of 0 degree celcius in farenhite is = 32

Process finished with exit code 0

enter the temperature in degrees-20

corresponding temperature in farenhite is 12

value of 0 degree celcius in farenhite is = 32

Q3)Write a function that accepts to numbers as default argument and then returns the HCF of the two numbers.

Solution:

def hcf(x,y):

if x>y: #finding the smaller number between given

smaller=y #two numbers

else:

smaller=x

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

if (x%i==0 and y%i==0):

hcf=i

return hcf

a=int(input("enter the first number="))

b=int(input("enter the second number="))

hh=hcf(y=b,x=a) #calling the function with keyword arguments

print("HCF of given numbers is =",hh)

**OUTPUT:**

enter the first number=23

enter the second number=45

('HCF of given numbers is =', 1)

enter the first number=144

enter the second number=12

('HCF of given numbers is =', 12)

Q4)Write a function that calculates the factorial of a number using recursion.

Solution:

def fact(no):

if no<=1: # exit condition to terminate the function calls

return 1

else:

return no\*fact(no-1)

no=int(input("enter the number"))

**Output:**

enter the number8

('factorial of given number is =', 40320)

#function call with given value as the argument

print("factorial of given number is =",fact(no))

Q5) Write a program to accept a set of numbers as arguments and then display them in sorted format.

Solution:

def sorted\_order(\*args):

ll=[]

for num in args: #for copying the numbers in args to list for sorting them

ll.append(num)

for i in range(0,len(args)):#for loop to sort the numers passed to the function

for j in range(0,len(args)-1):

if ll[j]>ll[j+1]:

temp=ll[j]

ll[j]=ll[j+1]

ll[j+1]=temp

return ll

#first function call is with 10,20,30,56,3 numbers as arguments and return the sorted order of the numbers

print("sorted order of the given numbers 10,20,30,56,3 is ",sorted\_order(10,20,30,56,3))

#second function call is with different number of arguments and sort the numbers

print("sorted order of the given numbers 678,200,-30 is ",sorted\_order(200,678,-30))

**Output**: ('sorted order of the given numbers 10,20,30,56,3 is ', [3, 10, 20, 30, 56])

('sorted order of the given numbers 678,200,-30 is ', [-30, 200, 678])