**IMPLEMENTING FUNCTIONS**

In [1]:

*#q1 multiplying 2 numbers*

product = 0

**def** multiply(x,y):

product = x \* y

**return** product

x = int(input("enter value of x = "))

y = int(input("enter value of y = "))

print("The product is",multiply(x,y))

enter value of x = 3

enter value of y = 3

The product is 9

In [2]:

*#q2 adding 2 numbers*

sum = 0

**def** add(x,y):

sum = x + y

**return** sum

x = int(input("enter value of x = "))

y = int(input("enter value of y = "))

print("The sum is",add(x,y))

enter value of x = 20

enter value of y = 40

The sum is 60

In [4]:

*#q3 finding factorial*

**def** factorial(n):

**if** n == 1:

**return** n

**else**:

**return** n \* factorial(n-1)

n = int(input("enter value of n"))

**if** n < 0:

print("Sorry, factorial does not exist for negative numbers")

**elif** n == 0:

print("The factorial of 0 is 1")

**else**:

print("The factorial of", n, "is", factorial(n))

enter value of n6

The factorial of 6 is 720

In [5]:

*#q4 fibonacci sequence*

**def** fibonacci(n):

**if** n <= 1:

**return** n

**else**:

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

terms = 10

*# check if the number of terms is valid*

**if** terms <= 0:

print("Plese enter a positive integer")

**else**:

print("Fibonacci sequence:")

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

print(fibonacci(i))

Fibonacci sequence:

0

1

1

2

3

5

8

13

21

34

In [33]:

*#q5 swapping 2 numbers*

temp = 0

**def** swapping(x, y):

temp = x

x = y

y = temp

**return** x, y

x = int(input("enter value of x = "))

y = int(input("enter value of y = "))

x, y = swapping(x, y)

print("Swapped value of x is **%d** & y is **%d**" %(x,y))

enter value of x = 20

enter value of y = 40

Swapped value of x is 40 & y is 20

In [9]:

*#6 find hcf of given nos*

**def** highest\_common\_factor(x, y):

**if** x > y:

smaller = y

**else**:

smaller = x

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

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

hcf = i

**return** hcf

x = int(input("enter value of x = "))

y = int(input("enter value of y = "))

print("The H.C.F. is", highest\_common\_factor(x,y))

enter value of x = 16

enter value of y = 32

The H.C.F. is 16

In [14]:

*#7 find ascii value of character*

x = 0

**def** ASCII(c):

x = ord(c)

**return** x

c = input("enter a character = ")

print("The ASCII value of '" + c + "' is", ASCII(c))

enter a character = a

The ASCII value of 'a' is 97

In [16]:

*#8 inbuilt mathematical functions*

**import** **math**

x = 0

**def** square\_root(a):

x = math.sqrt(a)

**return** x

a = int(input("enter an number"))

print("square root of",a,"=",square\_root(a))

enter an number25

square root of 25 = 5.0

In [24]:

*#9 inbuilt date and time functions*

**import** **datetime**

**def** dt(x):

today = datetime.datetime.now()

**return** today

print("the current date and time is",dt(x))

the current date and time is 2020-03-30 14:10:14.737506

In [34]:

*#10 demonstrating required arguments*

**def** greet(name,message):

print("hello",name,".",message)

greet("ayesha","how are you?")

hello ayesha . how are you?

In [28]:

*#q11 demonstrating keyword arguments*

*#the order (position) of the arguments can be changed*

**def** attendence(name,roll\_no,section = "cse-4c"):

print("details",name + ',' + roll\_no + ',' + section)

attendence(name = "ayesha",section = "cse-4a",roll\_no = "1")

attendence(section ="cse-4b",name = "alisha",roll\_no = "2")

attendence("ahana",roll\_no = "7")

details ayesha,1,cse-4a

details alisha,2,cse-4b

details ahana,7,cse-4c

In [26]:

*#12 demonstrating default arguments*

**def** greeting(name, msg = "how is your day going!"):

print("Hola",name + ', ' + msg)

greeting("ayesha")

greeting("alisha","is everything alright!")

Hola ayesha, how is your day going!

Hola alisha, is everything alright!

In [30]:

*#q13 demonstrating variable length arguments*

**def** my\_fun(\*argv):

**for** arg **in** argv:

print (arg)

my\_fun('Hello', 'hi', 'hola', 'namaste')

Hello

hi

hola

namaste