**def** Hello(name):

print("Hello, "**+** name **+** " Good Morning!")

Hello('srishti')

Hello, srishti Good Morning!

In [10]:

**def** absolute(num):

**if** num**>=**0:

**return** num

**else**:

**return** **-**num

print(absolute(2))

print(absolute(**-**3))

In [11]:

**def** my\_func():

x**=**10

print("Value inside function: ",x)

x**=** 20

my\_func()

print("Value outside function: ",x)

Value inside function: 10

Value outside function: 20

In [15]:

**def** greet(name, msg**=**"Good morning!"): *#Default Argument*

print("Hello", name **+** ', ' **+** msg)

greet("srishti")

greet("srishti", "How do you do?")

Hello srishti, Good morning!

Hello srishti, How do you do?

In [16]:

**def** greet(**\***names):

**for** name **in** names:

print("Hello", name)

greet("Monu", "Sonu", "Ram", "Shyam")

Hello Monu

Hello Sonu

Hello Ram

Hello Shyam

In [18]:

**def** fact(x): *#recursion function*

**if** x**==**1:

**return** 1

**else**:

**return** x**\*** fact(x**-**1)

n**=**5

print("Factorial of the number = ",fact(n))

Factorial of the number = 120

In [19]:

**def** tower\_of\_hanoi(disks, source, auxiliary, target):

**if**(disks **==** 1):

print('Move disk 1 from rod {} to rod {}.'**.**format(source, target))

**return**

tower\_of\_hanoi(disks **-** 1, source, target, auxiliary)

print('Move disk {} from rod {} to rod {}.'**.**format(disks, source, target))

tower\_of\_hanoi(disks **-** 1, auxiliary, source, target)

disks **=** int(input('Enter the number of disks: '))

tower\_of\_hanoi(disks, 'A', 'B', 'C')

Enter the number of disks: 4

Move disk 1 from rod A to rod B.

Move disk 2 from rod A to rod C.

Move disk 1 from rod B to rod C.

Move disk 3 from rod A to rod B.

Move disk 1 from rod C to rod A.

Move disk 2 from rod C to rod B.

Move disk 1 from rod A to rod B.

Move disk 4 from rod A to rod C.

Move disk 1 from rod B to rod C.

Move disk 2 from rod B to rod A.

Move disk 1 from rod C to rod A.

Move disk 3 from rod B to rod C.

Move disk 1 from rod A to rod B.

Move disk 2 from rod A to rod C.

Move disk 1 from rod B to rod C.

In [20]:

x **=** "global"

**def** fun():

print("x inside:", x)

fun()

print("x outside:", x)

x inside: global

x outside: global

In [21]:

**def** foo():

y **=** "local"

foo()

print(y)

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

NameError Traceback (most recent call last)

<ipython-input-21-24968e1b2c96> in <module>()

**2** y = "local"

**3** foo()

----> 4 print(y)

NameError: name 'y' is not defined

error because we are trying to access the local variable as global

In [22]:

x **=** 5

**def** foo():

x **=** 10

print("local x:", x)

foo()

print("global x:", x)

local x: 10

global x: 5

In [23]:

**def** outer():

x **=** "local"

**def** inner():

**nonlocal** x

x **=** "nonlocal"

print("inner:", x)

inner()

print("outer:", x)

outer()

inner: nonlocal

outer: nonlocal