

LOCAL AND GLOBAL VARIABLES

- Variable inside a function: Local Variable
- Variable outside the function: Global Variable
- The local variable value is available only in that function and not outside of that function.

Scope and Lifetime of Variables

- Scope of a variable is the portion of the program where the variable is recognized.
- A **local variable** is a variable whose scope is limited only to that function where it is created.
- The scope of the **global variable** is the entire program body written below it.

Example:

#Scope of a variable inside a function

```
def my_fun():  
    x=10  
    print("Value inside the function:",x)  
x=20  
my_fun()  
print("Value outside function:",x)
```

The Global Keyword

- Sometimes, the global variable and the local variable may have the same name. In that case, the function, by default, refers to the local variable and ignores the global variable. So, the global variable is not accessible inside the function but outside of it, it is accessible.
- In order to modify the value of variables outside the function, they must be declared as global variables using the keyword **global**.
- To read and write a global variable inside a function.
- Use of global keyword outside a function has no effect.

Example:

#Access the global variable inside a function

```
x=1  #global variable  
def my():  
    global x  #global variable  
    print('Global x=',x)  
x=2  #modifying global variable value  
print("Modified x=",x)
```

```
my()  
print('Global x=',x)
```

Passing the Group of Elements to a function

- To pass a group of elements like numbers, strings, we can accept them into a list and then pass the list to the function where the required processing can be done.

Example:

```
def calculate(lst):  
    n=len(lst)  
    sum=0  
    for i in lst:  
        sum=sum+i  
    avg=sum/n  
    return sum,avg  
  
#take a group of integers from keyboard  
print('Enter numbers separated by space:')  
lst=[int(x) for x in input().split()]  
  
#call calculate() and pass the list  
x,y=calculate(lst)  
print("Total = ",x)  
print("Average = ",y)
```