

Functions in Python---

```
def funcName() :  
    Definition
```

Function must have some body, if no body then give **pass**

1. Default function
2. Positional arguments
3. Keyword arguments
4. Variable arguments
5. Keyword variable arguments
6. MIX
7. Return

```
def f1():  
    pass
```

#Default values

```
def f2(c1=1,c2=1):  
    print("c1=",c1,"c2=",c2)  
    print(c1*c2)
```

```
f1()  
f2(12,13)  
f2()  
f2(10) # c1 will be 10 = USING POSITIONAL PARAMETERS  
f2(c2=10) # c1 will be 1 , c2 will be 10 = USING KEYWORD ARGUMENT
```

#variable number of arguments

```
def adder(*num): # the num is a TUPLE  
    print(num)  
    mylist = list(num) # convert the tuple to a list , if u need to change it  
    mylist[1] = 100  
    #num[1]=100 tuple is immutable so cannot change it  
    sum=0  
    for x in num:  
        sum=sum+x  
    return sum
```

```
w =adder(1,2,3,4,5,6,8,233,3,2,2,14,21)  
print(w)
```

#var keyword arguments

```
def productDetails(**info): #info is a dictionary  
    print(info)  
    for k1 in info.keys():  
        print(k1,info[k1])
```

```
productDetails(pname="box",material="cardbord",cost=30)
```

#mix and match = the variable argument MUST be last

*#def mix(*num,x,y):does not work*

```
def mix(x,y,*num):  
    print(num,x,y)
```

```
mix(10,20,30,40,50)
```

```
def mix2(*num,**data):  
    print("num=",num)  
    print("data=",data)
```

```
mix2(10, 20,30,height=20,width=10)
```

```
def showList(li):  
    print(li)
```

```
showList([12,4,6,2])
```

```
def firstTwo(mylist):  
    return mylist[0],mylist[1] #ARE WE returning many values ? NO, Tuple is returned
```

```
x = firstTwo([33,44,55,66,77,88])  
print(x)
```

HW ---

1. Write a function that accepts any number of student_names and their height
Hint: Keyword variable arguments
return the names of tallest and shortest student
call the function multiple times with different number of arguments

```
heightFunc(radha=5, teena=4, meena=4.5 )
```

2. Write a function that accepts any number of names in parameter
birthdayGuests(.....)
Show the total number of guests
Hint : variable arguments
3. Write a function to accept base, width and height of a box from user and compute the volume
User may enter only base or only width or only height, any 2 or all 3
 1. Height
 2. Base
 3. Width
 4. Base and height
 5. Base and width
 6. Width and height
 7. All 3

- 8. None
- 9. Quit

use default base , width , height

- 4. Write a function to accept any number of names from user , followed by details- venue, date,time,giftoptions, borderchar

birthdayPlanner

number of names are guests

details are details of birthday

Use the guestlist to count the guests

Use the details to display INVITATION

U R Invited to the Birthday OF :

ON

WHERE :

Call the function multiple times