

* INTRODUCTION TO MODULAR PROGRAMMING:-

So, there are built in modular function which helps in lots of things. [Ex:- Libraries]

Eg:- import math
import pygame
import os

* import math
print(math.pi)

>> 3.141592653589793 So, this will give the value of " π "

* import math
print(math.degrees(math.pi))
print(math.radians(60))

>> 180
1.0471975511965976

⇒ Creating your own modular function

So, for that you have to open a file in the same directory, where you are running your python command.

And, save that file by that name, which you will give to your module.

Lets do that :-

* import myModules

now, open a ^{new} file & save as myModules.
Create a function in that one.

```
def afunc(x, y):
```

```
    z = x * y
```

```
    return z
```

```
def bfunc(a, b):
```

```
    c = a % b
```

```
    return c
```

Now, save this file & go back to old one.

* import myModules

```
print(myModules.afunc(10, 8))
```

```
print(myModules.bfunc(11, 2))
```

```
>>> 80  
1
```

* Optional Parameters :-

→ [More advanced function]

```
* def func(a, b='123'):
    print(a)
    if b == 123:
        print("Hello coding, welcome hoogle")
    else:
        print("Hello Python")

func(2)
```

```
>>
2
Hello coding, welcome hoogle
```

Now if I will put some another value in function then it will change the value & that's what we called optional parameter.
Let's do it By on some above example.

```
* def func(a=5, b='123'):
    print(a)
    if b == '123':
        print("Hello coding, welcome hoogle")
    else:
        print("Hello Python")

func(100, 200)
```

```
>> 100
Hello Python
```

* TRY AND EXCEPT

(Error Handling)

```
* text = input("Enter Username: ")
```

```
try:
```

```
    number = int(text)
```

```
    print(number)
```

```
except:
```

```
    print("This is not a Username")
```

```
text =
```

```
text = input("Enter Username: ")
```

```
a = int(text)
```

```
print(a)
```

>>

Enter Username: abcdef

This is not a Username

Enter Username: 12345

12345

So if you put string in first time it will show a message & tell you to again type a Username.

* GLOBAL Vs LOCAL VARIABLES:-

Local Variables are those on which are defined inside the functions.

Example:-

```
* var = 8
  loop = True

  def Func(x):
      newVar = 7
      print(newVar)
      if x == 5:
          return newVar
```

Func(2)

>> 7

Global Variables are those which are not defined in a function.

Example:-

```
* var = 8
  loop = True } => These two are Global variables
  def func(x):
      newVar = 7
      print(var)
  func(2)
  >> 8
```

Now, how to change a Global Variable inside a function:-

*

```
loop = True
```

```
def func(x):  
    global loop  
    loop = 100
```

```
func(2)
```

```
print(loop)
```

```
>>> 100
```