```
#while loop



names = ['ram', 'shyam','gita','sita' ]
i =0 #initializer
while i < len(names):#condition
    print(names[i])
    i += 1 #incrementer/decrementer
```

```
ram
shyam
gita
sita
```

```
numbers = [1,2,3,4] #using for loop
sum = 0
for i in numbers:
    sum += i
    print (sum)
```

```
1
3
6
10
```

```
#using while loop
numbers =[1,2,3,4]
i=0
sum = 0
while i < len(numbers): # 4<4
    sum += numbers[i]   #0+1+2+3+4
    i += 1
print(sum)
```

```
10
```

```
#for
# => finite iteration
# => if you know how many times you are iterating(kati patak loop lagaunu parne thaa chhaa bhane for use garne)


#while
# => infinite iteration
# => if you don't know how many times you are iterating (kati patak loop garnu parne thhaa chhaina bhane while use garne)
```

Unsupported Cell Type. Double-Click to inspect/edit the content.

```
#use sanga age magne jaba samma 18 or tehaa bhanda badi rakdena value mageko magei garne ra 18 bhanda badi deyesi welcome lekhe

age = int(input("Enter the value of age"))
while age < 18:
    age = int(input("Enter the value of age"))
print("Welcome !!")
```

```
Enter the value of age 12
Enter the value of age 13
Enter the value of age 14
Enter the value of age 18
Welcome !!
```

```
# function
x=1
y=2
sum=x+y
print(sum)
```

```
3
```

```
def addition(): #function banako ho => function defination
    x=1
    y=3
    sum = x+y
```

```
    print(sum)


addition() # function call /run/execute
```

```
4
```

```
def substraction(): #function defining
    x=5
    y=2
    sub = x-y
    print(sub)


substraction()
```

```
3
```

```
def addition(x,y): # x and y defined as arguments
    #mathi jasari x and y ko value deda yeutei answer aauchaaa jati patak call garda pani so yesto
    #argument pass gareraa gareko
    sum = x+y
    print(sum)


addition(x=2,y=5)# mathi banako function lai call garako
```

```
7
```

```
addition (2,3)
```

```
5
```

```
addition(y=2,x=5)
```

```
7
```

```
addition(2, y=4)
```

```
6
```

```
addition(4,x=2) #yesto garna paudena because aagadi ko 4 x ma assign vaisakyo . so
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[22], line 1
----> 1 addition(4,x=2)

TypeError: addition() got multiple values for argument 'x'
```

```
addition (x=2,4) # x=2 yo chai keyword argument ho ra pacchadi ko 4 => positional argument
#aagadi keyword argument rakhesi pachhadi positional argument rakhnu meldennnaa
```

```
  Cell In[23], line 1
    addition (x=2,4) # x=2 yo chai keyword argument ho ra pacchadi ko 4 => positional argument
                     ^
SyntaxError: positional argument follows keyword argument
```

```
addition(2,y=9)
```

```
11
```

```
def addition(x,y): #x and y are called arguments
    sum = x+y
    return sum
   #function use gare sakepachhi print ko satta return use garna ni skanu paryo


s = addition(2,5)
```

```
print(s**2)
```

```
49
```

```
 #y ko value narakhda default value aaunu paryo 0
def addition(x,y=0):  # y ko value 0 lenchaa default value
    sum = x +y

    return sum
addition(4)
```

```
4
```

```
def calculator (x,y):
    add= x+y
    sub= x-y
    mul= x*y
    div= x/y
    return add # return garesi yehi bata exit vayo aru value print hunaa payenaa yesko tallaa ko
    return sub
    return mul
    return div



result = calculator(4,2)
print(result)
```

```
6
```

```
def calculator (x,y):
    add= x+y
    sub= x-y
    mul= x*y
    div= x/y
    return add,sub,mul,div #sabei print garna man vaye comma ma yesto garne



result = calculator(4,2)
print(result)
```

```
(6, 2, 8, 2.0)
```

```
def addition(*args): # jati ottaa argument ni pass garnaa payo yesto gardaa#any no of arguments
    print(args, type(args))


addition(2,4,5,6)
```

```
(2, 4, 5, 6) <class 'tuple'>
```

```
# loop layera sum garne
def addition(*args):  #any number of positional arguments
    sum =0
    for i in args:
        sum +=i
    return sum



addition(1,2,3,4,5,6,7,8,9,10)
```

```
55
```

```
addition (x=1,y=2)
#error aayo because yesle postional aargument support garchhaa
#x=2 yesto bhaneko keyword argument ho
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[42], line 1
----> 1 addition (x=1,y=2)

TypeError: addition() got an unexpected keyword argument 'x'
```

```
def addition(**kwargs): #support any number of keyword argument
    print(kwargs, type(kwargs))


addition(x=1,y=2)
```

```
{'x': 1, 'y': 2} <class 'dict'>
```

```
def addition(**kwargs):#keyword argument support garchhaa double star le
    sum=0
    for i in kwargs.values():
        sum += i
    return sum


addition(x=1, y=2, a=5 , z=4)
```

```
12
```

```
def addition(*args , **kwargs): #any number of positional argument + keyword arguments
    sum =0
    for i in args:
        sum += i

    for i in kwargs.values():
        sum += i
    return sum



addition(3,4,5,x=1,y=2,a=5,z=4)
```

```
24
```

```
def hello():
    xyz =8 #function level ma bascha
    # function vitra ko variable lai local scope ma baseko bhanenchha
    print(xyz)# local scope=>8
hello()
```

```
8
```

```
print(xyz) #function vitraa banako kuraa function bahira access garna meldena
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[55], line 1
----> 1 print(xyz) #function vitraa banako kuraa function bahira access garna meldena

NameError: name 'xyz' is not defined
```

```
# module level / file level => global scope
name = 'shyam'
print(name)
```

```
shyam
```

```
def hi():
    print(name) #local scope ma khojnaa first ma vetena kehi
    # then global scope ma khojchha jahhaa shyam vetchha
hi()
```

```
shyam
```

```
max([1,2,3])# built in scope
```

```
3
```

```
min([1,2,3])
```

```
1
```

```
len([1,2,3])
```

```
3
```

```
def hi():
    print(aged) # local scope => global scope => built in scope => error
hi()
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[63], line 3
      1 def hi():
      2     print(aged) # local scope => global scope => built in scope => error
----> 3 hi()

Cell In[63], line 2, in hi()
      1 def hi():
----> 2     print(aged)

NameError: name 'aged' is not defined
```

```
# built in scope => anywhere in python file => print, max,min,sorted,sum
#global scope => created variable within python file / module
#local scope => inside function
```

```
import os
```

```
os.getcwd()
```

```
'C:\\Users\\LENOVO'
```

Start coding or generate with AI.