

```
In [18]: import time
def func1(numlist):
    print("Func1 starts.")
    for eachnum in numlist:
        print("Square = ", eachnum **2)
        time.sleep(0.5)

def func2(numlist):
    for eachnum in numlist:
        print("cube = ", eachnum **3)
        time.sleep(0.5)

t1 = time.time()
list = [1,2,3,4,5]
func1(list)
func2(list)
print("Time taken = ", time.time()-t1)
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Func1 starts.
Square = 1
Square = 4
Square = 9
Square = 16
Square = 25
cube = 1
cube = 8
cube = 27
cube = 64
cube = 125
Time taken = 5.006094217300415
```

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In [19]: import time
import threading

def func1(numlist):
    for eachnum in numlist:
        print("Square = ", eachnum **2)
        time.sleep(0.5)

def func2(numlist):
    for eachnum in numlist:
        print("cube = ", eachnum **3)
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        time.sleep(0.5)

t1 = time.time()
list = [1,2,3,4,5]
th1 = threading.Thread(target= func1, args = (list,))
th2 = threading.Thread(target= func2, args = (list,))
th1.start()
th2.start()
th1.join()
th2.join()
print("Time taken = ", time.time()-t1)

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Square = 1
cube = 1
Square = 4
cube = 8
cube = Square = 9
27
cube = Square = 16
64
Square = cube = 125
25
Time taken = 2.507650136947632

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In [15]: import threading
import time

def func1():
    ctn = threading.current_thread().name
    print("First Statement. Thread Execution starts :", ctn)
    time.sleep(1)
    print("Second statement. Thread Execution ends :", ctn)

if __name__ == "__main__":
    ct = threading.current_thread()
    print("Current Thread = ", ct)
    print("Current Thread Name = ", ct.name )
    print("Thread count = ", threading.active_count())

    th1 = threading.Thread(target=func1,name = "first")
    th2 = threading.Thread(target=func1,name = "second")

    print("Thread count = ", threading.active_count())

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th1.start()
th2.start()

print("Thread count = ", threading.active_count())

th1.join()
th2.join()

print("Thread count = ", threading.active_count())

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Current Thread = <_MainThread(MainThread, started 13496)>
Current Thread Name = MainThread
Thread count = 6
Thread count = 6
First Statement. Thread Execution starts : first
First Statement. Thread Execution starts : second
Thread count = 8
Second statement. Thread Execution ends : first
Second statement. Thread Execution ends : second
Thread count = 6

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In [2]: import threading
import time
amount = 100
lockobj = threading.Lock()

def amt_credit():
    global amount
    for index in range(100):
        time.sleep(0.5)
        lockobj.acquire()
        print("Credit initiated. ", index)
        amount = amount + 50
        print("Credit ends. ", index)
        lockobj.release()

def amt_debit():
    global amount
    for index in range(100):
        time.sleep(0.5)
        lockobj.acquire()
        print("Debit initiated. ", index)
        amount = amount - 50
        print("Debit ends. ", index)

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        lockobj.release()

th1 = threading.Thread(target=amt_credit, name = "first")
th2 = threading.Thread(target=amt_debit, name = "second")

th1.start()
th2.start()

th1.join()
th2.join()

print("Credit and debit done.")
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Debit initiated. 0
Debit ends. 0
Credit initiated. 0
Credit ends. 0
Credit initiated. 1
Credit ends. 1
Debit initiated. 1
Debit ends. 1
Credit initiated. 2
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Debit initiated. 99
Debit ends. 99
Credit initiated. 99
Credit ends. 99
Credit and debit done.
```

```
In [3]: import threading
import time
numlist = [1,2,3,4,5]

class mythread (threading.Thread):
    def __init__(self, name):
        threading.Thread.__init__(self)
        self.name = name

    def run(self):
        global numlist
        for eachnum in numlist:
            print(self.name , " Square = ", eachnum **2)
            time.sleep(0.5)

th1 = mythread("first")
th2 = mythread("second")

th1.start()
th2.start()
```

```
first Square = 1
second Square = 1
first Square = 4
second Square = 4
firstsecond Square = 9
Square = 9
firstsecond Square = 16
Square = 16
firstsecond Square = 25
Square = 25
```