16 - Shruti Gauchandra

Assignment - 05

Implement multi-threading in python

```
from multiprocessing import Process, Array, Lock
from time import sleep

def addThousands(inputNumber, lock):
    for _ in range(1000):
        sleep(0.01)
        with lock:
            for i in range(len(inputNumber)):
                inputNumber[i] += 1

if __name__ == '__main__':
    sharedArray = Array('d', [0.0, 100.0, 200.0])
    lock = Lock()

    print(f'Number at the beginning : {sharedArray[:]}')

    firstProcess = Process(target=addThousands, args=(sharedArray, lock))
    secondProcess = Process(target=addThousands, args=(sharedArray, lock))

    firstProcess.start()
    secondProcess.start()

    firstProcess.join()
    secondProcess.join()

    print(f'Value in the end : {sharedArray[:]}')
```

```
Number at the beginning : [0.0, 100.0, 200.0]
Value in the end : [2000.0, 2100.0, 2200.0]
```