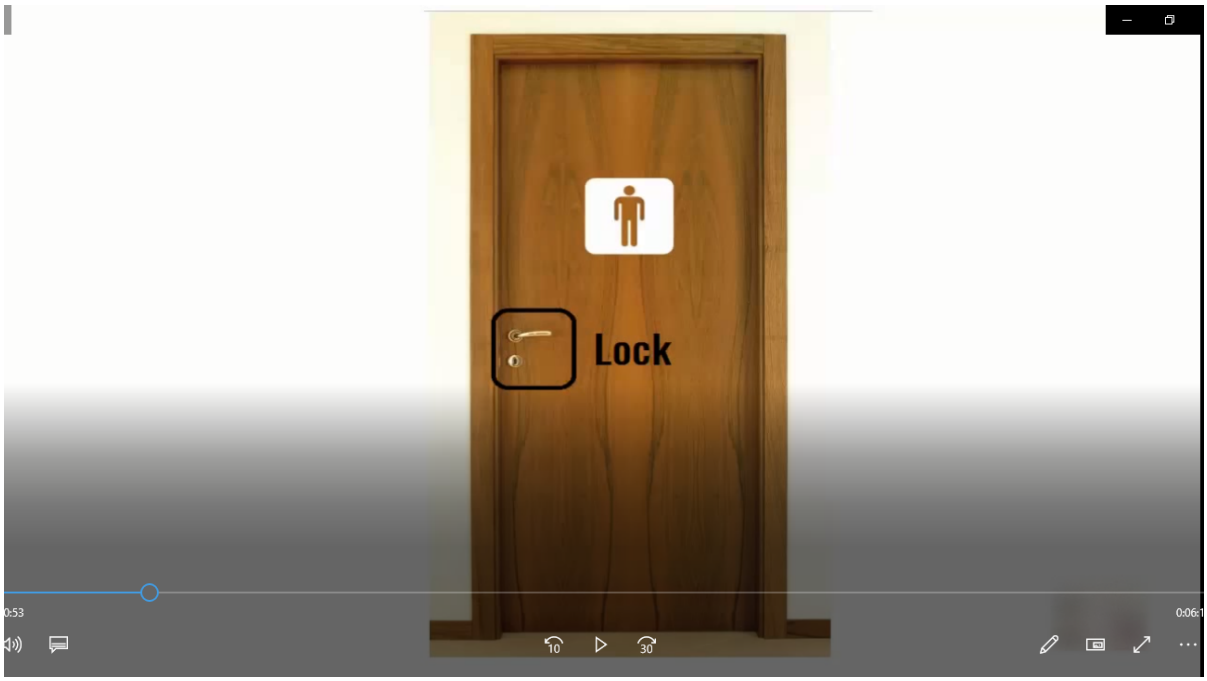
Video 6

Lock

Lock is a very important concept when it comes to multiprocessing and operating system concepts

Why do we need lock in real life?

> in our real life there are resources that can not be accessed by two people at the same time, for example a bathroom


Lock
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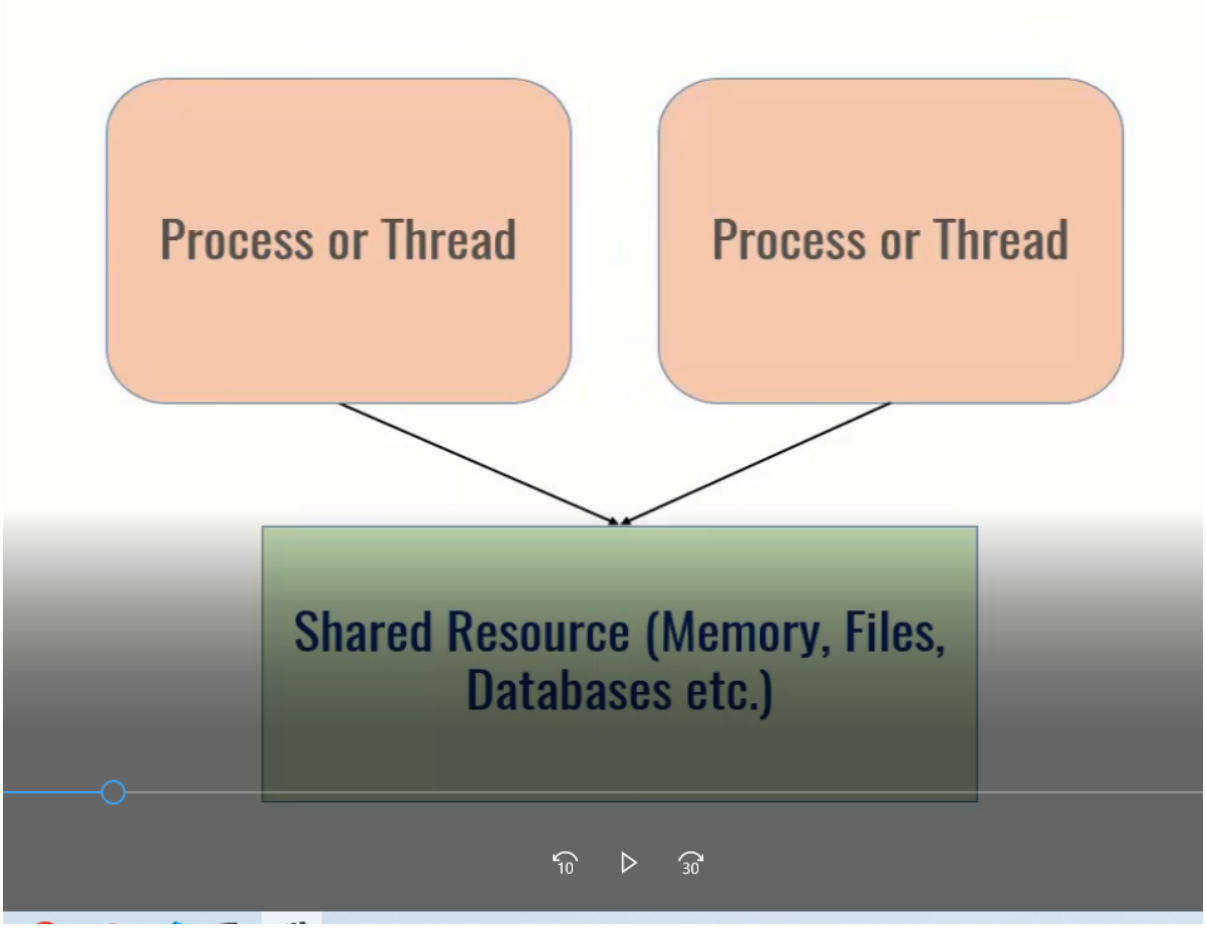


```
# simple deposit withraw with multiprocessing and lock
import time
import multiprocessing
def deposit(balance,lock):
    for i in range(100):
        time.sleep(0.01)
        lock.acquire()
        balance.value = balance.value + 1
        lock.release()
def withdraw(balance,lock):
    for i in range(100):
        time.sleep(0.01)
        lock.acquire()
        balance.value = balance.value - 1
        lock.release()
if __name__ == '__main__':
    balance = multiprocessing.Value('i',200)
    lock = multiprocessing.Lock()
    d = multiprocessing.Process(target=deposit,args=(balance,lock))
    w = multiprocessing.Process(target=withdraw,args=(balance,lock))
    d.start()
    w.start()
```

```
    d.join()
    w.join()
    print(balance.value)
```