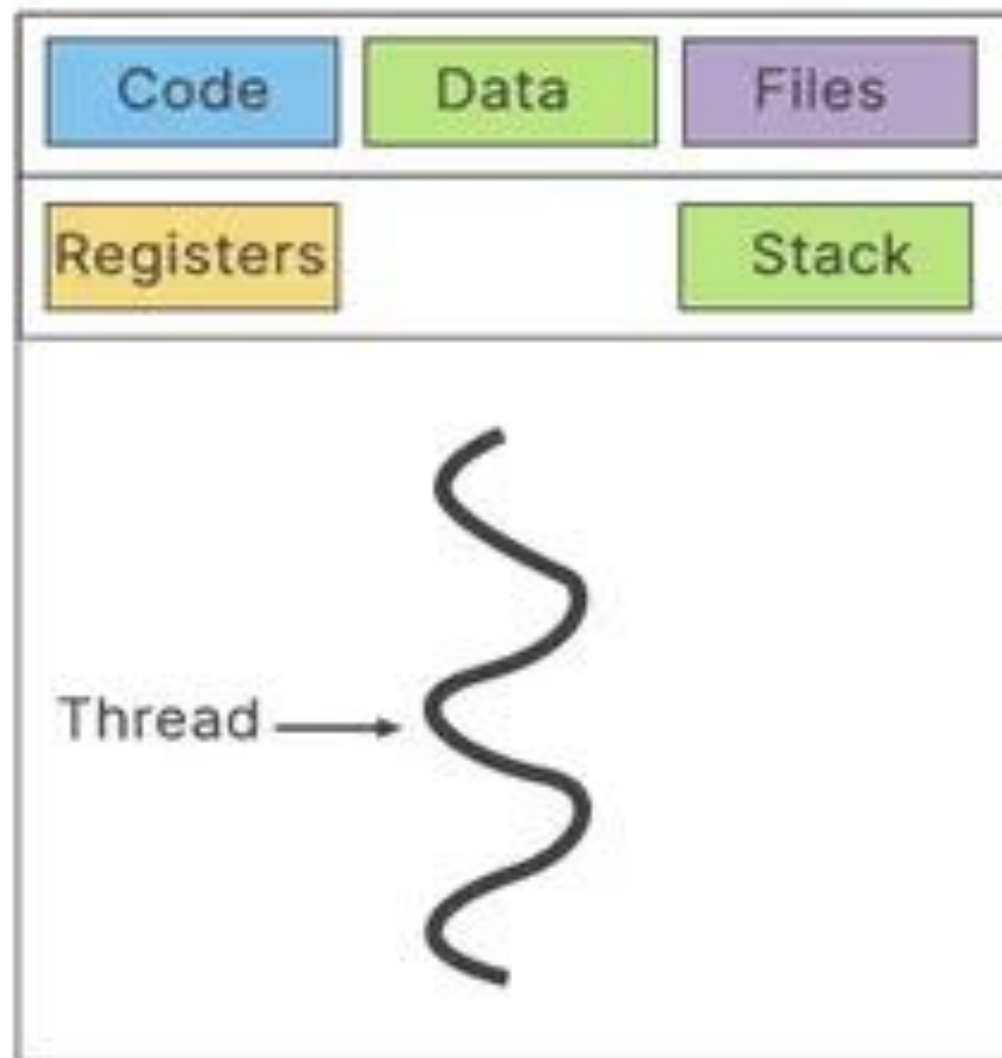




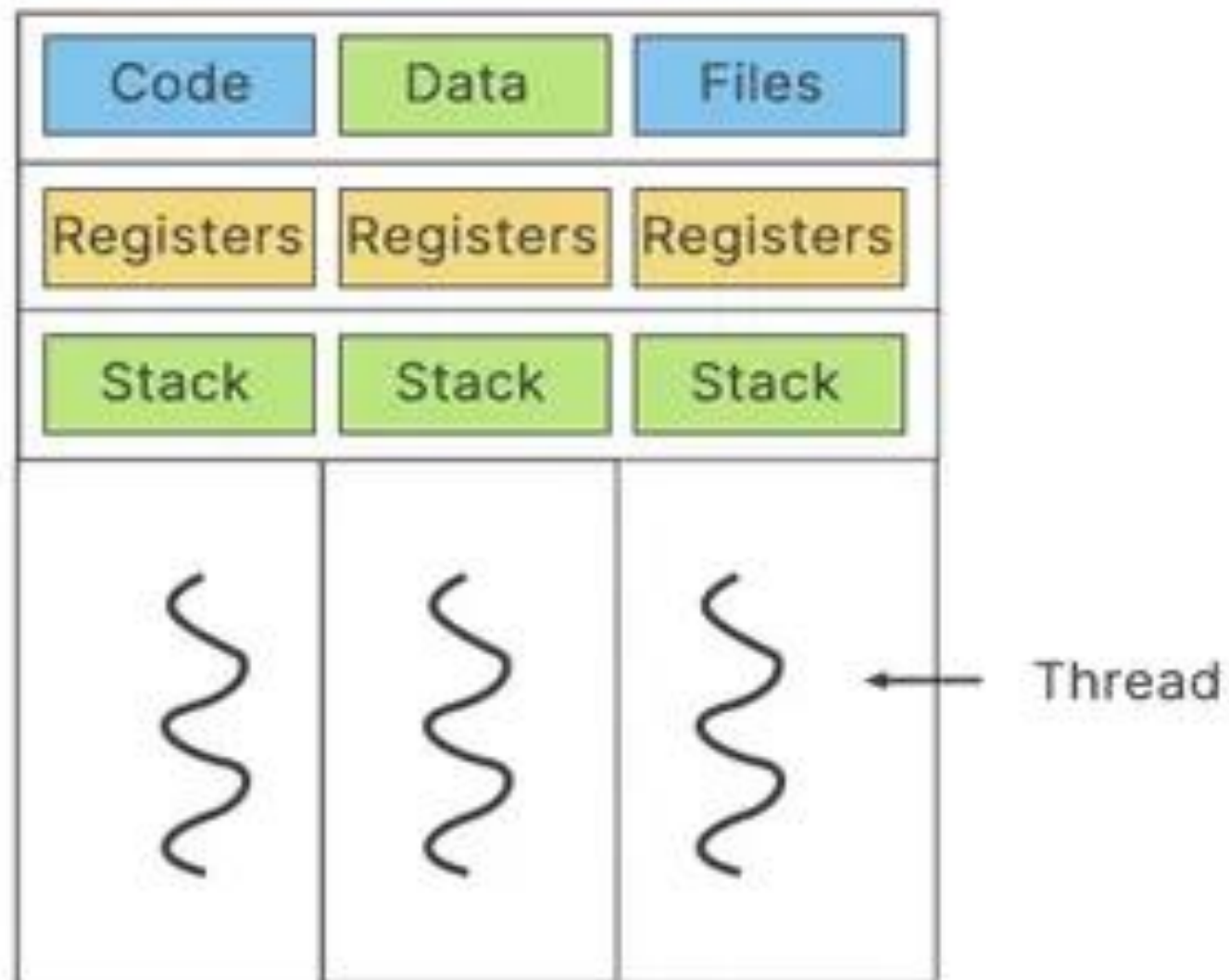
# Object Oriented Programming with Java (OOPJ)

Session 16: Threads

Kiran Waghmare

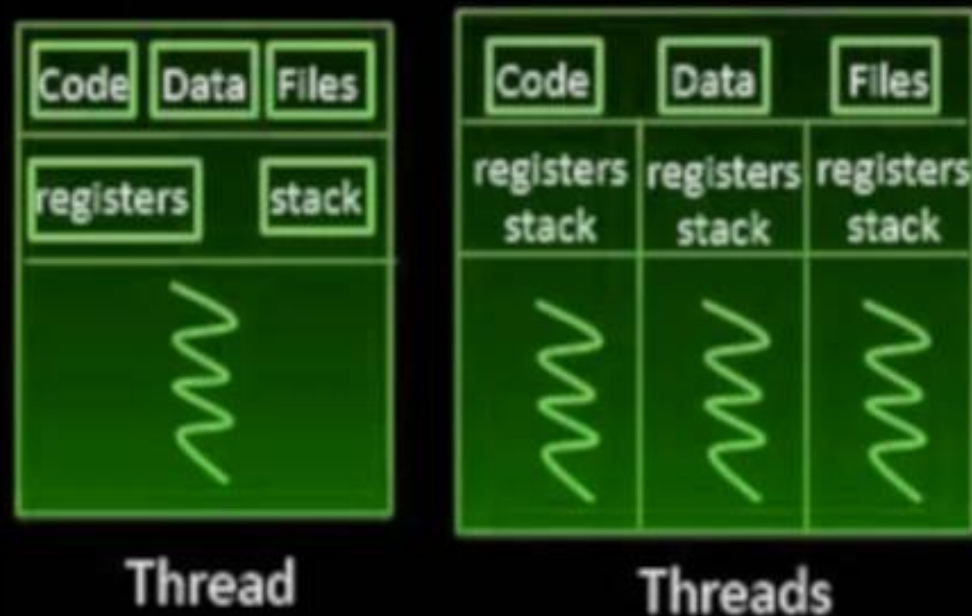
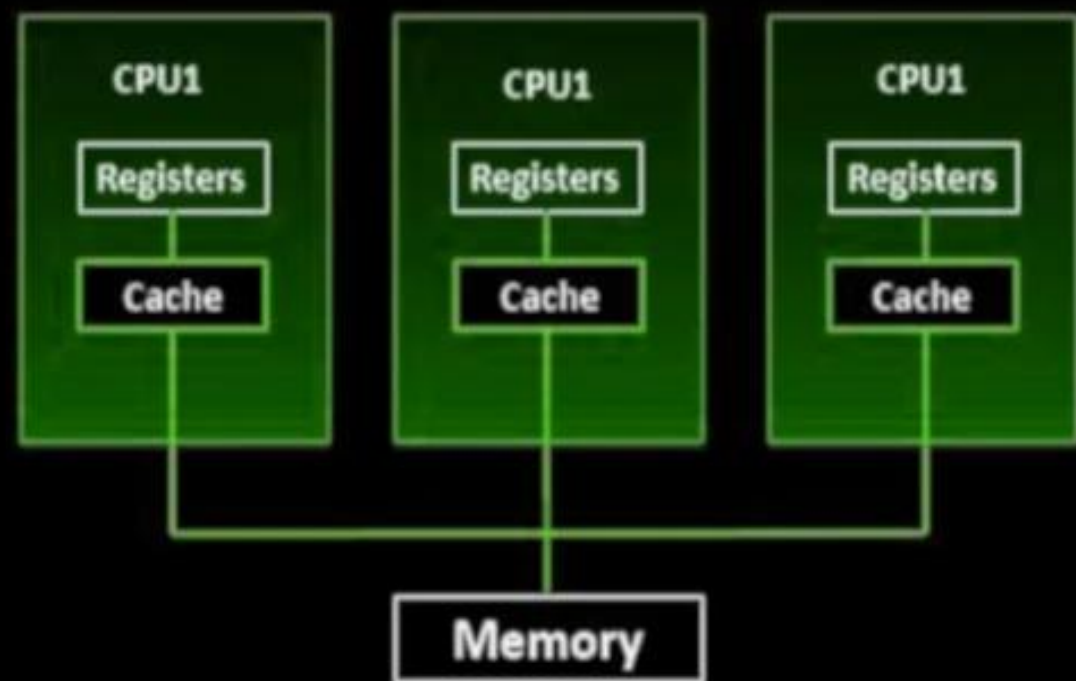


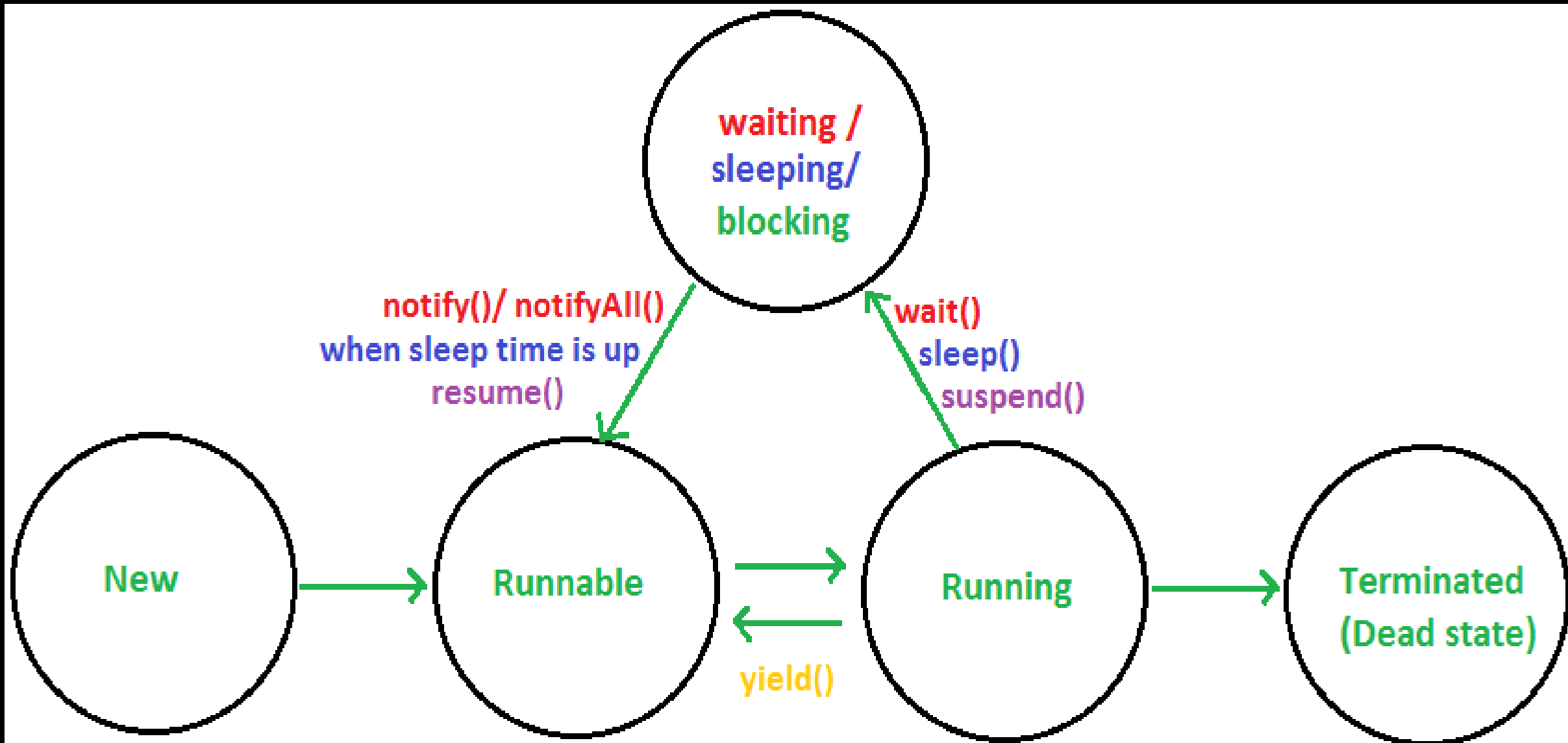
Single-Threaded Process



Multithreaded Process

# Multiprocessing vs Multithreading





## THREAD STATES

# Synchronized method

Locked by thread1

thread1

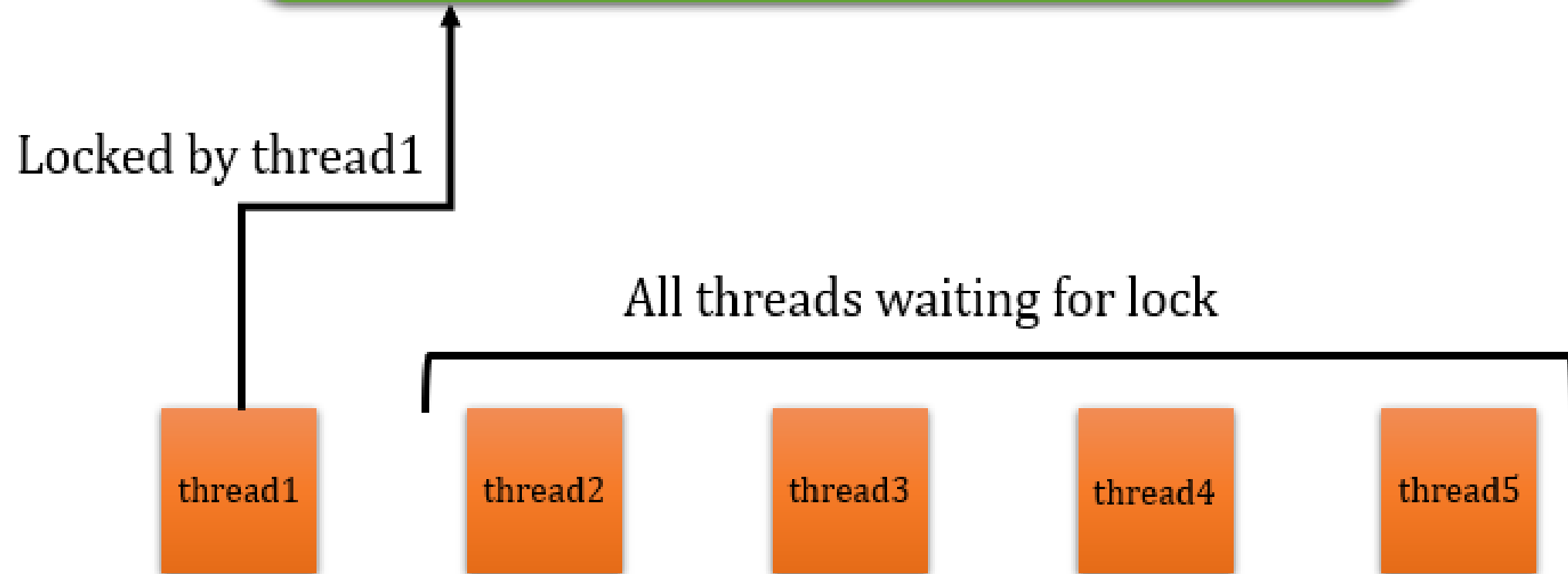
All threads waiting for lock

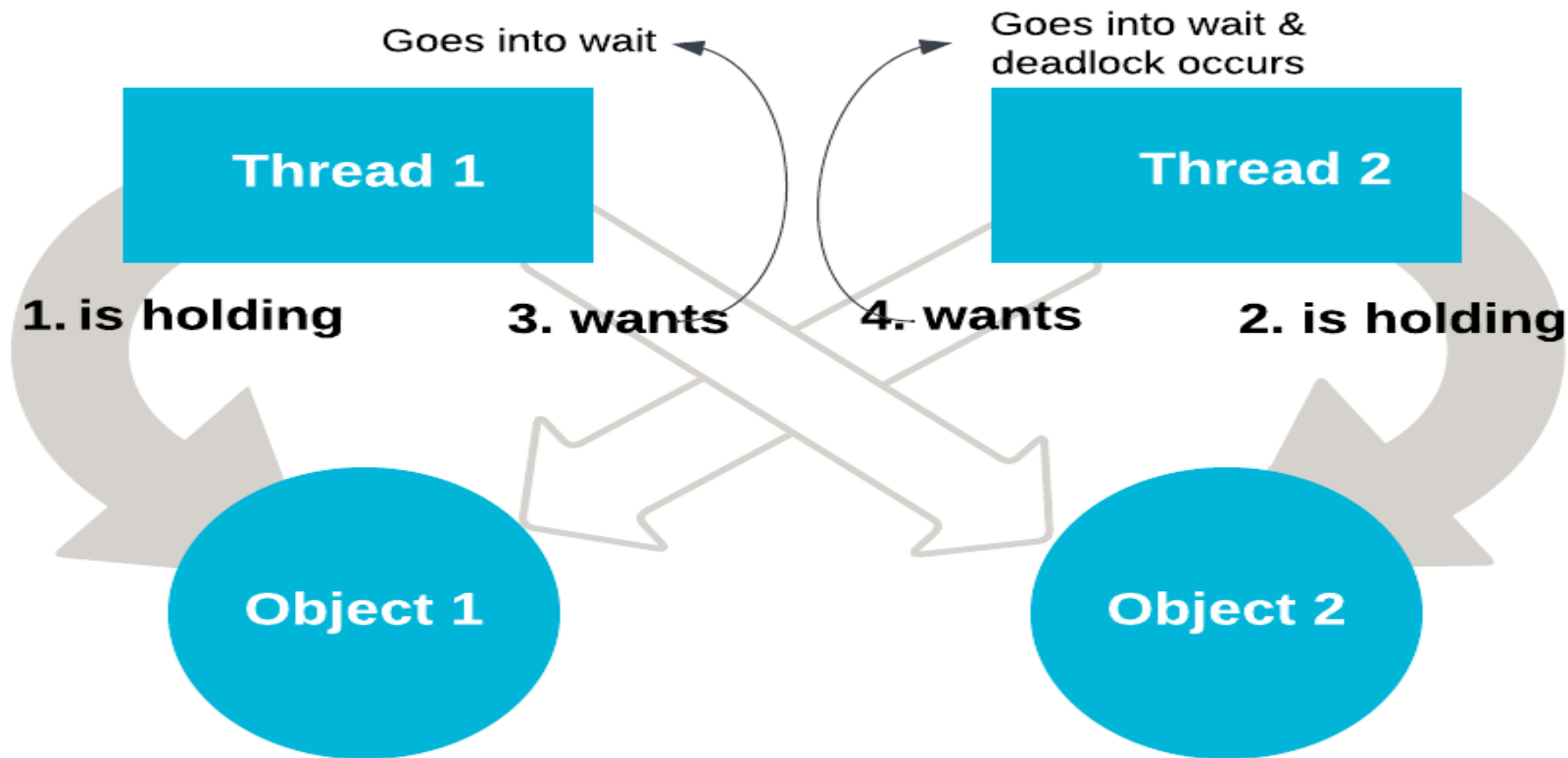
thread2

thread3

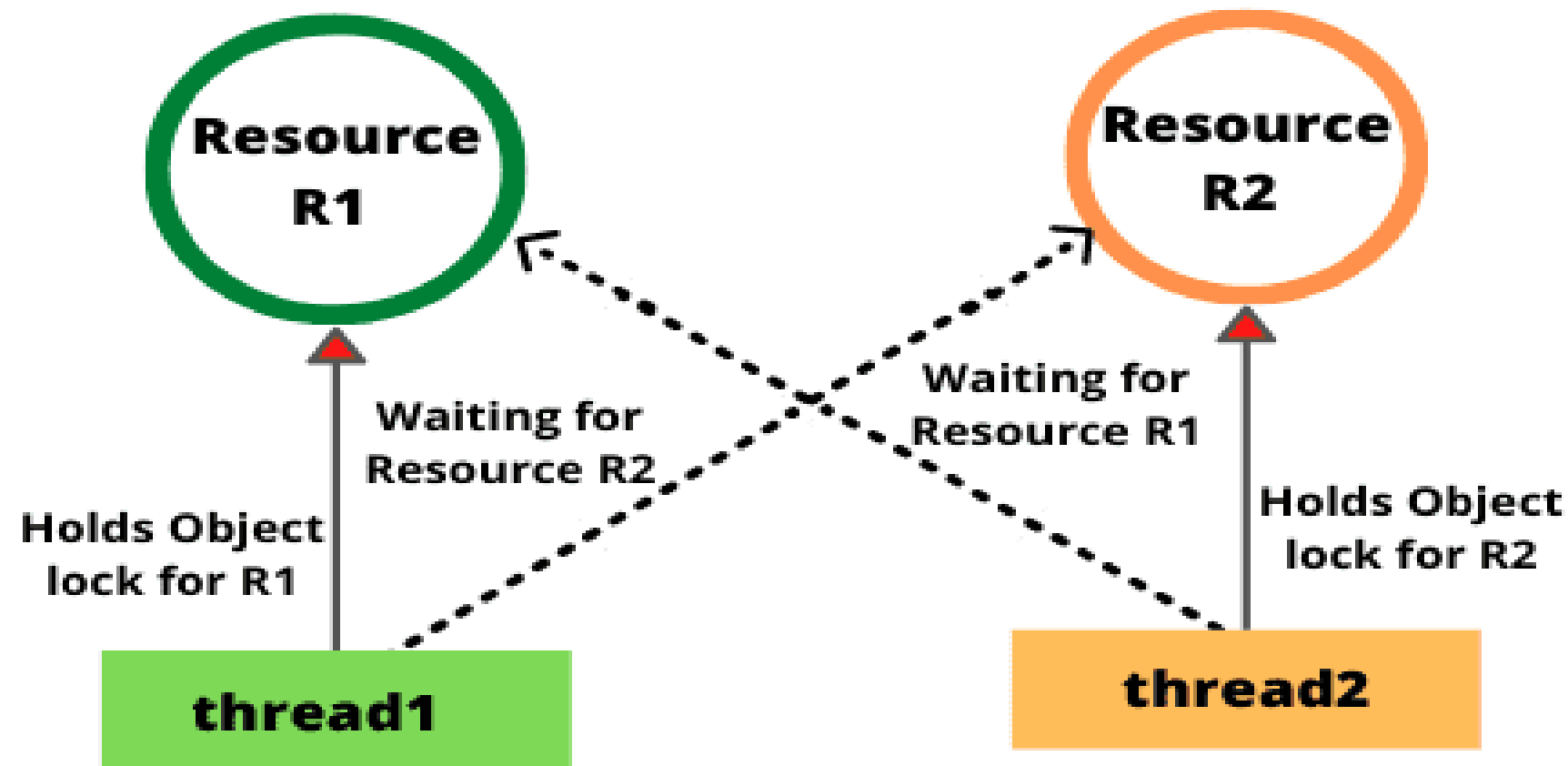
thread4

thread5





Wrong order of lock acquisition



Here, both threads are waiting for each other to unlock resources R1 and R2, but thread2 cannot release lock for resource R2 until it gets hold of resource R1.

Fig: Example of Deadlock condition