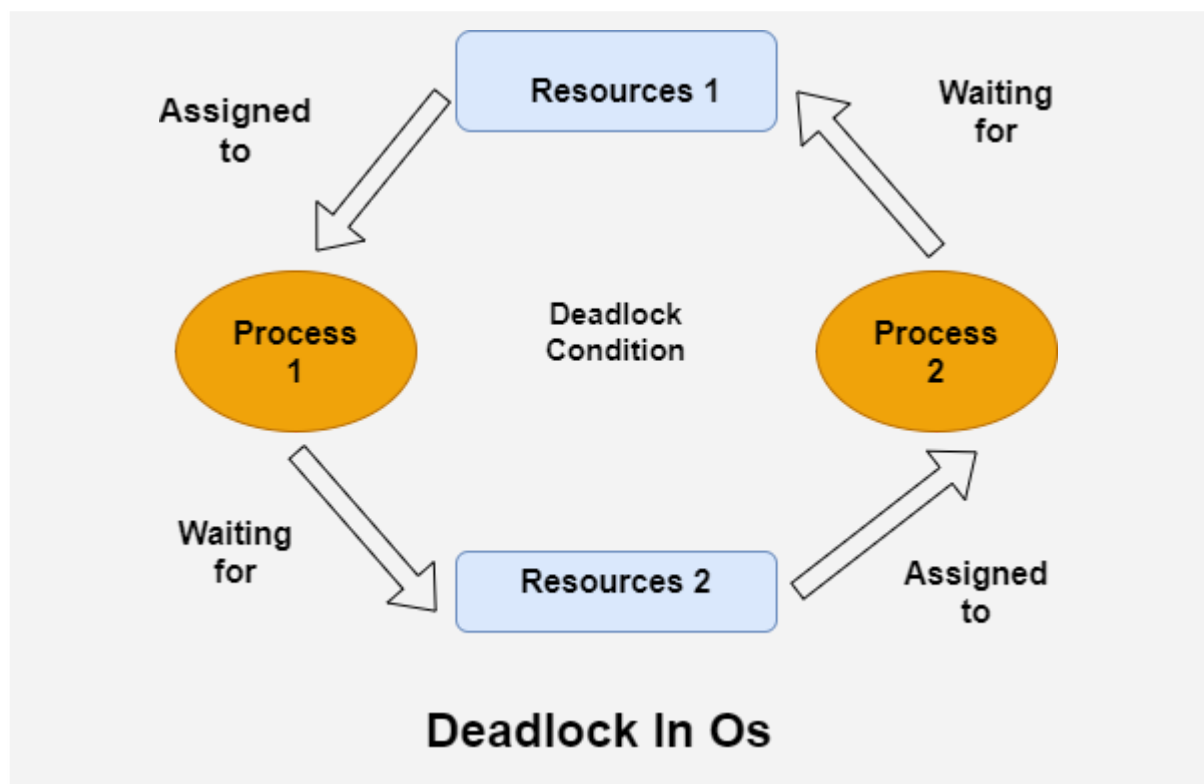# Deadlock

Deadlock

In a multiprogramming system, several processes may compete for a finite number of resources. A process requests for resources, and if the resources are not available at the time then the process enters the waiting state. Sometimes, a process will wait indefinitely because the resources it has requested for are being held by other similar waiting processes.
Deadlock is a state in which two or more processes are waiting indefinitely because the resources they have requested for are being held by one another.

A process is deadlocked if it is waiting for an event which is never going to happen. Deadlocks can occur via system calls, locking, etc.

Deadlock In Os

Example of deadlock

Let S and Q be two semaphores initialized to 1

P0	P1
wait (S);	wait (Q);
wait (Q):	wait (S);
.	
.	
.	
signal (S);	signal (Q);
signal (Q);	signal (S);