



Deadlocks

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Deadlocks

- **Deadlocks**: Occurs when threads are waiting for resources with circular dependencies
 - Often involve **nonpreemptable resources**, which cannot be taken away from its current thread without failing the computation (e.g., storage allocated to a file)

Deadlocks

- Deadlocks that involve ***preemptable resources*** (e.g., CPU) can usually be resolved by reallocation of resources
- ***Starvation***: a thread waits indefinitely
- A deadlock implies starvation