How to solve the deadlock?

- Conservative 2PL
- Wait die, wound wait

A deadlock is when transactions wait for the other to release a lock. To resolve a deadlock, one of the processes needs to be terminated and the locked resource needs to be freed so the process can complete. To prevent deadlocks from happening, the conservative two-phase locking method (C2PL) may be used. C2PL's transactions get all the locks they need before transactions begin. Obtaining all the locks guarantees a transaction that already holds some locks will not block waiting for other locks.

Another way to prevent deadlocks is to use the Wait-Die Scheme. If a transaction requests a resource that is locked by another transaction, then the DBMS will check the timestamp of both transactions and allows the older transaction to wait until the resource is available for execution.

A third way to prevent deadlocks is to use Wound Wait Scheme. If an older transaction requests for a resource held by a younger transaction, then an older transaction forces a younger transaction to kill the transaction and release the resource. The younger transaction is then restarted a minute later with the same timestamp.