Types of Locks in SQL Server:

**Shared Lock(S):** Shared(s) allow concurrent transactions to read(select).Shared(s) lock are released as soon as the read operation completes, unless the transaction level is set to repeatable read or higher, or a locking hint is used to retain the shared(s) locks for the transaction.

**Update Lock (U):** Update (U) locks prevents a common form of deadlock that occurs when multiple session are reading, locking and potentially updating resource later.

**Exclusive Lock (X):** Exclusive lock (x) used for data modification operations such as INSERT, DELETE or UPDATE, Ensures that multiple updates cannot be made to the same resource at the same time.

**Intent Lock (X):** Intent lock (x) are used by database engine to protect placing a shared(S) lock or Exclusive lock(X) on a resource lower in the lock hierarchy. Intent locks are named intent locks because they are acquired before a lock at the lower level, and therefore signal intent to place locks at a lower level.

To prevent other transactions from modifying the higher-level resource in a way that would invalidate the lock at the lower level.

To improve the efficiency of the database engine in detecting lock conflicts at the higher level of granularity.

Intent Shared (IS)

Intent exclusive (IX)

Intent shared with intent Exclusive (SIX)

Deadlock victim sys.dm\_os\_tasks