**Assignment 3: Explain the ACID properties of a transaction in your own words. Write SQL statements to simulate a transaction that includes locking and demonstrate different isolation levels to show concurrency control.**

Atomicity: This property ensures that a transaction is treated as a single unit of work, meaning that either all of its operations are successfully completed and committed, or none of them are. There's no in-between state.

Consistency: This property ensures that a transaction brings the database from one valid state to another. In other words, the integrity constraints and rules defined on the database should not be violated by the transaction.

Isolation: This property ensures that the execution of transactions concurrently does not result in interference between them. Each transaction should operate as if it is the only transaction executing on the database, even though multiple transactions may be executing concurrently.

Durability: This property ensures that once a transaction is committed, its effects persist even in the event of system failure. The changes made by the committed transaction are permanently stored in the database and cannot be lost.