1. Snapshot isolation conforms to the ANSI-SQL definition of serializability but is not conflict serializable. What is the difference between these two?

Suggested Answer.

ANSI described serializable purely in terms of 4 phenomena - dirty read, committed read, repeatable read, no phantom reads. The types of transaction phenomena defined in the ISO/ANSI standard. There are two isolation levels that SQL Server supports which never experience any of no dirty, non-repeatable or phantom reads. They are Serializable and Snaphot, they are both made available in order to avoid dirty, non-repeatable or phantom reads, but they do so using different methods.

Snapshot – The Snapshot transactions avoid phantom reads, dirty reads and non-repeatable reads, but they do it in quite a different way than Serializable transactions do. While Serializable uses locks, instead Snapshot uses a copy of committed data. Since no locks are taken, when subsequent changes are made by concurrent transactions, those changes are allowed and not blocked.

Conflict serializable – The Conflict-serializability is defined by equivalence to a serial schedule with the same transactions; it does no overlapping transactions, such that both schedules have the same sets of respective chronologically ordered pairs of conflicting operations. The Conflict-serializability is widely utilized because it is easier to determine and covers a substantial portion of the view-serializable schedules.