DATABASE MANAGEMENT AND SYSTEMS

ACID properties:

→ It is important to ensure that the database remains consistent before and after the transaction.

→ To ensure the consistences of database certain properties are followed by all the transactions occuring in the system.

→ The following are called ACID properties

i) Atomicity.

ii) Consistency

iii) Isolation

iv) Durability.

ATOMICITY:

→ All changes to data are performed as if they are single operation either the transaction occurs completely.

→ It is responsible of Transaction Control

Manager.

CONSISTENCY:

→ Data in a consistent state when a transaction starts and when it ends.

→ It is the responsible of DBMS and application programmer to ensure consistence of the database.

ISOLATION:

→ The intermediate state of a transaction is invisible to the transaction.

→ This property ensures that mul from can occur simultaneously without causing any inconsistency.

→ As a result, transaction that run concurrently appear to be serialized.

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DURABILITY:

→ This property ensures that all the changes made by a transaction after its successfully execution are written successfully to the disk.

→ It is responsible of recovery manager to ensure durability in the database.