Features

The two basic properties of RDMS are CRUD, the necessary operations to implement a persistent storage application and ACID, the properties to maintain consistency across the database.

CRUD – stands for Create, Read, Update and Delete. These are the basic operations that the RDBMS must allow on the records in the database. These functions are not only performed on the object records but also on the indexes used to search those records. The database engine must provide the interface for the user to perform these operations, to read or modify the data, on the database. Most the RDBMS use SQL language to perform CRUD operations or to communicate with the database.

ACID – stands for Atomicity, Consistency, Isolation and Durability. These are the methods that attempt to define and solve the concurrency issues in the RDBMS. Atomicity defines that any transaction must be atomic i.e. must be completed in full or must be never done. This methods groups all the data together as single unit, as an atomic unit of data. Consistency defines that the database must maintain a stable state, be consistent, before and after any transaction(s) rather than an in-consistent or corrupted state. Isolation defines that multiple transactions can occur concurrently, each in its own isolated state without interference and without leading to any inconsistency in the database. Durability defines that the data, once written or modified in the database, must be written to the disk and persist even if a system failure occurs.

All the relational database systems must support the above CRUD and ACID properties.