

Transaction

- A unit of program execution that access and possibly various data items.
- Initiated by a user program written in a high-level data-manipulation language.
- It is a unit of logical work and recovery.

Properties of Transaction

- ACID

- Atomicity (*run to completion as an individual unit*)

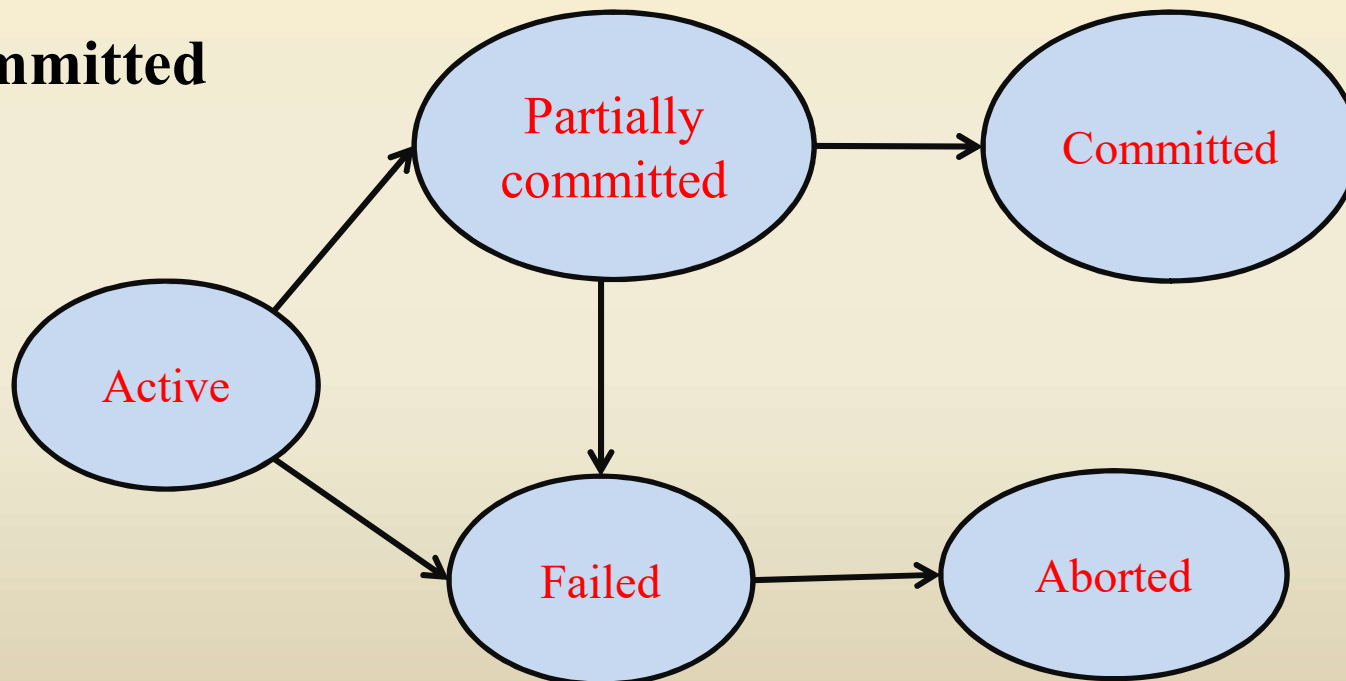
- Consistency (*transverse the consistency of the database*)

- Isolation (*multiple transaction may execute concurrently*)

- Durability (*longlife i.e. any changes to the database by a completed transaction remains permanent/durable in the database*)

Transaction State

- **Active**
- **Partially committed**
- **Failed**
- **Aborted**
- **Committed**



State diagram of transaction