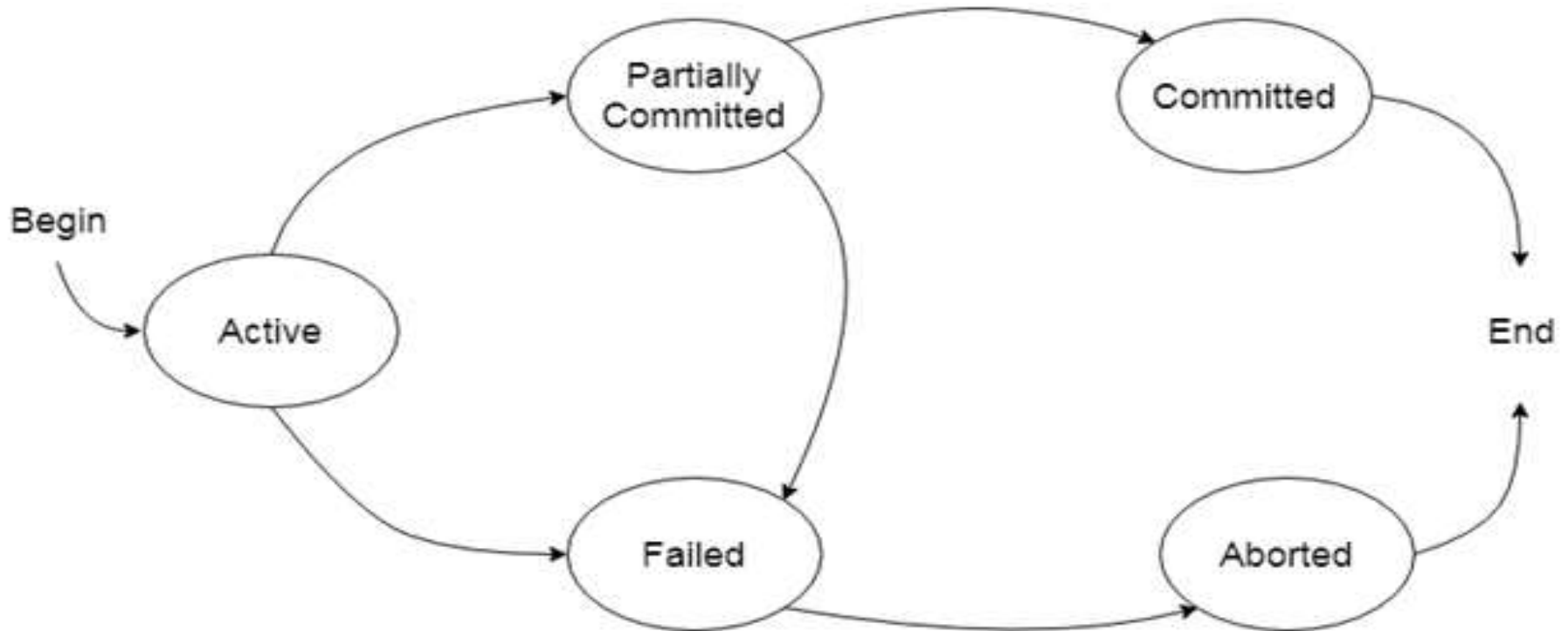# UNIT IV

TRANSACTIONS

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Transaction States

Active state

➢ The active state is the first state of every transaction. In this state, the transaction is being executed.

➢ For example: Insertion or deletion or updating a record is done here. But all the records are still not saved to the database.

Partially committed

- In the partially committed state, a transaction executes its final operation, but the data is still not saved to the database.

- In the total mark calculation example, a final display of the total marks step is executed in this state.

Committed

- A transaction is said to be in a committed state if it executes all its operations successfully.
- All the effects are now permanently saved on the database system.

Failed

- If any of the checks made by the database recovery system fails, then the transaction is said to be in the failed state.

- In the example of total mark calculation, if the database is not able to fire a query to fetch the marks, then the transaction will fail to execute.

Aborted

- If any of the checks fail and the transaction has reached a failed state then the database recovery system will make sure that the database is in its previous consistent state.

Operations

✓ Re-start the transaction

✓ Kill the transaction