Concurrency Control Schemes

- Concurrency control schemes are divided into 2 categories:
  - Pessimistic or Conservative Approach
  - Optimistic Approach
Pessimistic Execution

- Validate
- Read
- Compute
- Write
Two methods for implementing TS

- Use the value of the system as the timestamp (System Clock).

- Use a logical counter that is incremented after a new timestamp has been assigned.
Validation Based Protocol Phases…

- Validation Phase:
  - Come after end of Read phase.
  - Certain checks are performed to ensure that no conflict has occurred.
  - For Read only transactions this phase consist of checking that the data elements read are ok, no conflict is there then it is Committed.
  - If conflict is there then transaction is Aborted or Restarted.
  - For Updating transactions, it checks whether current transaction leaves database in a consistent state, if not then transaction is Aborted.