Module 4: Concurrency Control Protocols

Objective:
Familiarize with different types of protocols for controlling concurrent execution. Identify which concurrent transaction problem is overcome by each of these protocols. Understand the differences among these protocols. The objective is to identify a suitable concurrency protocol for a given scenario.

Topics:
- Locks: binary locks, shared and exclusive locks, intention locks
- Two-phase locking protocol (TPLP) and its benefits
- Versions of TPLP and their characteristics
- Need for deadlock prevention protocol (DPP)
- DPPs with timestamp
- DPPs without timestamp
- Timestamp Ordering (TSO) protocol without using any locks
- Versions of TSO protocols and their differences

Task:
Understand all topics through concept maps and then watch the video. Compare and contrast all three families of concurrency protocols and their versions.

Assessment:
A solid preparation of this module will enable you to score well in quizzes and exams.