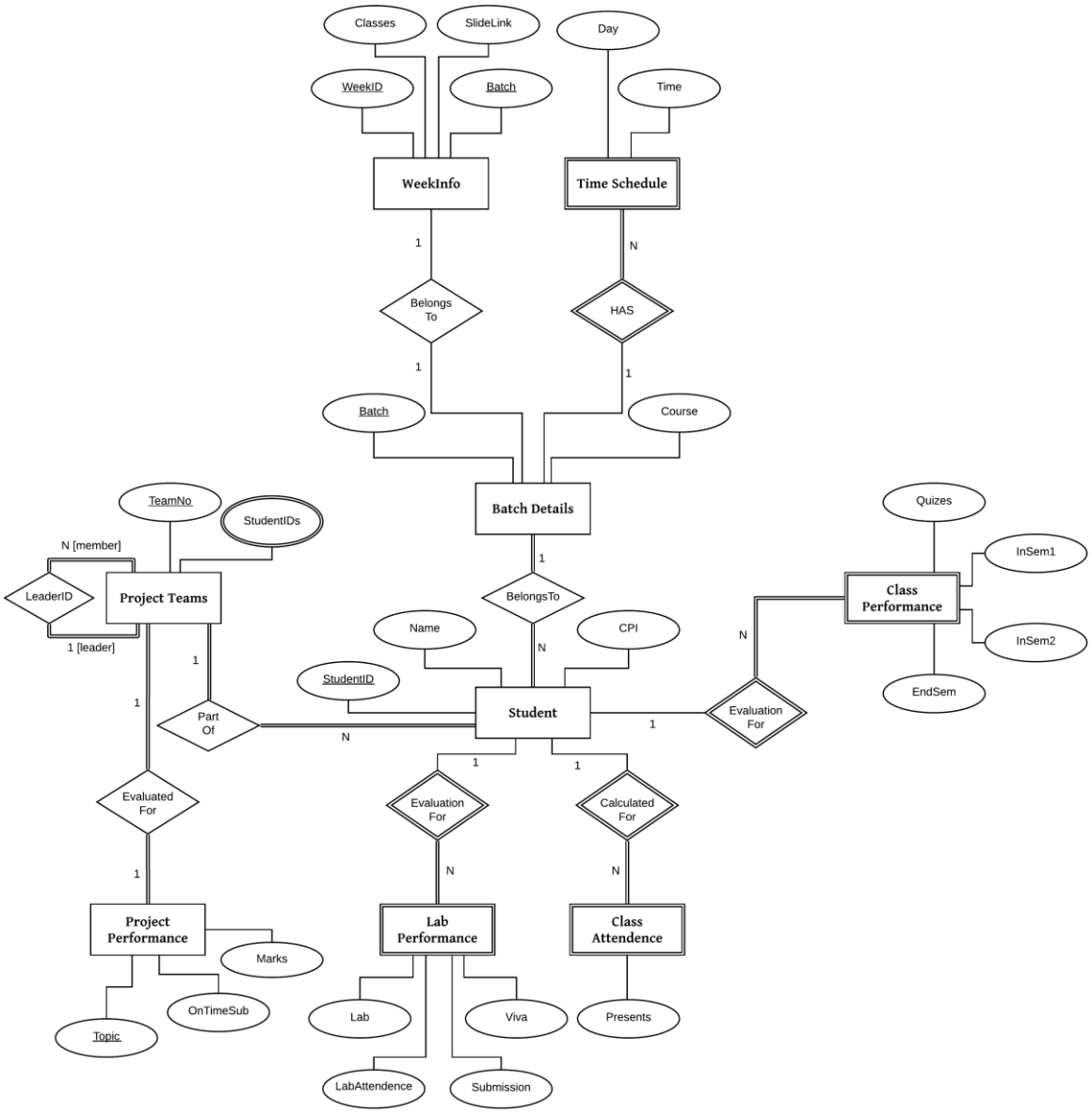
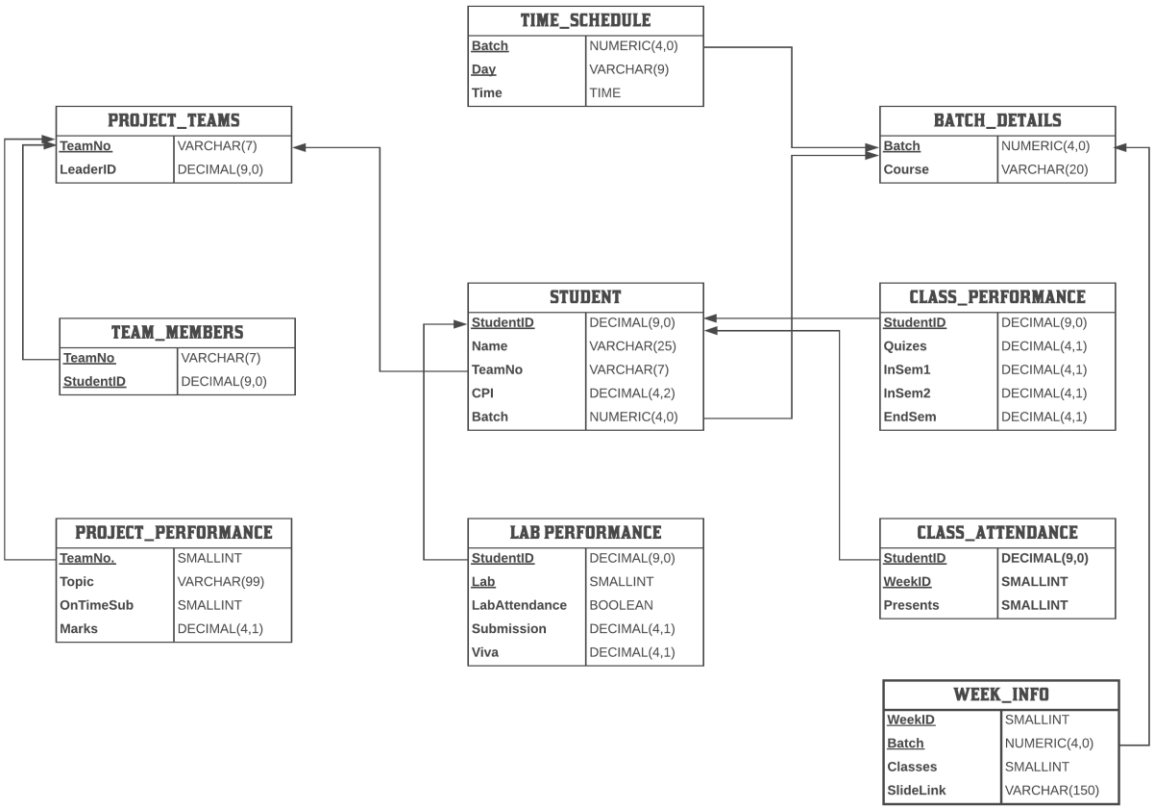
Professor’s Support System

ENTITY RELATIONSHIP DIAGRAM



RELATIONAL SCHEMA



BOYCE-CODD NORMAL FORM (BCNF) PROOF:

1. **PROJECT_TEAMS**
   A relations with only two attribute is always in BCNF.

2. **TEAM_MEMBERS**
   All attribute Key Relation is always in BCNF, i.e., if a relation has no FD then key is all attributes, and such relations are always in BCNF.

3. **PROJECT_PERFORMANCE**
   TeamNo → Topic
   TeamNo → OnTimeSub
   TeamNo → Marks

   Primary Key: TeamNo
   For every FD A → B that holds on relation PROJECT_PERFORMANCE, A(TeamNo) is its super-key.

4. **BATCH_DETAILS**
   A relations with only two attribute is always in BCNF.

5. **TIME_SCHEDULE**
   Batch, Day → Time

   Primary Key: Batch, Day
   For every FD A → B that holds on relation TIME_SCHEDULE, A(Batch, Day) is its super-key.

6. **STUDENT**
   StudentID → Name
   StudentID → TeamNo
   StudentID → CPI
   StudentID → Batch

   Primary Key: StudentId
   For every FD A → B that holds on relation STUDENT, A(StudentId) is its super-key.

7. **LAB_PERFORMANCE**
   StudentID, Lab → LabAttendance
   StudentID, Lab → Submission
   StudentID, Lab → Viva

   Primary Key: StudentId, Lab
   For every FD A → B that holds on relation LAB_PERFORMANCE, A(StudentId, Lab) is its super-key.

8. **CLASS_PERFORMANCE**
   StudentID → Quizes

StudentID → InSem1
StudentID → InSem2
StudentID → EndSem

Primary Key: StudentId
For every FD A → B that holds on relation CLASS_PERFORMANCE, A(StudentId) is its super-key.

9. **CLASS_ATTENDANCE**
   StudentID, WeekID → Presents

   Primary Key: StudentID, WeekID
   For every FD A → B that holds on relation CLASS_ATTENDANCE, A(StudentID, WeekID) is its super-key.

10. **WEEK_INFO**
    WeekID, Batch → Classes
    WeekID, Batch → SlideLink

    Primary Key: WeekID, Batch
    For every FD A → B that holds on relation WEEK_INFO, A(WeekID, Batch) is its super-key.