CHAPTER 2

ER DIAGRAM AND RELATIONAL SCHEMA DIAGRAM

This chapter focuses on the ER Diagram and schema diagram of the database

ER DIAGRAM

An entity relationship diagram, also known as an entity relationship model, is a graphical among people, objects, places, concepts representation of an information system that depicts the relationships, events within that system.

- Entity type like Department, Attendance, Staff, Student, Semsec are represented using rectangular boxes in the e-r diagram.
- The attributes which characterize the entities are represented in ovals, each attached to the entity type using a straight line. The attribute which is designated as the primary key is identified by underlining it within the oval.
- Relationship like ‘has’ are represented in diamond boxes which are attached to the entity type participating in the relationship using straight lines.
- The total participation of the entities participating in the relationship represented inside the rhombus is identified by two straight lines from the entity type to the diamond. Whereas, the partial participation is identified by single straight lines from the entity type to the diamond.
- There is a multi attribute of entity Department named as dept_location which contains the location of the department.
- The cardinality ratio are as follows
    1 Department: Student is of cardinality ratio 1: N as each Department can have N number of students.
    2 Student: Semsec is of cardinality ratio N:1 as N number of student studies in each semester and section.
    3 Staff: Attendance is of cardinality ratio 1: N as each Staff take Attendance of multiple classes.
    4 Department: Staff is of cardinality ratio 1: N as each Department can have N number of Staff.