

## CHAPTER 2

# E-R DIAGRAM AND RELATIONAL SCHEMA DIAGRAM

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

### 2.1 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 Cricket-db, User, Team, Batsman, Bowler and All-rounder 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.
- The cardinality ratio are as follows:
  - 1 User: Team is of cardinality ratio 1: 1 as each User can have 1 cricket Team.
  - 2 Team: Players is of cardinality ratio 1:N as 1 Team can have N players in it.
  - 3 Players: Batsman is of cardinality ratio 1: N as there can be N batsman that can be team players.
  - 4 Players: Bowlers is of cardinality ratio 1: N as there can be N bowlers that can be team players.
  - 5 Players: All-rounders is of cardinality ratio 1: N as there can be N all-rounders that can be team players.