CSE 512- Distributed Database Systems

Group Project: Cassandrian

Part 1: Design and Implementation of a Distributed Database System

1. Distributed Database Schema:

Entity-relationship diagram –

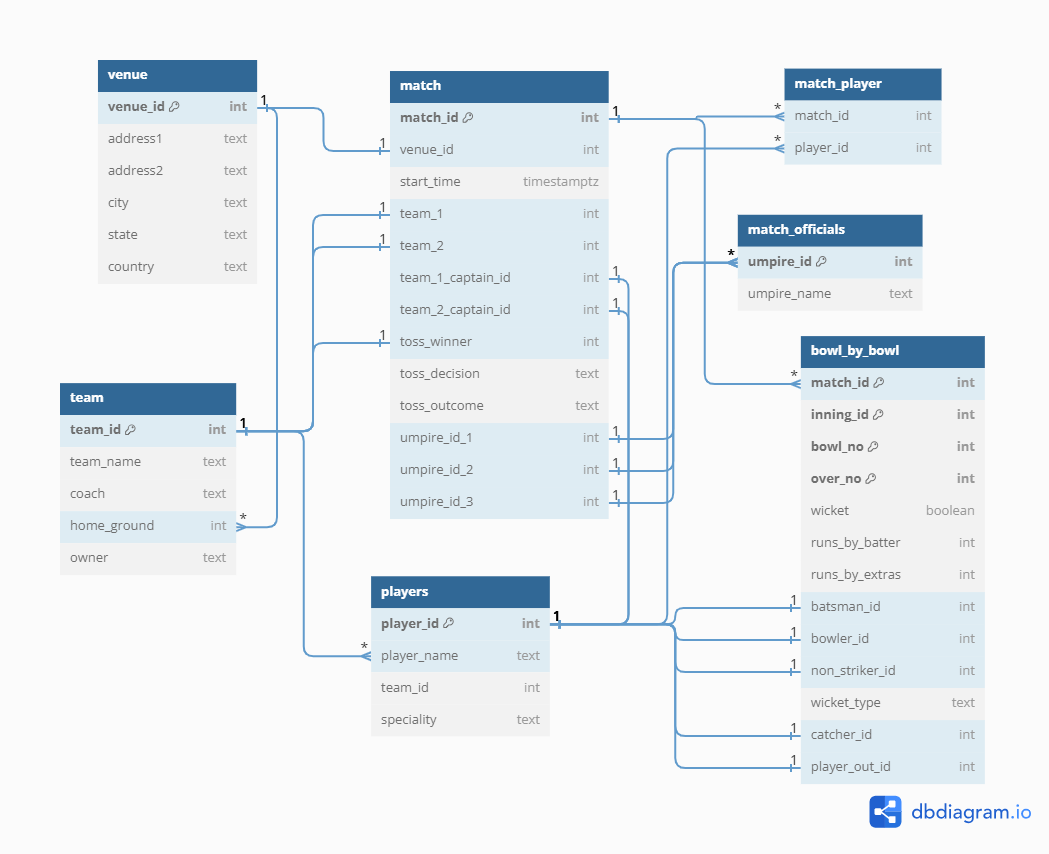


Table Definitions –

1. Venue table –

* This table contains information about the stadiums/venues for the matches.
* Attributes:

Venue\_id: Auto-incremental unique ID [Primary Key]

Address1: Address of the stadium

Address2: Landmark/Street, etc of Address

City: City of the stadium

State: State of the stadium

Country: Country of the stadium

1. Team –

* Team table contains basic information of the teams that play.
* Attributes:

Team\_id: Auto-incremental unique ID [Primary Key]

Team\_name: Name of the team

Coach: Name of the coach of the team

Home\_ground: Venue used for practice by team [Foreign Key – Venue (venue\_id)]

Owner: Owner of the team

1. Match –

* Match table contains data related to the match.
* Attributes:

Match\_id: Auto-incremental unique ID [Primary Key]

Venue\_id: Stadium where the match has/is taking place [Foreign Key – Venue (venue\_id)]

Start\_time: Starting time of the match

Team\_1: First team that’s playing the match [Foreign Key – Team (team\_id)]

Team\_2: Second team that’s playing the match [Foreign Key – Team (team\_id)]

Team\_1\_captain\_id: Captain of 1st team [Foreign Key – Players (player\_id)]

Team\_2\_captain\_id: Captain of 2nd team [Foreign Key – Players (player\_id)]

Toss\_winner: ID of team that won the toss [Foreign Key – Team (team\_id)]

Toss\_decision: Decision of the toss winning team

Toss\_outcome: Outcome of the toss

Umpire\_id\_1: ID of umpire [Foreign Key – match\_officials(umpire\_id)]

Umpire\_id\_2: ID of umpire [Foreign Key – match\_officials(umpire\_id)]

Umpire\_id\_3: ID of umpire [Foreign Key – match\_officials(umpire\_id)]

1. Match\_Player –

* This table contains information players that played for a match.
* Attributes:

Match\_id: ID of match [Foreign Key – match(match\_id)]

Player\_id: ID of player playing the match [Foreign Key – Players (player\_id)]

Primary Key [Match\_id, Player\_id] as this would always will be unique.

1. Match\_Officials –

* This table contains information of the match officials (umpires)
* Attributes:

Umpire\_id: Auto-incremental unique ID [Primary Key]

Umpire\_name: Name of the umpire

1. Players –

* This table contains basic information about the players
* Attributes:

Player\_id: Auto-incremental unique ID [Primary Key]

Player\_name: Name of the player

Team\_id: ID of the team that this player belongs to [Foreign Key – Team (team\_id)]

Specialty: Specialty of the player

1. Bowl\_by\_bowl –

* This table contains bowl-by-bowl score of the match
* Attributes:

Match\_id: ID the match [Foreign Key – match(match\_id)]

Inning\_id: Inning number of the match

Bowl\_no: Ball number for the particular match & inning

Over\_no: Over number of the match & inning

Wicket: boolean value whether wicket is taken or not

Runs\_by\_batter: runs scored by batter for the particular ball

Runs\_by\_extras: runs scored due to extras

Batsman\_id: ID of player who is batting [Foreign Key – Players (player\_id)]

Bowler\_id: ID of the player who is bowling [Foreign Key – Players (player\_id)]

Non\_striker\_id: ID of player who is non-striker for the ball [Foreign Key – Players (player\_id)]

Wicket\_type: If the wicket it taken for this ball, then type of wicket

Catcher\_id: ID of the player who caught the ball [Foreign Key – Players (player\_id)]

Player\_out\_id: ID of the player that got out because of the wicket [Foreign Key – Players (player\_id)]