

Set of FD's and Normal Form

Scorecard_in

{match_id,inning,over,ball_no.} → striker_id
{match_id,inning,over,ball_no.} → nonStriker_id
{match_id,inning,over,ball_no.} → bowler_id
{match_id,inning,over,ball_no.} → runs
{match_id,inning,over,ball_no.} → outType
{match_id,inning,over,ball_no.} → extras_type

Key : {match_id,inning,over,ball_no.}

Left hand side of every FD is Key,

Therefore NF is BCNF.

Team

{team_id} → stadium_id
{team_id} → coach_id
{team_id} → captain_id
{team_id} → viceCaptain_id
{team_id} → team_name

Key : {team_id}

Left hand side of every FD is Key,

Therefore NF is BCNF.

Match

{match_id} → home_team_id
{match_id} → guest_team_id
{match_id} → winner
{match_id} → stadium_id
{match_id} → category
{match_id} → toss_winner
{match_id} → home_team_score
{match_id} → guest_team_score
{match_id} → scheduled_date
{match_id} → manOfTheMatch_id

Key : {match_id}

Left hand side of every FD is Key,

Therefore NF is BCNF.

Players

$\{id\} \rightarrow dob$
 $\{id\} \rightarrow full_name$
 $\{id\} \rightarrow basePrice$
 $\{id\} \rightarrow bowling_hand$
 $\{id\} \rightarrow batting_hand$
 $\{id\} \rightarrow role$
 $\{id\} \rightarrow institute$
 $\{id\} \rightarrow gender$

Key : $\{id\}$

Left hand side of every FD is Key,
Therefore NF is BCNF.

Coach

$\{coach_id\} \rightarrow coach_name$

Key : $\{coach_id\}$

Left hand side of every FD is Key,
Therefore NF is BCNF.

Stadium

$\{stadium_id\} \rightarrow area$
 $\{stadium_id\} \rightarrow stadium_name$

Key : $\{stadium_id\}$

Left hand side of every FD is Key,
Therefore NF is BCNF.

Auctioned_to

$\{player_id\} \rightarrow team_id$
 $\{player_id\} \rightarrow final_price$

Key : $\{player_id\}$

Left hand side of every FD is Key,
Therefore NF is BCNF.

Team_owner

Key : $\{owner, team_id\}$

No FD set,
Therefore NF is BCNF.

Umpired

$\{\text{match_id}, \text{umpire_id}\} \rightarrow \text{role}$

Key : $\{\text{match_id}, \text{umpire_id}\}$

Left hand side of every FD is Key,

Therefore NF is BCNF.

Umpire

$\{\text{umpire_id}\} \rightarrow \text{dob}$

$\{\text{umpire_id}\} \rightarrow \text{umpire_name}$

Key : $\{\text{umpire_id}\}$

Left hand side of every FD is Key,

Therefore NF is BCNF.