Task 10 :- Normalizing databases : using Functional dependencies upto third normal form 29/9/25

Aim :- To normalize the below leathan & create the simplified table with suitable constraint.

cricket board (board ID_ name address: contact_no, team_ID, Name, coach, captain, player_ID, pl Name, pl name, Age, DOB, playing role, email, contact_no, batting, bowling match, ID, match_date, Time Result, Ground ID; & name: location, capacity, umpire ID, ut name, ul name, Age, DOB, casting email, contact no)

Apply the Functional dependencies normalize to INF

a, normalize maccelation using FD^T & D^T c, find the minimal cover, catered cover.

d. Normalize to 2NF, add constraints if necessary

e. Normalize to 3NF add after constraint of necessary

Procedure:-

Normalize again the relation creates simplification table with suitable constraints, we need to identify the functional dependencies & seperate team into different tables. normalizing in mode by creating.

First Normal Form:

The given relation into the first normal form (1NF) to ensure that each attribute (column) contains atomic indivisible values a more are repeating groups (or) arrays.

Second Normal Form:

To determine whether the given relation is in the 2NF we need to check:

The relation must already being in 1NF

It appears that the potential candidate keys could be: 1. Board ID
2. Team ID
3. Player ID
4. Match ID
5. Umpire ID

Next, we need to check if all non-prime attributes are fully functional dependent on their respective candidate keys (s).

Third Normal Form:

To determine whether the given relation is in the 3NF we need to check:

1. The relation must be already be in the scond normal form

2. There should be no transitive dependencies b/w non-prime attributes & candidates keys.

Now lets analyse each function dependencies and check for transitive dependencys.

Board ID → name, address, contact_No

Team ID → T name, coach, captain, No

Player_ID → Pf name, PL. name, age, DOB, playing_role, email, contact no, t_no, batting, bowling

Match venue (match ID {PK}, Ground (FK))

Ground ID → g Name, Capacity, location

Umpire ID → Uf name, Ul_name, Age, DOB, Contact, email, contact_no.

within the introduction of the match venue table we solve the transitive depending. the relation.

Now, statistics the condition of in 3NF

Task 11 +

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EX NO.	10
PERFORMANCE (5)	5
RESULT AND ANALYSIS (6)	5
VIVA VOCE (5)	5
RECORD (5)	20
TOTAL (20)	
SIGN WITH DATE	

Result :

Thus the normalization is created the simplified table with suitable constraint successfully given relation