

Project

On



“PREMIER LEAGUE

FOOTBALL”

DATABASE MANAGEMENT SYSTEM

PREPARED BY

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Subject: Advanced Database Management System

[Section: C]

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Chapter 01

Proposal of the System

Situation: Soccer enthusiasts who always love to keep themselves updated find it difficult to search the information needed on a daily basis. The track record of every player and team are found on different websites thus it is almost impossible to check all the websites and collect all the data when needed. Moreover it will really time consuming if someone wants to find out specific information regarding a specific player.

Proposed Solution: The laborious work of searching the record of players/teams can be eradicated by creating well defined database. It will allow a user to find any data regarding soccer in seconds hence make life easier.

Steps Involved:

1. Creating an E-R diagram.
2. Creating a use case diagram.
3. Creating an activity diagram.
4. Removing anomalies up-to 3NF
5. Creating table and schemas.

Benefits:

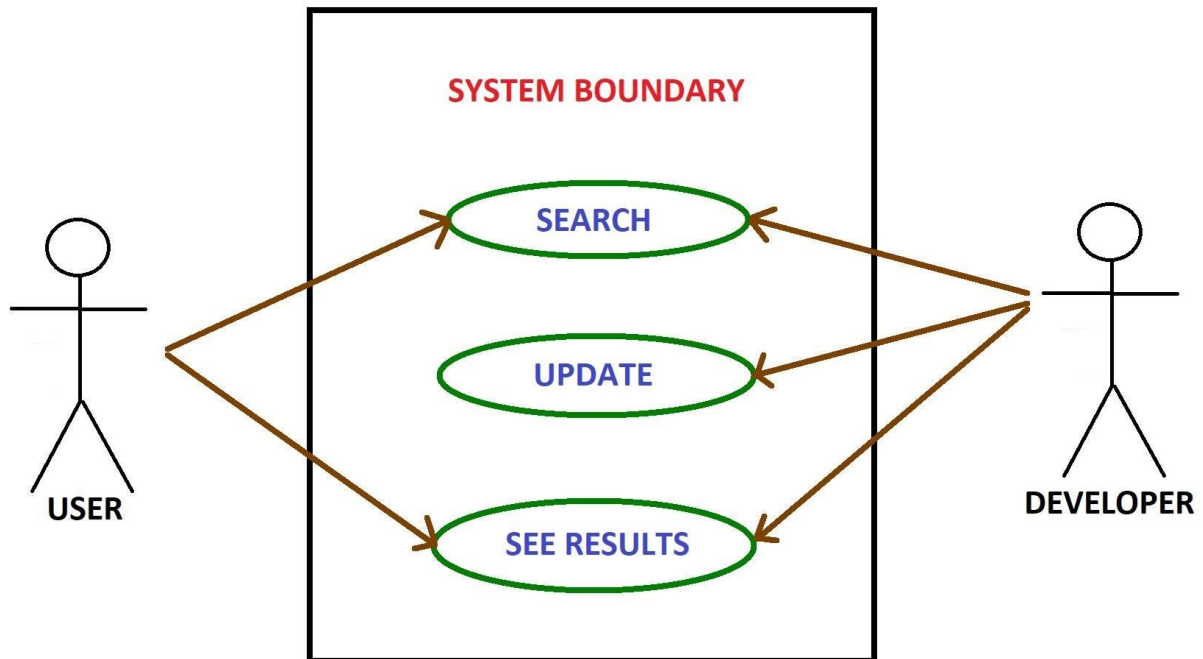
1. Anyone can find desired information about players/team within few seconds.
2. All information in a single database system.

Chapter 02

Entity Relationship Diagram of the System

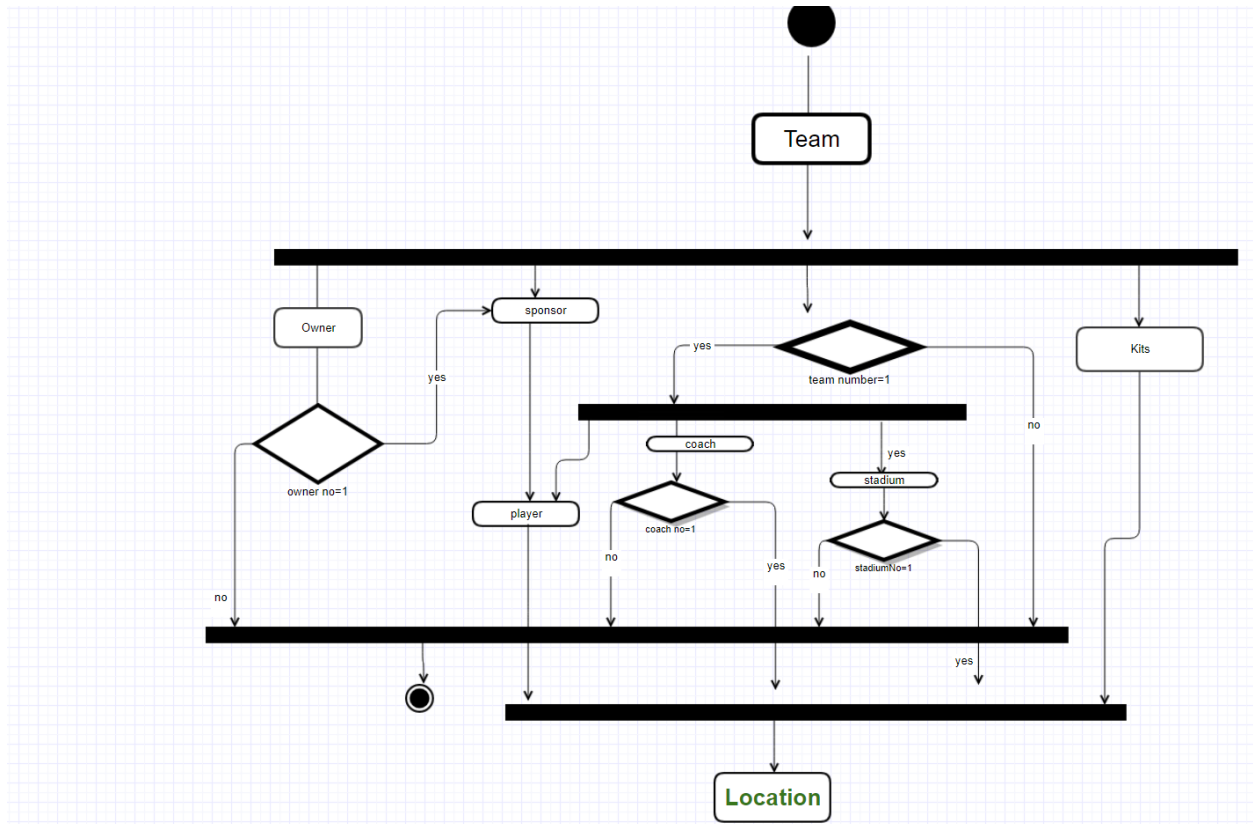


Chapter 03

Use Case Diagram

Chapter 04

Activity Diagram



Chapter 05

Normalization up-to 3NF

Already all the relations are normalized up to 3NF except the players table.

Here in Players table,

UNF:

PlayerID, PlayerName, DOB, LocID, GoalScored, Assists, Saves, TeamID, SponsorID, **Position**

Here, Position is a multivalued attribute. So in 1NF that will be removed and will be replaced with a composite primary key of the same name.

1NF:

PlayerID, PlayerName, DOB, LocID, GoalScored, Assists, Saves, TeamID, SponsorID, Position

Now there is a partial dependency. To remove that we will create a new table named POSITIONS where the primary key of the players table and the position will together form a composite primary key.

2NF:

Players_Table: PlayerID, PlayerName, DOB, LocID, GoalScored, Assists, Saves, TeamID, SponsorID

Positions_Table: PlayerID, POS

There is no transitive dependency.

3NF:

Players_Table: PlayerID, PlayerName, DOB, LocID, GoalScored, Assists, Saves, TeamID, SponsorID

Positions_Table: PlayerID, POS

In each of the relation that is connected to Players_Table, such as with Teams_Table, Sponsors_Table, Locations_Table this normalization of Players_Table will occur only.

All the rest of the table are already normalized up to 3NF.

Chapter 06

Schema Of the Final Tables

Table_Name	Schema																									
COACHES	<div><div>Add Column</div><div>Modify Column</div><div>Rename Column</div><div>Drop Column</div><div>Rename</div><div>Cop</div></div> <table><thead><tr><th>Column Name</th><th>Data Type</th><th>Nullable</th><th>Default</th><th>Primary Key</th></tr></thead><tbody><tr><td>COACHID</td><td>NUMBER(2,0)</td><td>No</td><td>-</td><td>1</td></tr><tr><td>COACHNAME</td><td>VARCHAR2(15)</td><td>Yes</td><td>-</td><td>-</td></tr><tr><td>LOCID</td><td>NUMBER(2,0)</td><td>Yes</td><td>-</td><td>-</td></tr><tr><td colspan="5">1 - 3</td></tr></tbody></table>	Column Name	Data Type	Nullable	Default	Primary Key	COACHID	NUMBER(2,0)	No	-	1	COACHNAME	VARCHAR2(15)	Yes	-	-	LOCID	NUMBER(2,0)	Yes	-	-	1 - 3				
Column Name	Data Type	Nullable	Default	Primary Key																						
COACHID	NUMBER(2,0)	No	-	1																						
COACHNAME	VARCHAR2(15)	Yes	-	-																						
LOCID	NUMBER(2,0)	Yes	-	-																						
1 - 3																										

COACHES

KITS

LOCATIONS

OWNERS

PLAYERS

POSITIONS

SPONSORS

STADIUM

TEAMS

Add Column

Modify Column

Rename Column

Drop Column

Rename

Co

Column Name	Data Type	Nullable	Default	Primary Key
KITID	NUMBER(2,0)	No	-	1
KITCOLOR	VARCHAR2(12)	Yes	-	-
1 - 2				

COACHES
KITS
LOCATIONS
OWNERS
PLAYERS
POSITIONS
SPONSORS
STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
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Column Name	Data Type	Nullable	Default	Primary Key
LOCID	NUMBER(2,0)	No	-	1
LOC	VARCHAR2(12)	Yes	-	-
1 - 2				

COACHES
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LOCATIONS
OWNERS
PLAYERS
POSITIONS
SPONSORS
STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
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Column Name	Data Type	Nullable	Default	Primary Key
OWNERID	NUMBER(2,0)	No	-	1
OWNERNAME	VARCHAR2(15)	Yes	-	-
LOCID	NUMBER(2,0)	Yes	-	-
1 - 3				

COACHES
KITS
LOCATIONS
OWNERS
PLAYERS
POSITIONS
SPONSORS
STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
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Column Name	Data Type	Nullable	Default	Primary Key
PLAYERID	NUMBER(2,0)	No	-	1
PLAYERNAME	VARCHAR2(12)	Yes	-	-
DOB	DATE	Yes	-	-
LOCID	NUMBER(2,0)	Yes	-	-
GOALSCORED	NUMBER(3,0)	Yes	-	-
ASSISTS	NUMBER(3,0)	Yes	-	-
SAVES	NUMBER(3,0)	Yes	-	-
TEAMID	NUMBER(2,0)	Yes	-	-
SPONSORID	NUMBER(2,0)	Yes	-	-
1 - 9				

COACHES
KITS
LOCATIONS
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PLAYERS
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STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
Column Name	Data Type	Nullable	Default	Primary Key	
PLAYERID	NUMBER(2,0)	No	-	1	
POS	VARCHAR2(20)	No	-	2	
1 - 2					

COACHES
KITS
LOCATIONS
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PLAYERS
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STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
Column Name	Data Type	Nullable	Default	Primary Key	
SPONSORID	NUMBER(2,0)	No	-	1	
SPONSORNAME	VARCHAR2(15)	Yes	-	-	
LOCID	NUMBER(2,0)	Yes	-	-	
OWNERID	NUMBER(2,0)	Yes	-	-	
1 - 4					

COACHES
KITS
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STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy
Column Name	Data Type	Nullable	Default	Primary Key	
STADIUMID	NUMBER(2,0)	No	-	1	
STADIUMNAME	VARCHAR2(30)	Yes	-	-	
LOCID	NUMBER(2,0)	Yes	-	-	
CAPACITY	NUMBER(15,0)	Yes	-	-	
1 - 4					

COACHES
KITS
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PLAYERS
POSITIONS
SPONSORS
STADIUM
TEAMS

Add Column	Modify Column	Rename Column	Drop Column	Rename	Co
Column Name	Data Type	Nullable	Default	Primary Key	
TEAMID	NUMBER(2,0)	No	-	1	
TEAMNAME	VARCHAR2(15)	Yes	-	-	
STADIUMID	NUMBER(2,0)	Yes	-	-	
COACHID	NUMBER(2,0)	Yes	-	-	
GAMEPLAYED	NUMBER(3,0)	Yes	-	-	
GAMEWON	NUMBER(3,0)	Yes	-	-	
GAMELOST	NUMBER(3,0)	Yes	-	-	
GAMEDRAWN	NUMBER(3,0)	Yes	-	-	
SPONSORID	NUMBER(2,0)	Yes	-	-	
KITID	NUMBER(2,0)	Yes	-	-	
OWNERID	NUMBER(2,0)	Yes	-	-	
					1 - 11