

**American
International
University-
Bangladesh**



Introduction to Database

Course project

PROJECT TITLE: FOOTBALL TOURNAMENT DATABASE
MANAGEMENT

17-APRIL-2019

Group members:

1. Kayes Ahamed Anik
18-37254-1
2. Mohammed Shahriar Hossain
18-37253-1
3. Nishad Khan
18-37239-1
4. Nahin Nasir
18-36430-1
5. Eashin Jahangir joy
18-36185-1

Course teacher:

Rifat Tasnim Ananya

Department of CS

Contents	page
PREFACE	04
Acknowledgement	
1.Introducing database structure	
1.1 Database scenario	05-06
1.2 ER-Diagram	
2. Normalization	07-19
2.1 Entity relationship normalization	
2.2 Final tables	
3. Data Tables	20-36
3.1 Table creation	
3.2Constraints	
3.2 Complete Data Tables	
5. Query questions	37

PREFACE

Rapid advances in computing and communication technologies and ever-reducing computer costs have resulted in phenomenal growth of computer applications in everyday life. Also, the dependence of the business establishment on computers is increasing at an accelerated pace, making the 21st century an information-intensive business environment. The key to success of a modern business is an effective data-management strategy and interactive data-analysis capabilities.

This project is a part of our undergraduate course, introduction to database. This project holds only a basic schema of database management system and further shows how a database system can allow users to access their data more efficiently.

Acknowledgement

Apart from the efforts of ours, the success of any project depends largely on the encouragement and guidelines of many others. we take this opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project.

we would like to show our greatest appreciation to our course teacher Rifat Tasnim Ananya. We can't thank enough for her tremendous support and help. we feel motivated and encouraged every time we attend her lectures. Without her encouragement and guidance this project would not have materialized.

The guidance and support received from all the members who contributed and who are contributing to this project, was vital for the success of the project. we are grateful for their constant support and help.

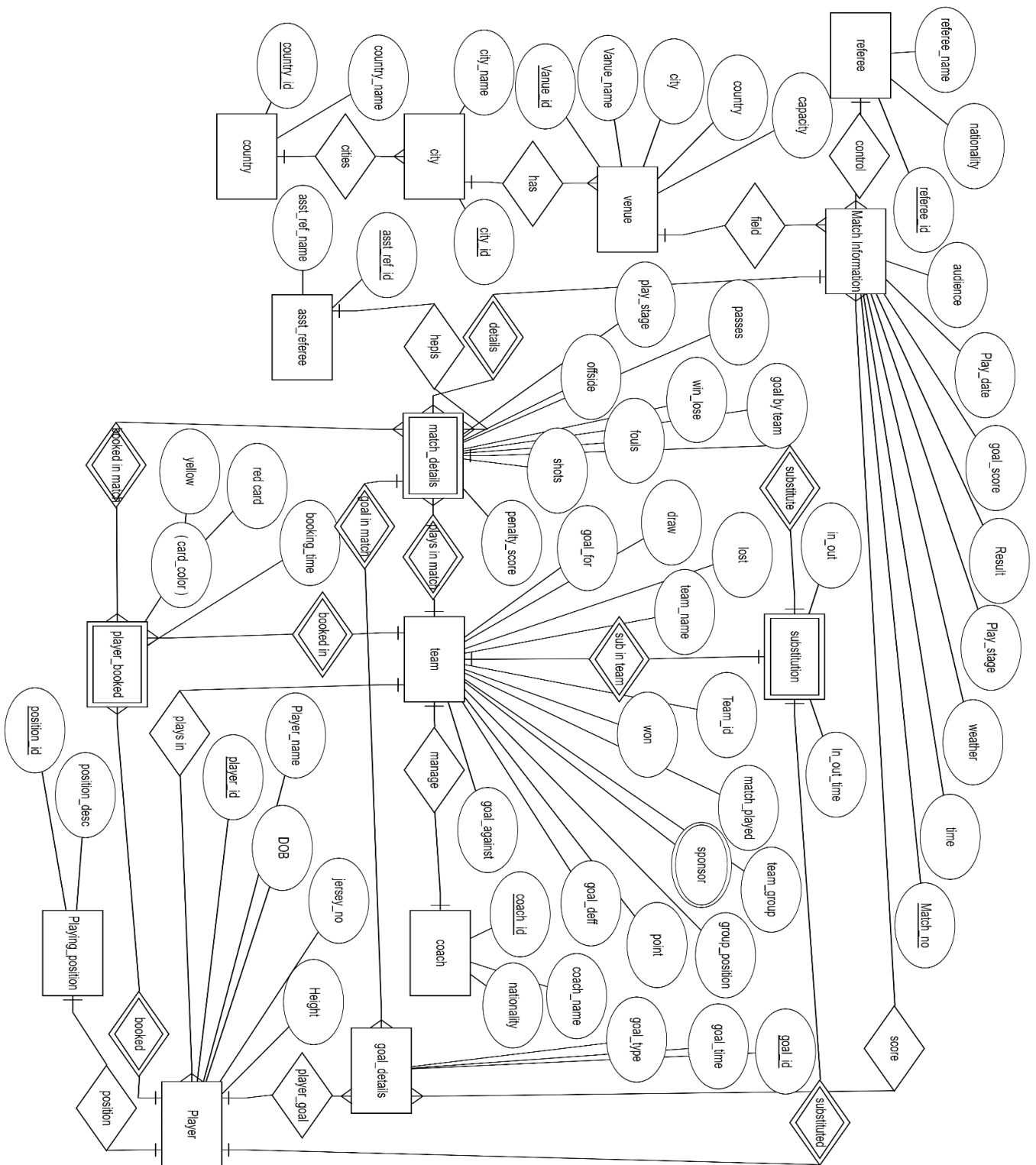
1.1 Database scenario

UEFA wants to create a database for UEFA FUTSAL EURO 2018 hosted by Spain, Italy and England in which 12 teams participated divided into four groups.

Followed by the requirements:

- Teams has unique id and also team name, a couch, sponsor, country, win, lost, score, group, position and a couch who are identified with coach id.
- There are six players in each team identified by player id. Player name, jersey number, date of birth, height, age, playing position and nationality must be recorded.
- Match details are recorded as: match no, win, loss, time, goals, weather, play time, shot, penalty, passes, audience, goal by team etc.
- For referee and assistant referee name, id is recorded.
- Venue: name, city, country, capacity.
- During match fouls are also recorded as red card and yellow card along with player name.
- As for match score win, loose, draw is recorded along with scorer and assisted player.
- Booking is recorded as red and yellow card along with booking time.
- Goal details for each player are recorded with in goal time.
- For substitution two players are exchanged in some between of match time which is also to be recorded.
- Each player plays in a unique position.

1.2 ER-Diagram



2. Normalization

2.1 Entity Relationship normalization

1. **CITIES:**(COUNTRY_ID, COUNTRY_NAME, CITY_ID, CITY_NAME)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1. COUNTRY_ID, COUNTRY_NAME

2. CITY_ID, CITY_NAME

TABLES FOR CITIES:

1. COUNTRY_ID, COUNTRY_NAME

2. CITY_ID, CITY_NAME, COUNTRY_ID(FK)

2. **HAS:**(CITY_ID, CITY_NAME, VENUE_ID, VENUE_NAME, CAPACITY)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1. CITY_ID, CITY_NAME

2. VENUE_ID, VENUE_NAME, CAPACITY

TABLES FOR HAS:

1. CITY_ID, CITY_NAME

2. VENUE_ID, VENUE_NAME, CAPACITY, CITY_ID(FK)

3. FIELD:(VENUE_ID, VENUE_NAME, CAPACITY, MATCH_NO, PLAY_STAGE, PLAY-DATE, TIME, AUDIENCE, WEATHER)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1.VENUE_ID, VENUE_NAME, CAPACITY

2. MATCH_NO, PLAY_STAGE, PLAY-DATE, TIME, AUDIENCE, WEATHER

TABLES FOR FIELD:

1.VENUE_ID, VENUE_NAME, CAPACITY

2.MATCH_NO, PLAY_STAGE, PLAY-DATE, TIME,
AUDIENCE, WEATHER, VENUE-NO(FK), RESULT_NO (FK)

3.RESULT_NO, GOAL_SCORE, RESULT

4. CONTROL:(MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, REFREE_ID,
REFREE_NAME, NATIONALITY)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE

2. REFREE_ID, REFREE_NAME, NATIONALITY

TABLES FOR CONTROL:

1.MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER,
AUDIENCE, REFREE_ID(FK)

2.REFREE_ID, REFREE_NAME, NATIONALITY

5. MANAGE:(COACH_ID, COACH_NAME, NATIONALITY, TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR)

1NF: SPONSOR MULTIVALUED ATTRIBUTE

2NF:

1.COACH_ID, COACH_NAME, NATIONALITY

2.TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS,
DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR

TABLES FOR MANAGE:

1.COACH_ID, COACH_NAME, NATIONALITY

2.TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW,
GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION
COACH_ID(FK)

3. TEAM_ID, SPONSOR

6.PLAYS_IN:(PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB, TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR)

1NF: SPONSOR MULTIVALUED ATTRIBUTE

2NF:

1.PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB

2.TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS,
DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION

3. TEAM_ID, SPONSOR

TABLES FOR PLAYS_IN:

1. PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB, TEAM_ID(FK)

2. TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW,
GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION

3. TEAM_ID, SPONSOR

7.BOOKED:(PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB, BOOKING_TIME,
YELLOW_CARD, RED_CARD)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB

2. BOOKING_TIME, YELLOW_CARD, RED_CARD

TABLES FOR BOOKED:

1. PLAYER_ID, PLAYER_NAME, JERSEY_NO, HEIGHT, DOB

2. BOOKING_TIME, YELLOW_CARD, RED_CARD, PLAYER_ID(FK)

8.BOOKED_IN:(TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW,
GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR, BOOKING_TIME,
YELLOW_CARD, RED_CARD)

1NF: SPONSOR MULTIVALUED ATTRIBUTE

2NF:

1. TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS,

DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR
 2. BOOKING_TIME, YELLOW_CARD, RED_CARD

TABLES FOR BOOKED_TEAM:

1. TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION
2. BOOKING_TIME, YELLOW_CARD, RED_CARD, TEAM_ID(FK)
3. TEAM_ID, SPONSOR

9. BOOKED_IN_MATCH:(MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE, BOOKING_TIME, YELLOW_CARD, RED_CARD)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE
2. BOOKING_TIME, YELLOW_CARD, RED_CARD

TABLES FOR BOOKED_MATCH:

1. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE
2. BOOKING_TIME, YELLOW_CARD, RED_CARD, MATCH_NO(FK)

10. SUBSTITUTED:(IN_OUT, IN_OUT-TIME, PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT
2. IN_OUT, IN_OUT-TIME

TABLES FOR SUBSTITUTED:

1. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT
2. IN_OUT, IN_OUT-TIME, PLAYER_ID(FK)

11. SUB_IN_TEAM:(IN_OUT, IN_OUT-TIME, TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR)

1NF: SPONSOR MULTIVALUED ATTRIBUTE

2NF:

1. IN_OUT, IN_OUT-TIME
2. TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION, SPONSOR

TABLES FOR SUB_IN_TEAM:

1. IN_OUT, IN_OUT-TIME, TEAM_ID(FK)
2. TEAM_ID, TEAM_NAME, TEAM_GROUP, MATCH_PLAYED, WON, LOSS, DRAW, GOAL_FOR, GOAL_AGAINST, POINTS, GROUP_POSITION
3. TEAM_ID, SPONSOR

12. SUBSTITUTE:(IN_OUT, IN_OUT-TIME, MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1.IN_OUT, IN_OUT-TIME

2. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE,
FOUL, WIN_LOSE, PENALTY_SCORE

TABLES FOR SUBSTITUTE:

1. IN_OUT, IN_OUT-TIME, MATCH_NO(FK)

2. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL,
WIN_LOSE, PENALTY_SCORE

13.GOAL_IN_MATCH:(GOAL_ID, GOAL_TYPE, GOAL_TIME, MATCH_NO, PLAY_STAGE,
GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1.GOAL_ID, GOAL_TYPE, GOAL_TIME

2.MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE,
FOUL, WIN_LOSE, PENALTY_SCORE

3NF:

1.GOAL_ID, GOAL_TYPE, GOAL_TIME

2.MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE,
FOUL, WIN_LOSE, PENALTY_SCORE, RESULT_NO(FK)

3.RESULT_NO, RESULT, GOAL_SCORE

TABLES FOR GOAL_IN_MATCH:

1.GOAL_ID, GOAL_TYPE, GOAL_TIME, MATCH_NO(FK)

2. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL,
WIN_LOSE, PENALTY_SCORE, RESULT_NO(FK)
3. RESULT_NO, RESULT, GOAL_SCORE

14. SCORE:(GOAL_ID, GOAL_TYPE, GOAL_TIME, MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT, GOAL_SCORE)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. GOAL_ID, GOAL_DETAILS, GOAL_TYPE, GOAL_TIME
2. MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT,
GOAL_SCORE

3NF:

1. GOAL_ID, GOAL_TYPE, GOAL_TIME
2. MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT,
GOAL_SCORE
3. RESULT_NO, GOAL_SCORE, RESULT

TABLES FOR SCORE:

1. GOAL_ID, GOAL_TYPE, GOAL_TIME, MATCH_NO(FK), RESULT_NO(FK)
2. MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT,
GOAL_SCORE
3. RESULT_NO, GOAL_SCORE, RESULT

15. PLAYER_GOAL:(GOAL_ID, GOAL_TYPE, GOAL_TIME, PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT)

1NF:NO MULTIVALUED ATTRIBUTE

2NF:

1. GOAL_ID, GOAL_TYPE, GOAL_TIME
2. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT

TABLES FOR SCORE:

1. GOAL_ID, GOAL_TYPE, GOAL_TIME, PLAYER_ID(FK)
2. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT

16. HELPS:(ASST_REF_ID, ASST_REF_ID, MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1. ASST_REF_ID, ASST_REF_ID
2. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE

TABLES FOR HELPS:

1. ASST_REF_ID, ASST_REF_ID
2. MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE, ASST_ID(FK)

17. DETAILS:(MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT, GOAL_SCORE, MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1.MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT, GOAL_SCORE

2.MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE

3NF:

1.MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT, GOAL_SCORE

2.MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE

3. RESULT_NO, RESULT, GOAL_SCORE

TABLES FOR DETAILS:

1.MATCH_NO, PLAT_STAGE, PLAY_DATE, WEATHER, AUDIENCE, RESULT, GOAL_SCORE

2.MATCH_NO, PLAY_STAGE, GOAL_BY_TEAM, PASSES, SHOTS, OFFSIDE, FOUL, WIN_LOSE, PENALTY_SCORE, RESULT_NO(FK)

3. RESULT_NO, RESULT, GOAL_SCORE

18. POSITION:(PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT, POSITION_ID, POSITION_DESC)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT
2. POSITION_ID, POSITION_DESC

TABLES FOR POSITION:

1. PLAYER_ID, PLAYER_NAME, DOB, JERSEY_NO, HEIGHT
2. POSITION_ID, POSITION_DESC, PLAYER_ID(FK)

19.FIELD:(VENUE_ID, VENUE_NAME, CAPACITY, MATCH_NO, PLAY_STAGE, PLAY_DATE, TIME, AUDIENCE, WEATHER, GOAL_SCORE, RESULT)

1NF: NO MULTIVALUED ATTRIBUTE

2NF:

1. VENUE_ID, VENUE_NAME, CAPACITY
2. MATCH_NO, PLAY_STAGE, PLAY_DATE, TIME, AUDIENCE, WEATHER, GOAL_SCORE, RESULT

3NF:

1. VENUE_ID, VENUE_NAME, CAPACITY.
2. MATCH_NO, PLAY_STAGE, PLAY_DATE, TIME, AUDIENCE, WEATHER, GOAL_SCORE, RESULT.
3. RESULT_NO, RESULT, GOAL_SCORE

TABLES FOR FIELD:

1. VENUE_ID, VENUE_NAME, CAPACITY
2. MATCH_NO, PLAY_STAGE, PLAY_DATE, TIME, AUDIENCE, WEATHER, GOAL_SCORE, RESULT, VENUE_ID(FK), RESULT_NO(FK)

3. RESULT_NO, RESULT, GOAL_SCORE

2.2 Final Tables:

1. PLAYER

PLAYER_ID(PK)	PLAYER_NAME	DOB	JERSEY_NO	HEIGHT	TEAM_ID	POSITION_ID(FK)
---------------	-------------	-----	-----------	--------	---------	-----------------

TEAM_ID(PK)	TEAM_NAME	TEAM_GROUP	MATCH_PLAYED	WON	LOSE	DRAW	GOAL_FOR	GOAL_AGAINST	GOAL_DIFFERENCE	POINT	GROUP_POSITION	COACH_ID(FK)
-------------	-----------	------------	--------------	-----	------	------	----------	--------------	-----------------	-------	----------------	--------------

2. TEAM

3. MATCH_INFORMATION

MATCH_NO(PK)	PLAY_STAGE	PLAY_DATE	PLAY_TIME	WEATHER	RESULT_ID	AUDIENCE	VENUE_ID(FK)	REFEREE_ID(FK)
--------------	------------	-----------	-----------	---------	-----------	----------	--------------	----------------

4. MATCH_DETAILS

MATCH_NO	PLAY_STAGE	TEAM_ID	WIN_LOSE	GOAL_BY_TEAM	PENALTY_SCORED	ASSIST_REF_ID(FK)	PASSES	OFFSIDES	FAUL
----------	------------	---------	----------	--------------	----------------	-------------------	--------	----------	------

5. VENUE

VENUE_ID(PK)	VENUE_NAME	CAPACITY	CITY_ID(FK)
--------------	------------	----------	-------------

6. POSITION

POSITION_ID(FK)	POSITION_DESC
-----------------	---------------

7. GOAL

GOAL_ID(PK)	MATCH_NO	PLAYER_ID	GOAL_TIME	GOAL_TYPE
-------------	----------	-----------	-----------	-----------

8. COUNTRY

COUNTRY_ID(PK)	COUNTRY_NAME
----------------	--------------

9. COACH

COACH_ID(PK)	COACH_NAME	NATIONALITY
--------------	------------	-------------

10. CITY

CITY_ID(PK)	COUNTRY_ID(FK)	CITY_NAME
-------------	----------------	-----------

11. BOOKING

MATCH_NO	TEAM_ID(FK)	PLAYER_ID(FK)	BOOKING_TIME	RED_CARD	YELLOW_CARD
----------	-------------	---------------	--------------	----------	-------------

12. REFEREE

REFEREE_ID(PK)	REFEREE_NAME	NATIONALITY
----------------	--------------	-------------

13. ASSISTANT_REFEREE

ASSIST_REFF_ID(PK)	ASSIST_REF_NAME
--------------------	-----------------

14. RESULT

RESULT_ID(PK)	SCORE	RESULT
---------------	-------	--------

15. SPONSOR

TEAM_ID(PK)	SPONSOR_NAME
-------------	--------------

16. SUBSTITUTION

MATCH_NO	TEAM_ID(FK)	PLAYER_ID(FK)	PLAYER_IN_OUT	IN_OUT_TIME
----------	-------------	---------------	---------------	-------------

3. PLAYER:

Object Type **TABLE** Object **PLAYER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PLAYER	PLAYER_ID	Number	-	20	0	1	-	-	-
	PLAYER_NAME	Varchar2	15	-	-	-	✓	-	-
	DOB	Number	-	20	0	-	✓	-	-
	JERSEY_NO	Number	-	20	0	-	✓	-	-
	HEIGHT	Number	-	20	0	-	✓	-	-
	TEAM_ID	Number	-	20	0	-	✓	-	-
	POSITION_ID	Number	-	20	0	-	✓	-	-
									1 - 7

4. REFEREE:

Object Type **TABLE** Object **REFEREE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
REFEREE	REFEREE_ID	Number	-	20	0	1	-	-	-
	REFEREE_NAME	Varchar2	15	-	-	-	✓	-	-
	NATIONALITY	Varchar2	20	-	-	-	✓	-	-
									1 - 3

5. ASSISTANT_REFEREE:

Object Type **TABLE** Object **ASSISTANT_REFEREE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ASSISTANT_REFEREE	ASSIST_REF_ID	Number	-	20	0	1	-	-	-
	ASSIST_REF_NAME	Varchar2	15	-	-	-	✓	-	-
									1 - 2

6. COACH:

Object Type **TABLE** Object **COACH**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COACH	COACH_ID	Number	-	20	0	1	-	-	-
	COACH_NAME	Varchar2	15	-	-	-	✓	-	-
	NATIONALITY	Varchar2	15	-	-	-	✓	-	-
									1 - 3

7. MATCH_DETAILS:

Object Type **TABLE** Object **MATCH_DETAILS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
MATCH_DETAILS	MATCH_NO	Number	-	20	0	-	✓	-	-
	PLAY_STAGE	Varchar2	15	-	-	-	✓	-	-
	TEAM_ID	Number	-	20	0	-	✓	-	-
	WIN_LOSE	Varchar2	15	-	-	-	✓	-	-
	GOAL_BY_TEAM	Number	-	20	0	-	✓	-	-
	PENALTY_SCORED	Number	-	20	0	-	✓	-	-
	ASSIST_REF_ID	Number	-	20	0	-	✓	-	-
	PASSES	Number	-	20	0	-	✓	-	-
	OFFSIDES	Number	-	20	0	-	✓	-	-
	FAUL	Number	-	20	0	-	✓	-	-
									1 - 10

8. MATCH_INFORMATION:

Object Type **TABLE** Object **MATCH_INFORMATION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
MATCH_INFORMATION	MATCH_NO	Number	-	20	0	1	-	-	-
	PLAY_STAGE	Varchar2	15	-	-	-	✓	-	-
	PLAY_DATE	Number	-	20	0	-	✓	-	-
	PLAY_TIME	Varchar2	15	-	-	-	✓	-	-
	WEATHER	Varchar2	15	-	-	-	✓	-	-
	RESULT_ID	Number	-	20	0	-	✓	-	-
	AUDIENCE	Number	-	20	0	-	✓	-	-
	VANUE_ID	Number	-	20	0	-	✓	-	-
	REFEREE_ID	Number	-	20	0	-	✓	-	-
									1 - 9

9.GOAL:

Object Type **TABLE** Object **GOAL**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>GOAL</u>	<u>GOAL_ID</u>	Number	-	20	0	1	-	-	-
	<u>MATCH_NO</u>	Number	-	20	0	-	✓	-	-
	<u>PLAYER_ID</u>	Number	-	20	0	-	✓	-	-
	<u>GOAL_TIME</u>	Number	-	20	0	-	✓	-	-
	<u>GOAL_TYPE</u>	Varchar2	15	-	-	-	✓	-	-
1 - 5									

10. POSITION:

Object Type **TABLE** Object **POSITION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>POSITION</u>	<u>POSITION_ID</u>	Number	-	20	0	1	-	-	-
	<u>POSITION_DESC</u>	Varchar2	20	-	-	-	✓	-	-
1 - 2									

11. COUNTRY:

Object Type **TABLE** Object **COUNTRY**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>COUNTRY</u>	<u>COUNTRY_ID</u>	Number	-	20	0	1	-	-	-
	<u>COUNTRY_NAME</u>	Varchar2	15	-	-	-	✓	-	-
1 - 2									

12. CITY:

Object Type **TABLE** Object **CITY**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CITY</u>	<u>CITY_ID</u>	Number	-	20	0	1	-	-	-
	<u>COUNTRY_ID</u>	Number	-	20	0	-	✓	-	-
	<u>CITY_NAME</u>	Varchar2	20	-	-	-	✓	-	-
1 - 3									

13. BOOKING:

Object Type **TABLE** Object **BOOKING**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOKING	MATCH_NO	Number	-	20	0	-	✓	-	-
	TEAM_ID	Number	-	20	0	-	✓	-	-
	PLAYER_ID	Number	-	20	0	-	✓	-	-
	BOOKING_TIME	Number	-	20	0	-	✓	-	-
	RED_YELLOW_CARD	Varchar2	15	-	-	-	✓	-	-
									1 - 5

14. VENUE:

Object Type **TABLE** Object **VENUE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
VENUE	VENUE_ID	Number	-	20	0	1	-	-	-
	VENUE_NAME	Varchar2	15	-	-	-	✓	-	-
	CAPACITY	Number	-	20	0	-	✓	-	-
	CITY_ID	Number	-	20	0	-	✓	-	-
									1 - 4

15. SUBSTITUTION:

Object Type **TABLE** Object **SUBSTITUTION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SUBSTITUTION	MATCH_NO	Number	-	20	0	-	✓	-	-
	TEAM_ID	Number	-	20	0	-	✓	-	-
	PLAYER_ID	Number	-	20	0	-	✓	-	-
	PLAYER_IN_OUT	Varchar2	15	-	-	-	✓	-	-
	IN_OUT_TIME	Number	-	20	0	-	✓	-	-
									1 - 5

16. RESULT:

Object Type **TABLE** Object **RESULT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>RESULT</u>	<u>RESULT_ID</u>	Number	-	20	0	1	-	-	-
	<u>SCORE</u>	Varchar2	15	-	-	-	✓	-	-
	<u>RESULT</u>	Varchar2	15	-	-	-	✓	-	-
									1 - 3

3.2 CONSTRAINTS:

PRIMARY KEY:

1. ALTER TABLE RESULT ADD CONSTRAINT RESULT1 PRIMARY KEY(RESULT_ID)
2. ALTER TABLE CITY ADD CONSTRAINT CITY1 PRIMARY KEY(CITY_ID)
3. ALTER TABLE REREFEE ADD CONSTRAINT REFEREE1 PRIMARY KEY(REFEREE_ID)
4. ALTER TABLE COUNTRY ADD CONSTRAINT COUNTRY1 PRIMARY KEY(COUNTRY_ID)
5. ALTER TABLE GOAL ADD CONSTRAINT GOAL1 PRIMARY KEY(GOAL_ID)
6. ALTER TABLE POSITION ADD CONSTRAINT POSITION1 PRIMARY KEY(POSITION_ID)
7. ALTER TABLE MATCH_INFORMATION ADD CONSTRAINT MATCH_INFO1 PRIMARY KEY(MATCH_NO)
8. ALTER TABLE PLAYER ADD CONSTRAINT PLAYER1 PRIMARY KEY(PLAYER_ID)
9. ALTER TABLE TEAM ADD CONSTRAINT TEAM1 PRIMARY KEY(Team_ID)
10. ALTER TABLE VENUE ADD CONSTRAINT VENUE1 PRIMARY KEY(VENUE_ID)
11. ALTER TABLE ASSISTANT_REFeree ADD CONSTRAINT ASSIST_REF1 PRIMARY KEY(ASSIST_REF_ID)

FOREIGN KEY:

1. ALTER TABLE BOOKING ADD CONSTRAINT BOOKING1 FOREIGN KRY(PLAYER_ID) REFERENCES PLAYER(PLAYER_ID)
2. ALTER TABLE BOOKING ADD CONSTRAINT BOOKING2 FOREIGN KRY(Team_ID) REFERENCES TEAM(Team_ID)
3. ALTER TABLE MATCH_DETAILS ADD CONSTRAINT MATCH_DETAILS1 FOREIGN KRY(Team_ID) REFERENCES TEAM(Team_ID)
4. ALTER TABLE MATCH_DETAILS ADD CONSTRAINT MATCH_DETAILS2 FOREIGN KRY(ASSIST_REF_ID) REFERENCES ASSISTANT_REFeree(ASSIST_REF_ID)
4. ALTER TABLE MATCH_INFORMATION ADD CONSTRAINT MATCH_INFO1 FOREIGN KRY(RESULT_ID) REFERENCES RESULT(RESULT_ID)
5. ALTER TABLE MATCH_INFORMATION ADD CONSTRAINT MATCH_INFO2 FOREIGN KRY(VENUE_ID) REFERENCES VENUE (VENUE_ID)

6. ALTER TABLE MATCH_INFORMATION ADD CONSTRAINT MATCH_INFO3 FOREIGN KRY(REFEREE_ID) REFERENCES REFEREE(REFEREE_ID)
7. ALTER TABLE PLAYER ADD CONSTRAINT PLAYER2 FOREIGN KRY(Team_ID) REFERENCES TEAM(Team_ID)
8. ALTER TABLE POSITION ADD CONSTRAINT PLAYER3 FOREIGN KRY(Position_ID) REFERENCES POSITION(Position_ID)
9. ALTER TABLE SPONSOR ADD CONSTRAINT SPONSOR1 FOREIGN KRY(Team_ID) REFERENCES TEAM(Team_ID)
10. ALTER TABLE SUBSTITUTION ADD CONSTRAINT SUBSTITUTION1 FOREIGN KRY(Team_ID) REFERENCES TEAM(Team_ID)
11. 10. ALTER TABLE SUBSTITUTION ADD CONSTRAINT SUBSTITUTION2 FOREIGN KRY(PLAYER_ID) REFERENCES PLAYER(PLAYER_ID)
12. ALTER TABLE TEAM ADD CONSTRAINT TEAM2 FOREIGN KRY(COACH_ID) REFERENCES COACH(COACH_ID)
13. ALTER TABLE VENUE ADD CONSTRAINT VENUE2 FOREIGN KRY(CITY_ID) REFERENCES CITY(CITY_ID)
14. ALTER TABLE CITY ADD CONSTRAINT CITY2 FOREIGN KRY(COUNTRY_ID) REFERENCES COUNTRY(COUNTRY_ID)
15. ALTER TABLE GOAL ADD CONSTRAINT GOAL2 FOREIGN KRY(PLAYER_ID) REFERENCES PLAYER(PLAYER_ID)

3.3 Data tables:

1. TEAM:

TEAM_ID	TEAM_NAME	TEAM_GROUP	MATCH_PLAYED	WON	DRAW	LOSE	GOAL_FOR	GOAL_AGAINST	GOAL_DIFFERENCE	POINT	GROUP_POSITION	COACH_ID
12001	juventus	A	2	2	0	0	6	2	4	6	1	201
12002	Spurs	A	2	1	0	1	4	3	1	3	2	202
12003	United	A	2	0	0	2	2	7	-5	0	3	203
12004	chelsea	B	2	1	1	0	4	3	1	4	2	204
12005	Liverpool	B	2	0	0	2	3	6	-3	0	3	205
12006	L.city	B	2	1	1	0	2	0	2	4	1	206
12007	M.city	C	2	0	1	1	0	1	-1	1	3	207
12008	Arsenal	C	2	1	1	0	1	0	1	4	1	208
12009	I.milan	C	2	0	2	0	0	0	0	2	2	209
12010	R.madrid	D	2	2	0	0	4	1	3	6	1	210
12011	Barcelona	D	2	1	0	1	3	2	1	3	2	211
12012	A.madrid	D	2	0	0	2	0	4	-4	0	3	212

2. VENUE:

VENUE_ID	VENUE_NAME	CAPACITY	CITY_ID
20001	villamarin	12500	1
20002	mestalla	11000	2
20003	san siro	13800	3
20004	allianz	13800	4
20005	anfield	12200	5
20006	etihad	15000	6
20007	old trafford	15250	6

3. POSITION:

POSITION_ID	POSITION_DESC
1	Goalkeeper
2	Defender
3	Midfielder
4	Forward

4. CITY:

CITY_ID	COUNTRY_ID	CITY_NAME
1	1	real batis
2	1	valencia
3	2	milan
4	2	turin
5	3	liverpool
6	3	manchester

5.ASSISTANT_REFeree:

ASSIST_REF_ID	ASSIST_REF_NAME
1601	Tomas Mokrusch
1602	Martin Wilczek
1603	Simon Beck
1604	Stephen Child
1605	Jake Collin
1606	Mark Borsch
1607	Mark Borsch
1608	Vencel Toth

6.COACH:

COACH_ID	COACH_NAME	NATIONALITY
201	Zidane	France
202	Wenger	France
203	Pep gurdiola	Spain
204	Jose	Portugal
205	Valverde	Spain
206	Henry	France
207	Dunga	Brazil
208	Allegri	Italy
209	Marco Sliva	Portugal
210	Unai Emery	Spain
211	Jemmy dey	England
212	Conte	Italy

7. REFEREE:

REFEREE_ID	REFEREE_NAME	NATIONALITY
801	wingstone	England
802	Mike dean	England
803	Ken Aston	England
804	Oliver	England
805	Anderson	England
806	Michel	England

8. PLAYER:

PLAYER_ID	PLAYER_NAME	DOB	JERSEY_NO	HEIGHT	TEAM_ID	POSITION_ID
1201	Etrit Berisha	10-MAR-89	1	5.8	12001	1
1202	andi lila	12-FEB-90	2	5.9	12001	2
1203	Emri	15-FEB-90	23	5.7	12001	2
1204	hulk	19-AUG-90	5	5.6	12001	3
1205	loric	19-JAN-91	5	5.6	12001	4
1206	ansi	11-JAN-91	10	5.6	12001	4
1207	lenjani	11-JAN-91	1	5.6	12002	1
1208	jack	11-JUN-91	1	6	12002	2
1209	roni	14-JUN-92	10	6	12002	4
1210	vasa	14-JUL-91	11	6.1	12002	4
1211	john	20-JUL-90	11	5.10	12002	3
1212	steve	20-OCT-95	3	5.11	12002	2
1213	ali	23-MAY-93	1	5.9	12003	1
1214	angle	05-MAY-92	2	5.9	12003	2
1215	clerk	01-APR-92	5	5.8	12003	2
1216	levi	01-DEC-90	7	5.8	12003	3
1217	roy	16-DEC-93	10	5.7	12003	4
1218	Andrew	16-DEC-94	0	5.7	12003	4
1219	Symonds	16-FEB-94	1	5.7	12004	1
1220	Clark	16-FEB-95	2	5.8	12004	2
1221	gilly	28-MAR-93	3	5.8	12004	2
1222	Heyden	12-MAR-90	4	5.8	12004	3
1223	Mbappe	22-DEC-98	7	5.6	12004	4
1224	Ponting	12-MAR-91	6	5.8	12004	4
1225	Sachin	12-MAR-91	1	5.8	12005	1
1226	Ki	14-MAR-91	2	6.4	12005	2
1227	Barbara	25-DEC-00	3	6.4	12005	2
1228	alonso	25-DEC-85	4	6.4	12005	3
1229	Smith	21-DEC-86	5	5.5	12005	4
1230	haley	18-NOV-92	10	5.8	12005	4
1231	patton	17-NOV-95	1	6	12006	1
1232	railey	02-AUG-90	2	5.11	12006	2
1233	rylie	09-AUG-93	2	5.11	12006	2
1234	isiah	27-JUL-91	5	5.1	12006	3
1235	elsa	25-JUL-90	7	5.7	12006	4
1236	breadon	27-JUN-90	10	5.9	12006	4

1237	darien	01-FEB-90	1	5.9	12007	1
1238	maccaty	07-MAR-94	2	5.10	12007	2
1239	boyle	08-MAR-92	3	5.10	12007	2
1240	shaffer	15-AUG-92	4	5.8	12007	3
1241	collin	10-AUG-90	7	5.7	12007	4
1242	harper	09-MAY-90	9	5.9	12007	4
1243	ronnie	07-MAY-91	1	5.9	12008	1
1244	maynard	12-JAN-96	2	5.8	12008	2
1245	murillo	29-JAN-95	3	5.7	12008	2
1246	paulina	29-OCT-92	5	5.9	12008	3
1247	kelley	14-OCT-90	7	6	12008	4
1248	kelley	08-JUL-90	10	5.10	12008	4
1249	pugh	05-MAR-95	1	5.10	12009	1
1250	alonzo	09-MAR-94	2	5.11	12009	2
1251	spencer	14-MAY-90	3	5.11	12009	2
1252	mathews	10-NOV-91	11	5.8	12009	4
1253	wade	12-AUG-91	6	5.8	12009	3
1254	pope	01-NOV-92	10	5.9	12009	4
1255	smith	15-SEP-92	1	5.9	12010	1
1256	nevaeh	23-JAN-95	2	5.10	12010	2
1257	lena	25-MAR-95	3	5.10	12010	2
1258	white	07-APR-93	9	5.11	12010	3
1259	curry	05-FEB-93	10	5.8	12010	4
1260	harrell	08-MAR-90	12	5.9	12010	4
1261	matteo	17-JUN-90	1	6.1	12011	1
1262	deleon	26-JUL-96	2	5.10	12011	2
1263	alma	02-JUL-96	3	5.11	12011	2
1264	beltran	07-JAN-92	6	5.8	12011	3
1265	davis	06-MAY-95	10	5.8	12011	4
1266	david	06-SEP-95	8	5.9	12011	4
1267	cole	26-SEP-91	1	5.9	12012	1
1268	davidson	06-SEP-93	2	5.10	12012	2
1269	phelps	18-OCT-93	3	5.10	12012	2
1270	candence	01-OCT-95	8	5.11	12012	3
1271	franklin	07-DEC-96	10	6	12012	4
1272	ferguson	12-NOV-95	13	5.9	12012	4

9. MATCH_INFORMATION:

MATCH_NO	PLAY_STAGE	PLAY_DATE	PLAY_TIME	WEATHER	RESULT_ID	AUDIENCE	VANUE_ID	REFEREE_ID
1	G	01-JAN-18	12:00	sunny	101	9563	20001	801
2	G	02-JAN-18	12:00	sunny	102	10112	20002	802
3	G	03-JAN-18	10:00	foggy	103	9852	20003	803
4	G	04-JAN-18	09:00	sunny	104	10852	20004	804
5	G	05-JAN-18	11:00	cold	105	9762	20005	805
6	G	06-JAN-18	17:00	foggy	106	9102	20006	806
7	G	07-JAN-18	19:00	clear	107	9537	20007	802
8	G	08-JAN-18	20:00	clear	108	9934	20002	801
9	G	09-JAN-18	12:30	sunny	109	10234	20005	806
10	G	10-JAN-18	21:00	clear	110	9801	20007	804
11	G	11-JAN-18	10:00	foggy	111	9705	20004	801
12	G	12-JAN-18	09:00	foggy	112	9326	20005	806
13	S	14-JAN-18	20:00	clear	113	9987	20006	803
14	S	16-JAN-18	20:00	clear	114	10113	20007	805
15	F	20-JAN-18	22:00	clear	115	13256	20006	801

10. SPONSOR:

TEAM_ID	SPONSOR_NAME
12011	Qater
12011	Rakuten
12012	Plus500
12001	jeep
12002	cheverlet
12003	AIA
12004	Samsung
12004	Yokahama
12005	Standard
12006	Etihad
12007	Etihad
12008	Fly Emirates
12009	Puma
12010	Adidas
12010	bwin

11. COUNTRY:

COUNTRY_ID	COUNTRY_NAME
1	spain
2	italy
3	england

12. MATCH_DETAILS:

MATCH_NO	PLAY_STAGE	TEAM_ID	WIN_LOSE	GOAL_BY_TEAM	PENALTY_SCORED	ASSIST_REF_ID	PASSES	OFFSIDES	FAUL
1	G	12001	W	3	0	1601	454	2	6
1	G	12002	L	2	0	1601	396	3	7
2	G	12003	L	0	0	1602	445	0	5
2	G	12001	W	3	0	1602	423	1	8
3	G	12002	L	0	0	1603	342	3	5
3	G	12003	W	4	0	1603	412	2	5
4	G	12004	W	4	0	1604	389	1	6
4	G	12005	L	3	0	1604	373	0	8
5	G	12006	D	0	0	1605	333	4	8
5	G	12004	D	0	0	1605	433	2	8
6	G	12005	L	0	0	1606	393	1	5
6	G	12006	W	2	0	1606	383	2	7
7	G	12009	D	0	0	1607	417	1	9
7	G	12007	D	0	0	1607	413	2	3
8	G	12007	L	0	0	1608	417	0	6
8	G	12008	W	1	0	1608	317	2	6
9	G	12008	D	0	0	1601	401	1	3
9	G	12009	D	0	0	1601	357	3	9
10	G	12010	W	2	0	1602	405	2	3
10	G	12011	L	1	0	1602	415	0	5
11	G	12010	W	2	0	1603	315	1	5
11	G	12012	L	0	0	1603	367	3	7
12	G	12011	W	2	0	1604	377	1	7
12	G	12012	L	0	0	1604	414	0	5
13	S	12010	W	2	0	1605	424	2	7
13	S	12006	L	1	0	1605	431	1	8
14	S	12008	W	1	3	1606	411	0	5
14	S	12001	L	1	2	1606	374	0	3
15	F	12010	L	1	0	1607	384	1	3
15	F	12008	W	3	0	1607	364	1	6

13. GOAL

GOAL_ID	MATCH_NO	PLAYER_ID	GOAL_TIME	GOAL_TYPE
1	1	1205	2	N
2	1	1204	13	N
3	1	1204	60	N
5	1	1209	90	N
6	2	1206	5	N
7	2	1206	13	N
8	2	1206	18	N
9	3	1217	21	N
10	3	1217	33	N
11	3	1214	60	N
12	3	1216	83	N
13	4	1219	2	N
14	4	1219	13	N
15	4	1219	60	N
16	4	1224	63	N
17	4	1229	5	N
18	4	1230	33	N
19	4	1230	66	N
20	6	1233	14	N
21	6	1236	90	N
22	8	1248	89	N
23	10	1258	33	N
24	10	1258	64	N

24	10	1258	64	N
25	10	1264	80	N
26	11	1257	60	N
27	10	1260	73	N
28	12	1264	34	N
29	12	1266	80	N
30	13	1260	5	N
31	13	1260	13	N
32	13	1636	38	N
33	14	1648	33	N
34	14	1206	35	N
35	14	1606	0	P
36	14	1205	0	P
37	14	1203	0	P
38	14	1248	0	P
39	14	1247	0	P
41	15	1260	1	N
42	15	1248	23	N
43	15	1247	33	N
44	15	1247	45	N
45	15	1244	90	N

14. SUBSTITUTE:

MATCH_NO	TEAM_ID	PLAYER_ID	PLAYER_IN_OUT	IN_OUT_TIME
1	12001	1206	I	40
1	12001	1203	O	40
1	12002	1208	I	46
1	12002	1210	O	46
2	12003	1218	I	53
2	12003	1217	O	53
4	12004	1220	I	59
4	12004	1224	O	59
5	12005	1229	I	51
5	12005	1230	O	51
5	12004	1224	O	51
5	12004	1223	O	51
8	12008	1248	I	51
8	12008	1246	O	51
10	12010	1259	I	65
10	12011	1266	I	68
10	12011	1263	O	68
10	12010	1260	O	65
11	12012	1272	O	62
11	12012	1270	I	62
13	12010	1259	O	61
13	12006	1235	O	69
13	12010	1259	O	61
13	12006	1236	I	69
13	12006	1235	O	69
13	12010	1260	I	61
15	12008	1247	O	71
15	12010	1256	O	72
15	12010	1255	I	72
15	12008	1248	I	71

15. RESULT:

RESULT_ID	SCORE	RESULT
101	3-2	win
102	3-0	win
103	4-0	win
104	4-3	win
105	0-0	draw
106	2-0	win
107	0-0	draw
108	1-0	win
109	0-0	draw
110	2-1	win
111	2-0	win
112	2-0	win

16. Booking:

MATCH_NO	TEAM_ID	PLAYER_ID	BOOKING_TIME	RED_YELLOW_CARD
1	12001	1206	32	yellow
4	12005	1230	41	Red
4	12012	1268	44	Yellow
15	12010	1260	13	Yellow

5.Query Question:

1. select players and their position for each team.
2. Find player name who has highest score.
3. Find tallest player of Juventus and all other of his same height.
4. create a view to show player name and score. Order by score asc.
5. Find total goals and penalties