Individual Project Report
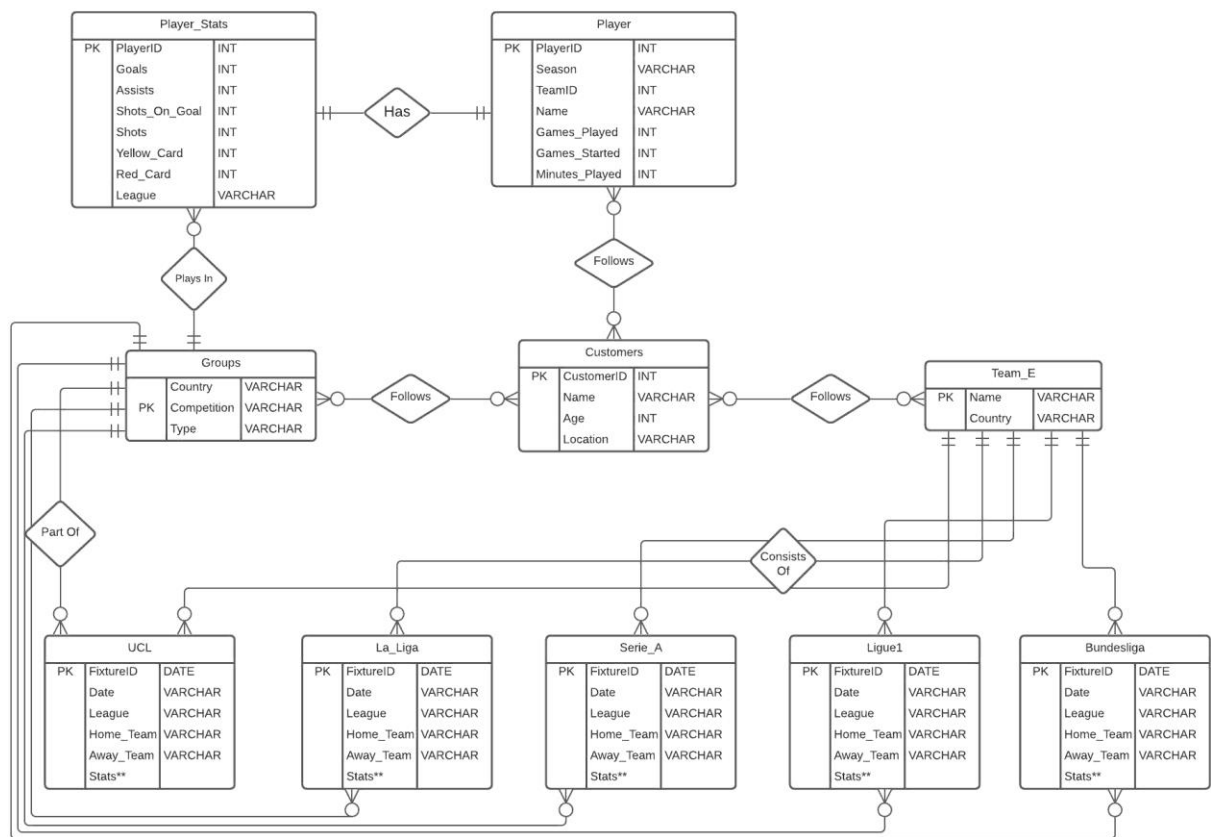
Overview of the Dataset:

This dataset contains details of different fixtures from the biggest leagues in European football, namely, La-Liga, Bundesliga, Ligue 1 and Serie A along with the contesting teams accompanied by several statistics on their individual performances in each of the matches they have been a part of. This dataset also contains statistical information on the UEFA Champions League where most of the top teams from Europe perform. The dataset can be used by customers to build insight on their favourite teams and find out the latest updates on all the competitions that they follow. This could be used to draw inferences of various aspects of team performances which in turn can be used in Sports betting to gain advantage. The dataset also contains historical information on several players across different leagues and their performances statistics over the course of 5 full seasons from 2013 to 2018.

I have cumulated the data from several sources like Github and Kaggle. I have also created some random sample data for the customer information along with their connections to various teams and competitions. Please find below, the sites which I used to collect the information:

- https://github.com/awesomedata/awesome-public-datasets
- https://www.jokecamp.com/blog/guide-to-football-and-soccer-data-and-apis/
- https://www.betonjames.com/football-data-downloads/

ENTITY RELATIONSHIP DIAGRAM:

Note**: I have not added the full set of attributes for the tables UCL, La_Liga, Serie_A, Ligue1 and Bundesliga due to the space constraints. Please find below the abbreviations and their full_forms of the various match statistics given in the mentioned tables:

FTR = Full time result	H_PT = Home team possession time
FTHG = Full time home goals	H_COR = Home team corners
FTAG = Full time away goals	H_FL = Home team fouls
HTR = Half time result	H_TC = Home team yellow cards
HTHG = Half time home goals	H_RC = Home team red cards
HTAG = Half time away goals	A_ST = Away team shots total
ETR = Extra time Result	A_SOG = Away team shots on goal
ETHG = Extra time home goals	A_SFG = Away team shots off goal
ETAG = Extra time away goals	A_PT = Away team possession time
PENR = Penalty shootout Result	A_COR = Away team corners
PENHG = Penalty shootout home goals	A_FL = Away team fouls
PENAG = Penalty shootout away goals	A_TC = Away team yellow cards
H_ST = Home team shots total	A_RC = Away team red cards
H_SOG = Home team shots on goal	N/A = Not applicable
H_SFG = Home team shots off goal	SNV = Stat not available

RELATIONAL SCHEMA:

1) Customers (CustomerID, Name, Age, Location)
   Primary Key: CustomerID

2) Player (PlayerID, Season, TeamID, Name, Games_Played, Games_Started, Minutes_Played)
   Primary Key: PlayerID

3) Player_Stats (PlayerID, Goals, Assists, Shots_On_Goal, Shots, Yellow_Card, Red_Card, League)
   Primary Key: PlayerID
   Foreign Key: PlayerID REFERENCES Player(PlayerID)
   Foreign Key: League REFERENCES Groups(Competition)

4) Team_E (Name, Country)
   Primary Key: Name

5) Groups (Country, Competition, Type)
   Primary Key: Competition

6) UCL (FixtureID, Date, League, Home_Team, Away_Team, FTR, FTHG, FTAG, HTR, HTHG, HTAG, ETR, ETHG, ETAG, PENR, PENHG, PENAG, H_ST, H_SOG, H_SFG, H_PT, H_COR, H_FL, H_YC, H_RC, A_ST, A_SOG, A_SFG, A_PT, A_COR, A_FL, A_YC, A_RC)

   Primary Key: FixtureID
   Foreign Key: League REFERENCES Groups(Competition)
   Foreign Key: Home_Team REFERENCES Team_E(Name)

7) La_Liga (FixtureID, Date, League, Home_Team, Away_Team, FTR, FTHG, FTAG, HTR, HTHG, HTAG, ETR, ETHG, ETAG, PENR, PENHG, PENAG, H_ST, H_SOG, H_SFG, H_PT, H_COR, H_FL, H_YC, H_RC, A_ST, A_SOG, A_SFG, A_PT, A_COR, A_FL, A_YC, A_RC)

   Primary Key: FixtureID
   Foreign Key: League REFERENCES Groups(Competition)
   Foreign Key: Home_Team REFERENCES Team_E(Name)

8) Bundesliga (FixtureID, Date, League, Home_Team, Away_Team, FTR, FTHG, FTAG, HTR, HTHG, HTAG, ETR, ETHG, ETAG, PENR, PENHG, PENAG, H_ST, H_SOG, H_SFG, H_PT, H_COR, H_FL, H_YC, H_RC, A_ST, A_SOG, A_SFG, A_PT, A_COR, A_FL, A_YC, A_RC)

   Primary Key: FixtureID
   Foreign Key: League REFERENCES Groups(Competition)
   Foreign Key: Home_Team REFERENCES Team_E(Name)

9) Serie_A (FixtureID, Date, League, Home_Team, Away_Team, FTR, FTHG, FTAG, HTR, HTHG, HTAG, ETR, ETHG, ETAG, PENR, PENHG, PENAG, H_ST, H_SOG, H_SFG, H_PT, H_COR, H_FL, H_YC, H_RC, A_ST, A_SOG, A_SFG, A_PT, A_COR, A_FL, A_YC, A_RC)

Primary Key: FixtureID
Foreign Key: League REFERENCES Groups(Competition)
Foreign Key: Home_Team REFERENCES Team_E(Name)

10) Ligue1 (FixtureID, Date, League, Home_Team, Away_Team, FTR, FTHG, FTAG, HTR, HTHG, HTAG, ETR, ETHG, ETAG, PENR, PENHG, PENAG, H_ST, H_SOG, H_SFG, H_PT, H_COR, H_FL, H_YC, H_RC, A_ST, A_SOG, A_SFG, A_PT, A_COR, A_FL, A_YC, A_RC)

Primary Key: FixtureID
Foreign Key: League REFERENCES Groups(Competition)
Foreign Key: Home_Team REFERENCES Team_E(Name)

11) Cust_Group (CustomerID, comp)
Primary Key: CustomerID, comp
Foreign Key: CustomerID REFERENCES Customers(CustomerID)
Foreign Key: comp REFERENCES Groups(Competition)

12) Cust_Player (CustomerID, PlayerID)
Primary Key: CustomerID, PlayerID
Foreign Key: CustomerID REFERENCES Customers(CustomerID)
Foreign Key: PlayerID REFERENCES Players(PlayerID)

13) Cust_Team (CustomerID, team)
Primary Key: CustomerID, team
Foreign Key: CustomerID REFERENCES Customers(CustomerID)
Foreign Key: team REFERENCES Team_E(Team)

QUERIES:

Query 1:

Details of the top 10 active customers in terms of number of teams following:

SELECT C.*, temp.ctr AS count FROM customers C inner JOIN

(SELECT CustomerID, count(team) as ctr FROM cust_team GROUP BY CustomerID)temp ON temp.CustomerID=C.CustomerID

ORDER BY temp.ctr DESC, C.name ASC LIMIT 10;

Output:

CustomerID	Name	Location	Age	count
3	Brooks Mazzei	Canada	29	15
25	Deane Beauchamp	USA	36	15
27	Devora Cargile	Canada	28	15
9	Dortha Peck	Canada	32	15
16	Fernande Bonavita	Canada	35	15
24	Gilberte Mccaffrey	Canada	21	15
8	Irma Wishart	Canada	33	15
31	Loida Mcelveen	Canada	28	15
2	Lynetta Mcgivney	Canada	24	15
19	Nena Cressman	Canada	20	15

Query 2:

Top 10 players who played the most minutes in Europe's top flight from 2013-2018:

SELECT name, sum(Minutes_played) FROM player GROUP BY name ORDER BY sum(Minutes_played) DESC, name ASC LIMIT 10;

Output:

			name ▲ 2	sum(Minutes_played) ▼ 1
☐	Edit	Copy ⊝ Delete	Juanfran	32613
☐	Edit	Copy ⊝ Delete	Marcelo	22113
☐	Edit	Copy ⊝ Delete	Adri?n	21826
☐	Edit	Copy ⊝ Delete	Danilo	21737
☐	Edit	Copy ⊝ Delete	Naldo	17805
☐	Edit	Copy ⊝ Delete	Lukaku, Romelu	17389
☐	Edit	Copy ⊝ Delete	Nainggolan, Radja	17264
☐	Edit	Copy ⊝ Delete	Mart?nez, I?igo	16841
☐	Edit	Copy ⊝ Delete	Ziyech, Hakim	16726
☐	Edit	Copy ⊝ Delete	Handanovic, Samir	16430

Query 3:

Top 10 players with most average goals form 2013 – 2018:

SELECT temp.name, format(avg(temp.goals),2) AS Avg_Goals, format(avg(temp.assists),2) as
Avg_Assists FROM(
   SELECT p.playerID, name, goals, assists FROM player p INNER JOIN player_stats s ON
   p.PlayerID=s.PlayerID
)temp
GROUP BY temp.name
ORDER BY avg(temp.goals) desc
LIMIT 10;

Output:

name	Avg_Goals	Avg_Assists
Ronaldo, Cristiano	35.00	10.25
Messi, Lionel	33.60	13.20
Su?rez, Luis	28.20	13.20
Lewandowski, Robert	25.20	4.20
Cristiano Ronaldo	25.00	6.00
Cavani, Edinson	23.60	2.80
Higua?n, Gonzalo	22.20	5.00
Ag?ero, Sergio	21.60	5.00
Kane, Harry	21.60	2.80
Stuani, Cristhian	21.00	0.00
Lacazette, Alexandre	21.00	2.00
Icardi, Mauro	20.00	4.20
Ibrahimovic, Zlatan	19.80	3.60
T?vez, Carlos	19.50	7.00
Griezmann, Antoine	19.00	5.20
Johnsen, Bjorn	19.00	1.00

Query 4:

Who was the most efficient out of the 10 players in scoring and assisting (Find out the goals to games ratio for the 10 players):

SELECT t.*,(sum_Min/sum_Goals) AS Minutes_per_Goal FROM(

   SELECT temp.name, sum(temp.goals) AS sum_Goals, sum(temp.assists) as sum_Assists,
sum(Minutes_Played) AS sum_Min FROM(

     SELECT p.playerID, name, goals, assists FROM player p INNER JOIN player_stats s ON
p.PlayerID=s.PlayerID)temp

     INNER JOIN player on temp.PlayerID=player.PlayerID

     GROUP BY temp.name

     ORDER BY avg(temp.goals) desc

     LIMIT 10)t

ORDER BY sum_Min/sum_Goals ASC;

Output:

name	sum_Goals	sum_Assists	sum_Min	Minutes_per_Goal
Ronaldo, Cristiano	140	41	11115	79.3929
Messi, Lionel	168	66	14435	85.9226
Su?rez, Luis	141	66	14055	99.6809
Ag?ero, Sergio	108	25	10822	100.2037
Cristiano Ronaldo	25	6	2544	101.7600
Lewandowski, Robert	126	21	12886	102.2698
Cavani, Edinson	118	14	12796	108.4407
Kane, Harry	108	14	12061	111.6759
Higua?n, Gonzalo	111	25	13958	125.7477
Lacazette, Alexandre	105	10	13342	127.0667

Query 5:

Which league is the most aggressive in Europe's top flight from 2013 to 2018?

SELECT league, avg(Yellow_Cards) as Yellow_Card, avg(Red_Cards) AS Red_Card FROM player_stats
GROUP BY League

ORDER BY `Yellow_Card` DESC, Red_Card DESC;

Output:

	league	Yellow_Card ▾ 1	Red_Card ▾ 2
☐ 🖉 Edit 📋 Copy ⊖ Delete	La Liga	3.7539	0.1630
☐ 🖉 Edit 📋 Copy ⊖ Delete	Serie A	3.0676	0.1953
☐ 🖉 Edit 📋 Copy ⊖ Delete	Ligue 1	2.4370	0.1616
☐ 🖉 Edit 📋 Copy ⊖ Delete	Champions League	2.3478	0.0953
☐ 🖉 Edit 📋 Copy ⊖ Delete	Bundesliga	2.3064	0.1043
☐ 🖉 Edit 📋 Copy ⊖ Delete	Europa League	2.1298	0.1149

Query 6:

Which teams have a better chance of winning in the ucl if they scored on the first half?

```
SELECT team, avg(ratio) from(
(SELECT Away_Team AS team, HTAG AS HG, FTR,
CASE
WHEN HTAG > 0 AND FTR = 'A' THEN 1
ELSE 0
END AS ratio FROM ucl)
UNION
(SELECT Home_Team AS team, HTHG as HG, FTR,
```

CASE
WHEN HTHG > 0 AND FTR = 'H' THEN 1
ELSE 0
END AS ratio FROM ucl))t
GROUP BY team
ORDER BY avg(ratio) DESC

Output:

team	avg(ratio) ▼ 1
bayern munich	0.7143
ferencv??ros	0.6000
celtic	0.6000
paris saint germain	0.5714
borussia dortmund	0.5000
manchester city	0.5000
psv	0.5000
barcelona	0.5000
sheriff	0.5000
ararat-armenia	0.5000
liverpool	0.4286
ajax	0.4286
cfr cluj	0.4286
olympique lyonnais	0.4286
apoel	0.4000
chelsea	0.4000
juventus	0.4000
maribor	0.4000

Query 7:

Average age of Customers following different leagues:

SELECT cg.comp AS League,avg(c.age) AS Avg_Age
FROM cust_group cg INNER JOIN groups g on g.competition=cg.comp INNER join customers c on c.CustomerID=cg.CustomerID GROUP BY cg.comp
ORDER BY `Avg_Age` ASC

Output:

League	Avg_Age ▲ 1
Bundesliga	30.4545
Champions League	30.5102
La Liga	30.7000
Serie A	31.0833
Ligue 1	35.0000

Query 8:

Which team had the greatest number of home and away wins in the champions league?

SELECT team,sum(res) FROM
((SELECT home_team AS team, sum(CASE
WHEN ftr = 'H' then 1
ELSE 0
END) AS res FROM ucl group BY team)
UNION
(SELECT away_team AS team, sum(CASE
WHEN ftr = 'A' then 1
ELSE 0
END) AS res FROM ucl group BY team))t1 GROUP BY team
ORDER BY `sum(res)` DESC

Output:

team	sum(res)	▼ 1
bayern munich	11	
juventus	6	
olympiakos piraeus	6	
atl??tico madrid	5	
dinamo zagreb	5	
barcelona	5	
ajax	5	
rosenborg	5	
borussia dortmund	4	
paris saint germain	4	
ferencv??ros	3	
club brugge	3	
apoel	3	
real madrid	3	
crvena zvezda	3	
cfr cluj	3	
valencia	3	
ceraba?	3	

Query 9:

Most represented country in the UCL this season

SELECT country,COUNT(t.team) FROM(SELECT DISTINCT Home_Team AS team FROM ucl)t INNER
JOIN team_e ON t.team = team_e.team WHERE team_e.country != '' GROUP BY team_e.country

Output:

country	COUNT(t.team)
Austria	1
Belgium	2
Croatia	1
Cyprus	1
Czech	1
England	4
Europe	1
France	2
Germany	4
Glogovac	1
Greece	1
Italy	4
Netherlands	2
Portugal	2
Russia	2
San Marino	1
Serbia	1
Spain	4
Switzerland	1
Turkey	1
Ukraine	2

Query 10:

Select the fixtures in Italy and Spain where the matches yielded more than two goals and atleast one red card.

(SELECT FixtureID, league, Home_Team, Away_team, FTR, FTHG,FTAG,h_rc,a_rc, (fthg+ftag) AS goals,
(h_rc+a_rc)AS Red FROM la_liga WHERE (fthg+ftag)>2 AND (h_rc+a_rc)>1)
UNION
(SELECT FixtureID, league, Home_Team, Away_team, FTR, FTHG,FTAG,h_rc, a_rc, (fthg+ftag) AS
goals, (h_rc+a_rc)AS Red FROM serie_a WHERE (fthg+ftag)>2 AND (h_rc+a_rc)>1);

Output:

FixtureID	league	Home_Team	Away_team	FTR	FTHG	FTAG	h_rc	a_rc	goals	Red
80	La Liga	barcelona	sevilla	H	4	0	2	0	4	2
226	La Liga	real betis	barcelona	A	2	3	1	1	5	2
63	Serie A	genoa	milan	A	1	2	2	2	3	4
66	Serie A	bologna	lazio	D	2	2	1	1	4	2
95	Serie A	juventus	genoa	H	2	1	1	2	3	3
128	Serie A	lecce	cagliari	D	2	2	1	2	4	3
146	Serie A	lecce	genoa	D	2	2	0	2	4	2
203	Serie A	torino	atalanta	A	0	7	2	0	7	2
231	Serie A	bologna	genoa	A	0	3	2	0	3	2
238	Serie A	sampdoria	fiorentina	A	1	5	1	1	6	2
257	Serie A	hellas verona	cagliari	H	2	1	1	1	3	2
275	Serie A	parma	inter	A	1	2	1	1	3	2
298	Serie A	inter	bologna	A	1	2	1	1	3	2
380	Serie A	genoa	hellas verona	H	3	0	2	1	3	3

Query 11:

Which country produced the most goals in all the league matches during the last season.

SELECT team_e.country, sum(goal) AS Total_Goals_Scored FROM
((SELECT team,sum(goals) AS goal FROM
((SELECT home_team as team,sum(fthg) as goals FROM la_liga group by home_team)
UNION
(SELECT away_team as team,sum(ftag) as goals FROM la_liga group by Away_team))t GROUP BY
team)
UNION
(SELECT team,sum(goals) AS goal FROM
((SELECT home_team as team,sum(fthg) as goals FROM serie_a group by home_team)
UNION
(SELECT away_team as team,sum(ftag) as goals FROM serie_a group by Away_team))t GROUP BY
team)
UNION
(SELECT team,sum(goals) AS goal FROM
((SELECT home_team as team,sum(fthg) as goals FROM ligue1 group by home_team)
UNION
(SELECT away_team as team,sum(ftag) as goals FROM ligue1 group by Away_team))t GROUP BY
team)
UNION
(SELECT team,sum(goals) AS goal FROM
((SELECT home_team as team,sum(fthg) as goals FROM bundesliga group by home_team)
UNION
(SELECT away_team as team,sum(ftag) as goals FROM bundesliga group by Away_team))t GROUP BY
team))t1 INNER JOIN team_e ON team_e.team=t1.team group BY team_e.country HAVING
team_e.country != ''
ORDER BY `Total_Goals_Scored` DESC

Output:

country	Total_Goals_Scored ▾ 1
Italy	1131
Germany	964
France	658
Spain	521

Query 12:

Teams who conceded the most goals in league and cup competitions this season

SELECT temp.team,temp.league,temp.goal,temp1.league,temp1.goal FROM
((SELECT team,league, sum(goals) as goal from ((SELECT home_team as team,league, sum(ftag) as
goals from la_liga group by home_team,league)UNION(SELECT away_team as team,league,
sum(fthg) as goals from la_liga group by away_team,league))t group by team ,league)
UNION
(SELECT team,league, sum(goals) as goal from ((SELECT home_team as team,league, sum(ftag) as
goals from serie_a group by home_team,league)UNION(SELECT away_team as team,league,
sum(fthg) as goals from serie_a group by away_team,league))t group by team ,league)
UNION
(SELECT team,league, sum(goals) as goal from ((SELECT home_team as team,league, sum(ftag) as
goals from ligue1 group by home_team,league)UNION(SELECT away_team as team,league,
sum(fthg) as goals from ligue1 group by away_team,league))t group by team ,league)
UNION
(SELECT team,league, sum(goals) as goal from ((SELECT home_team as team,league, sum(ftag) as
goals from bundesliga group by home_team,league)UNION(SELECT away_team as team,league,
sum(fthg) as goals from bundesliga group by away_team,league))t group by team ,league))temp
LEFT JOIN (SELECT team,league, sum(goals) as goal from ((SELECT home_team as team,league,
sum(ftag) as goals from ucl group by home_team,league)UNION(SELECT away_team as team,league,
sum(fthg) as goals from ucl group by away_team,league))t group by team ,league)temp1 ON
temp.team=temp1.team
ORDER BY `temp1`.`goal` DESC

Output:

+ Options

team	league	goal	league	goal ▾ 1
atalanta	Serie A	48	Champions League	18
valencia	La Liga	34	Champions League	15
barcelona	La Liga	29	Champions League	14
lille	Ligue 1	27	Champions League	14
rb leipzig	Bundesliga	37	Champions League	12
borussia dortmund	Bundesliga	41	Champions League	11
inter	Serie A	36	Champions League	9
bayer leverkusen	Bundesliga	22	Champions League	9
bayern munich	Bundesliga	32	Champions League	8
napoli	Serie A	50	Champions League	8
olympique lyonnais	Ligue 1	27	Champions League	7
real madrid	La Liga	9	Champions League	6
paris saint germain	Ligue 1	24	Champions League	6
juventus	Serie A	43	Champions League	6
olympique marseille	Ligue 1	29	NULL	NULL
espanyol	La Liga	40	NULL	NULL
k??ln	Bundesliga	69	NULL	NULL
cagliari	Serie A	28	NULL	NULL

Query 13:

Which teams had the highest win percentage in the European top-flight?

SELECT l.team,l.Total_Matches,l.Total_Wins,l.Win_Percent,team_e.country FROM
((SELECT team, sum(matches) AS Total_Matches, sum(wins) AS Total_Wins,
(sum(wins)/sum(matches)) AS WIn_Percent FROM
((SELECT home_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='H' THEN 1 ELSE
0 END) AS Wins FROM la_liga GROUP BY home_team)
UNION
(SELECT away_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='A' THEN 1 ELSE 0
END) AS Wins FROM la_liga GROUP BY away_team))t GROUP BY team)
UNION
(SELECT team, sum(matches) AS Total_Matches, sum(wins) AS Total_Wins,
(sum(wins)/sum(matches)) AS WIn_Percent FROM
((SELECT home_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='H' THEN 1 ELSE
0 END) AS Wins FROM serie_a GROUP BY home_team)
UNION
(SELECT away_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='A' THEN 1 ELSE 0
END) AS Wins FROM serie_a GROUP BY away_team))t GROUP BY team)
UNION
(SELECT team, sum(matches) AS Total_Matches, sum(wins) AS Total_Wins,
(sum(wins)/sum(matches)) AS WIn_Percent FROM
((SELECT home_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='H' THEN 1 ELSE
0 END) AS Wins FROM ligue1 GROUP BY home_team)
UNION
(SELECT away_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='A' THEN 1 ELSE 0
END) AS Wins FROM ligue1 GROUP BY away_team))t GROUP BY team)
UNION
(SELECT team, sum(matches) AS Total_Matches, sum(wins) AS Total_Wins,
(sum(wins)/sum(matches)) AS WIn_Percent FROM
((SELECT home_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='H' THEN 1 ELSE
0 END) AS Wins FROM bundesliga GROUP BY home_team)
UNION
(SELECT away_team AS team, count(FixtureID) AS matches, sum(CASE WHEN FTR='A' THEN 1 ELSE 0
END) AS Wins FROM bundesliga GROUP BY away_team))t GROUP BY team))l INNER JOIN team_e ON
team_e.team=l.team
ORDER BY `Win_Percent` DESC

Output:

team	Total_Matches	Total_Wins	Win_Percent ▾ 1	country
paris saint germain	27	22	0.8148	France
bayern munich	17	13	0.7647	Germany
juventus	38	26	0.6842	Italy
inter	38	24	0.6316	Italy
lazio	38	24	0.6316	Italy
barcelona	24	15	0.6250	Spain
borussia dortmund	34	21	0.6176	Germany
atalanta	38	23	0.6053	Italy
borussia m'gladbach	34	20	0.5882	Germany
olympique marseille	14	8	0.5714	France
real madrid	23	13	0.5652	Spain
bayer leverkusen	34	19	0.5588	Germany
roma	38	21	0.5526	Italy
rennes	28	15	0.5357	France
lille	28	15	0.5357	
rb leipzig	34	18	0.5294	Germany
real sociedad	23	12	0.5217	Spain
sevilla	23	12	0.5217	Spain
milan	38	19	0.5000	Italy
napoli	38	18	0.4737	Italy

Query 14:

Find out the players in different leagues who had the most number of red cards for each season from 2013-2018

SELECT p.Season, name, team, league,country,type,sum(red_cards) as Total_Red_Cards FROM player_stats ps INNER JOIN player p ON p.PlayerID=ps.PlayerID inner join groups g on g.competition=ps.league group by p.playerID
ORDER BY `Total_Red_Cards` DESC, `name` ASC

Output:

Season	name ▲ 2	team	league	country	type	Total_Red_Cards ▾ 1
2016/2017	Paletta, Gabriel	ac milan	Serie A	Italy	LEAGUE	5
2016/2017	Acquah, Afriyie	torino	Serie A	Italy	LEAGUE	3
2016/2017	Bacuna, Juninho	fc groningen	Europa League	Europe	CUP	3
2013/2014	Congr?, Daniel	montpellier	Ligue 1	France	LEAGUE	3
2016/2017	Gbamin, Jean-Philippe	fsv mainz 05	Bundesliga	Germany	LEAGUE	3
2017/2018	Gouano, Prince-Desir	amiens	Ligue 1	France	LEAGUE	3
2016/2017	Kucka, Juraj	ac milan	Serie A	Italy	LEAGUE	3
2013/2014	Luiz Gustavo	vfl wolfsburg	Bundesliga	Germany	LEAGUE	3
2014/2015	M?rquez, Rafael	verona	Serie A	Italy	LEAGUE	3
2015/2016	Murillo, Jeison	inter milan	Serie A	Italy	LEAGUE	3
2013/2014	Poundje, Maxime	bordeaux	Ligue 1	France	LEAGUE	3
2015/2016	Wanyama, Victor	southampton	Champions League	Europe	CUP	3
2015/2016	Xhaka, Granit	m?nchengladbach	Bundesliga	Germany	LEAGUE	3
2017/2018	Zuculini, Bruno	verona	Serie A	Italy	LEAGUE	3
2014/2015	Acquah, Afriyie	sampdoria	Serie A	Italy	LEAGUE	2

Query 15:

From last season, which team had the most probability of winning a match after going down in the first leg?

SELECT team, sum(matches) AS total_match, sum(Wins) as wins, (sum(Wins)/sum(matches)) AS probability_of_Winning from
((SELECT home_team AS team, sum(CASE WHEN htr='A' THEN 1 ELSE 0 END) AS matches, sum(CASE WHEN (htr='A' AND ftr='H') THEN 1 ELSE 0 END) AS Wins FROM ucl group by home_team) UNION (SELECT Away_team as team, sum(CASE WHEN htr='A' THEN 1 ELSE 0 END) AS matches, sum(CASE WHEN (htr='H' AND ftr='A') THEN 1 ELSE 0 END) AS Wins FROM ucl group by away_team))t group by team HAVING total_match !=0 AND probability_of_winning !=0
ORDER BY `probability_of_Winning` DESC

Output:

+ Options

team	total_match	wins	probability_of_Winning ▼ 1
juventus	1	1	1.0000
bate	1	1	1.0000
borussia dortmund	2	1	0.5000
paris saint germain	2	1	0.5000
rosenborg	2	1	0.5000
barcelona	3	1	0.3333
crvena zvezda	3	1	0.3333
valencia	4	1	0.2500
tottenham hotspur	4	1	0.2500
rb leipzig	6	1	0.1667

Query 16:

Create a view to find the points amassed and the goal difference of each team in all the leagues.

Create view league_table as(SELECT team,sum(matches) AS Total_Matches, sum(point_scored) AS Total_Points, sum(Goal) AS Goal_Difference FROM

((SELECT home_team AS team,count(FixtureID) as matches, sum(CASE WHEN ftr='H' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(fthg-ftag) AS Goal from la_liga group by Home_Team)

UNION

(SELECT away_team as team,count(FixtureID) as matches, sum(CASE WHEN ftr='A' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(ftag-fthg) AS Goal from la_liga group by Away_Team))t group by team)

UNION

(SELECT team,sum(matches) AS Total_Matches, sum(point_scored) AS Total_Points, sum(Goal) AS Goal_Difference FROM

((SELECT home_team AS team,count(FixtureID) as matches, sum(CASE WHEN ftr='H' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(fthg-ftag) AS Goal from serie_a group by Home_Team)

UNION

(SELECT away_team as team,count(FixtureID) as matches, sum(CASE WHEN ftr='A' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(ftag-fthg) AS Goal from serie_a group by Away_Team))t group by team)

UNION

(SELECT team,sum(matches) AS Total_Matches, sum(point_scored) AS Total_Points, sum(Goal) AS Goal_Difference FROM

((SELECT home_team AS team,count(FixtureID) as matches, sum(CASE WHEN ftr='H' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(fthg-ftag) AS Goal from ligue1 group by Home_Team)

UNION

(SELECT away_team as team,count(FixtureID) as matches, sum(CASE WHEN ftr='A' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(ftag-fthg) AS Goal from ligue1 group by Away_Team))t group by team)

UNION

(SELECT team,sum(matches) AS Total_Matches, sum(point_scored) AS Total_Points, sum(Goal) AS Goal_Difference FROM

((SELECT home_team AS team,count(FixtureID) as matches, sum(CASE WHEN ftr='H' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(fthg-ftag) AS Goal from bundesliga group by Home_Team)

UNION

(SELECT away_team as team,count(FixtureID) as matches, sum(CASE WHEN ftr='A' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(ftag-fthg) AS Goal from bundesliga group by Away_Team))t group by team)

ORDER BY `Total_Points` DESC

Query 17:

Create a view to find the points amassed and the goal difference of each team in the champions league

CREATE VIEW UCL_Points_Tally AS

(SELECT t.team,sum(matches) AS Total_Matches, sum(point_scored) AS Total_Points, sum(Goal) AS Goal_Difference,team_e.country FROM

((SELECT home_team AS team,count(FixtureID) as matches, sum(CASE WHEN ftr='H' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(fthg-ftag) AS Goal from ucl group by Home_Team)

UNION

(SELECT away_team as team,count(FixtureID) as matches, sum(CASE WHEN ftr='A' then 3 when ftr='D' then 1 WHEN ftr='A' THEN 0 end) as point_scored, sum(ftag-fthg) AS Goal from ucl group by Away_Team))t INNER JOIN team_e ON team_e.team=t.team group by team)

Query 18:

From the views created find out which teams performed the best in the league and continental stage.

SELECT u.team AS Team, u.Total_Matches AS UCL_Matches, u.Total_Points as UCL_Points, u.Goal_Difference as UCL_GD, l.Total_Matches as League_Matches,l.Total_Points as League_Points, l.Goal_Difference AS League_GD FROM league_table l INNER JOIN ucl_points_tally u on u.team=l.team

ORDER BY `UCL_Points` DESC, `League_Points` DESC

Output:

Team	UCL_Matches	UCL_Points ▾ 1	UCL_GD	League_Matches	League_Points ▾ 2	League_GD
bayern munich	11	33	35	34	82	68
paris saint germain	11	25	19	27	68	51
rb leipzig	10	20	4	34	66	44
juventus	8	19	8	38	83	33
barcelona	9	18	1	24	49	27
olympique lyonnais	10	14	0	28	40	15
atalanta	9	13	-1	38	78	50
borussia dortmund	8	13	-1	34	69	43
napoli	8	13	5	38	62	11
real madrid	8	11	4	23	46	23
valencia	8	11	-2	23	36	-2
inter	6	7	1	38	82	45
bayer leverkusen	3	3	-2	34	63	17
lille	6	1	-10	28	49	8

Query 19:

Which team in the leagues has the most average possession?

(SELECT h.Home_Team AS team,h.League, ((Pos_h+Pos_a)/2) as Avg_Possession FROM

(SELECT Home_Team,league, avg(h_pt) AS Pos_h FROM la_liga group by Home_Team,league)h INNER JOIN (SELECT Away_Team,league, avg(a_pt) AS Pos_a FROM la_liga group by Away_team,league)a on h.Home_Team=a.Away_Team)

UNION

(SELECT h.Home_Team AS team,h.League, ((Pos_h+Pos_a)/2) as Avg_Possession FROM

(SELECT Home_Team,league, avg(h_pt) AS Pos_h FROM ligue1 group by Home_Team,league)h INNER JOIN (SELECT Away_Team,league, avg(a_pt) AS Pos_a FROM ligue1 group by Away_team,league)a on h.Home_Team=a.Away_Team)

UNION

(SELECT h.Home_Team AS team,h.League, ((Pos_h+Pos_a)/2) as Avg_Possession FROM

(SELECT Home_Team,league, avg(h_pt) AS Pos_h FROM serie_a group by Home_Team,league)h INNER JOIN (SELECT Away_Team,league, avg(a_pt) AS Pos_a FROM serie_a group by Away_team,league)a on h.Home_Team=a.Away_Team)

UNION

(SELECT h.Home_Team AS team,h.League, ((Pos_h+Pos_a)/2) as Avg_Possession FROM

(SELECT Home_Team,league, avg(h_pt) AS Pos_h FROM bundesliga group by Home_Team,league)h INNER JOIN (SELECT Away_Team,league, avg(a_pt) AS Pos_a FROM bundesliga group by Away_team,league)a on h.Home_Team=a.Away_Team)

ORDER BY `Avg_Possession` DESC

Output:

team	League	Avg_Possession ▼ 1
bayern munich	Bundesliga	65.4706
paris saint germain	Ligue 1	64.99725274725274
barcelona	La Liga	64.8322
bayer leverkusen	Bundesliga	63.7353
borussia dortmund	Bundesliga	60.9412
napoli	Serie A	59.47365
juventus	Serie A	58.2368
sassuolo	Serie A	57.89475
real madrid	La Liga	57.76135
atalanta	Serie A	57.6842
sevilla	La Liga	57.02275
olympique lyonnais	Ligue 1	56.51538461538462
real sociedad	La Liga	56.2231
rb leipzig	Bundesliga	55.5
milan	Serie A	55.1579

Query 20:

Teams that received the most red cards in all league fixtures last season

(SELECT team,league,sum(RC) as Total_Red_Cards from

((SELECT home_team as team, league, sum(h_rc) as RC FROM la_liga group by home_team,league) UNION ((SELECT away_team as team, league, sum(a_rc) as RC FROM la_liga group by away_team,league)))t group by team,league)

UNION

(SELECT team,league,sum(RC) as Total_Red_Cards from

((SELECT home_team as team, league, sum(h_rc) as RC FROM serie_a group by home_team,league) UNION ((SELECT away_team as team, league, sum(a_rc) as RC FROM serie_a group by away_team,league)))t group by team,league)

UNION

(SELECT team,league,sum(RC) as Total_Red_Cards from

((SELECT home_team as team, league, sum(h_rc) as RC FROM ligue1 group by home_team,league) UNION ((SELECT away_team as team, league, sum(a_rc) as RC FROM ligue1 group by away_team,league)))t group by team,league)

UNION

(SELECT team,league,sum(RC) as Total_Red_Cards from

((SELECT home_team as team, league, sum(h_rc) as RC FROM bundesliga group by home_team,league) UNION ((SELECT away_team as team, league, sum(a_rc) as RC FROM bundesliga group by away_team,league)))t group by team,league)

ORDER BY `Total_Red_Cards` DESC, `team` ASC

Output:

team ▲ 2	league	Total_Red_Cards ▼ 1
genoa	Serie A	10
monaco	Ligue 1	10
bologna	Serie A	7
hellas verona	Serie A	7
inter	Serie A	7
nice	Ligue 1	7
roma	Serie A	7
sampdoria	Serie A	7
torino	Serie A	7
bayer leverkusen	Bundesliga	6
brescia	Serie A	6
cagliari	Serie A	6
espanyol	La Liga	6
milan	Serie A	6
n??mes	Ligue 1	6
barcelona	La Liga	5
fiorentina	Serie A	5