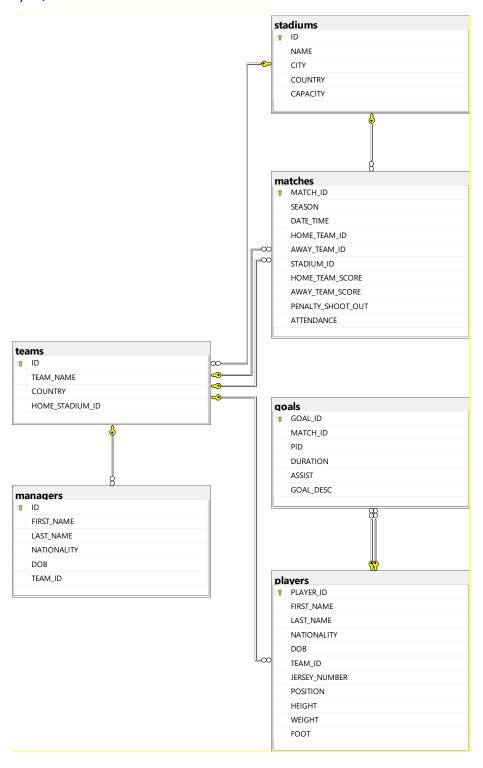
Group Members: Section: E

Javeriah Abid (21I-0885)

Zunaira Amir (21I-0780)

Database Assignment # 3 Report PART # 1

1) SQL Schema:



- 2) We have given **one** primary key to all tables, therefore all tables have full functional dependency.
- 3) We believe no normalization is required as:1NF is when the columns of table
 - Columns of all our tables are atomic i.e., they can't be broken down anymore, are not composite and are not multivalued, hence our tables are in 1NF.
 - As already mentioned, all tables are full functionally dependent hence, all tables are in 2NF.
 - There are no transitive relations in any of the tables hence, all tables are in 3NF.
 - As for BCNF, we have yet not covered this topic in class.

PART # 2

We converted all sheets of the provided excel sheets in separate csv files and inserted them in SQL file to create tables.

PART#3

EASY

Query 1:

DECEAR	@Specific_Manager	1nt = 41								
		players.FI	RST_NAME, pla	yers.LAST	_NAME,	players.	NATIONALITY,	players.DOB,	players.TEAM_ID, managers.ID as	'Managers I
from p										
	nagers on managers			ID						
	anagers.ID = @Spec		er							
order	y players.PLAYER_1	.U								
1% - 4 ■										
Results B M	essages									
PLAYER	D FIRST_NAME	LAST_NAME	NATIONALITY	DOB	TEAM_II	D Manager	s ID			
ply1359	?gmundur	Kristinsson	Iceland	1989-06-19	40	41				
ply1360	Athanasios-Theologos		Greece	2003-09-06	40	41				
ply1361	Alexandros		Greece	1989-07-28	40	41				
ply1363	Tom?		Czech Republic	1989-03-29		41				
ply1364	Athanasios		Greece	1997-05-06		41				
ply1365	Ousseynou		Senegal	1995-11-11		41				
ply1366	Pape		Senegal	1995-09-14		41				
ply1367	Etienne		France	2002-01-14		41				
ply1368 ply1369	Leonardo Kenny		Greece France	1995-07-23 1991-10-03		41				
ply1369 ply1370	Doron		Israel			41				
ply1370 ply1371	NULL		Brazil	1988-05-12		41				
3 ply1372	Giannis		Greece	1996-08-24		41				
4 ply1373	Nemanja		Bosnia-Herzegovina	2001-02-21		41				
5 ply1374	Sokratis		Greece	1988-06-09	40	41				
6 ply1375	NULL		Spain	1998-01-26	40	41				
7 ply1376	Oleg	Reabciuk	Moldova	1998-01-16	40	41				
B ply1377	Panagiotis	Retsos	Greece	1998-08-09		41				
9 ply1378	?ime	Vrsaljko	Croatia	1992-01-10	40	41				
ply13/6	Oleg	Reabcluk	Moldova	1998	-01-16	40	41			
ply1377	Panagiotis	Retsos	Greece	1998	-08-09	40	41			
ply1378	?ime	Vrsaljko	Croatia	1992	-01-10	40	41			
ply1379	Andreas	Bouchalakis	Greece	1993	-04-05	40	41			
ply1380	Aguibou	Camara	Guinea	2001	-05-20	40	41			
ply1381	Kostas	Fortounis	Greece	1992	-10-16	40	41			
ply1382	In-beom	Hwang	South Korea	1996	-09-20	40	41			
ply1383	Pajtim	Kasami	Switzerland			40	41			
ply1384	Ioannis	Kosti	Cyprus			40	41			
ply1385	Yann	M'Vila	France			40	41			
ply1386	Pierre	Malong	Cameroon			40	41			
ply1388	Pep	Biel	Spain			40	41			
ply1389	Garry	Rodriques	Cape Verde			40	41			
		5	Cape verde Colombia			40	41			
ply1390	James Diodia	Rodr?guez					41			
ply1391	Diadi?	Samass?ko				40				
ply1392	Mathieu	Valbuena	France			40	41			
ply1393	C?dric	Bakambu	Congo DR			40	41			
ply1394	Josh	Bowler	England			40	41			
ply1395	Konrad de la	Fuente	USA			40	41			
ply1396	NULL	Diby	Spain			40	41			
ply1397	Youssef	El-Arabi	Morocco	1987	-02-03	40	41			
ply1398	Ui-jo	Hwang	South Korea	1992	-08-28	40	41			
ply1399	Aboubakar	Kamara	Mauritania	1995	-03-07	40	41			
ply1400	Georgios	Masouras	Greece	1994	-01-01	40	41			
ply1401	Marios	Vrousai	Greece	1998	-07-02	40	41			

Query 2:

```
-- OUERY 2
       - All the matches that have been played in a specific country.
      DECLARE @Specific_Country varchar(50) = 'Portugal'
      select matches.MATCH_ID, matches.SEASON, matches.DATE_TIME, matches.STADIUM_ID, matches.HOME_TEAM_SCORE, matches.AWAY_TEAM_ID, match
      from matches
      join stadiums on stadiums.ID = matches.STADIUM_ID
      where stadiums.COUNTRY = @Specific_Country
       - 4 ■
MATCH_ID SEASON
                                               STADIUM_ID HOME_TEAM_SCORE AWAY_TEAM_ID HOME_TEAM_SCORE AWAY_TEAM_SCORE ATTENDANCE
                 2021-2022 2022-02-23 20:00:00.000 26
     mt103
                                                                                                                                       54760
                          2022-04-05 20:00:00.000 26
                                                                                                                                       59633
                 2021-2022
                                                                                18
      mt114
      mt15
                 2021-2022
                          2021-09-28 20:00:00.000
                                                                                18
                                                                                                                                       23520
      mt152
                 2020-2021
                          2020-10-27 20:00:00.000 13
                                                                                40
                                                                                                                                       2450
      mt154
                 2020-2021
                           2020-11-03 20:00:00.000
      mt158
                 2020-2021
                          2020-12-01 20:00:00 000
                                               13
                                                                                20
                                                                                                                                       ٥
                          2021-10-19 20:00:00.000
                                                                                                                                       32130
                 2021-2022
                                               13
      mt18
                 2020-2021
                          2021-02-17 20:00:00.000
                                                                                16
      mt23
                 2021-2022
                          2021-12-07 20:00:00 000
                                               13
                                                                                                                                       38830
                 2020-2021
                          2021-05-29 20:00:00.000
                                                                                                                                       14110
 10
      mt250
      mt26
                 2021-2022
                          2021-09-15 20:00:00.000 27
                                                                                                                                       20382
                          2021-11-03 20:00:00.000 27
                                                                                6
                                                                                                                                       40835
 12
      mt32
                 2021-2022
                 2019-2020
                           2019-09-17 20:00:00.000
                                                                                                                                       46460
 14
      mt328
                 2019-2020 2019-10-23 20:00:00 000 26
                                                                                48
                                                                                                                                       53035
      mt333
                 2019-2020
                          2019-12-10 20:00:00.000
                                                                                32
                                                                                                                                       40232
 15
      mt34
                 2021-2022
                          2021-11-24 20:00:00.000 27
                                                                                                                                       41341
 17
      mt363
                 2019-2020
                          2020-08-12 20:00:00.000 26
                                                                                22
                                                                                                                                      0
                 2019-2020
                           2020-08-13 20:00:00.000
 19
      mt365
                 2019-2020
                          2020-08-14 20:00:00.000
                                                                                                                                      0
     mt366
                 2019-2020 2020-08-15 20:00:00.000 27
                                                                                                                                      0
 20
                  2019-2020 2020-08-18 20:00:00.000 26
21
                                                                                                                                   3
                                                                                                                                                          0
     mt367
                                                                    0
                                                                                           22
                                                                                                            0
                  2019-2020 2020-08-19 20:00:00.000 27
     mt368
                                                                    0
                                                                                           5
                                                                                                            0
                                                                                                                                   3
                                                                                                                                                          0
22
     mt369
                  2019-2020 2020-08-23 20:00:00.000 26
                                                                                           5
23
                                                                    0
                                                                                                            0
                                                                                                                                                          0
                  2018-2019 2018-10-03 20:00:00.000 13
                                                                                                                                                          42711
24
      mt409
                                                                                           46
                                                                                                                                   0
25
     mt412
                  2018-2019 2018-11-06 20:00:00.000 13
                                                                                           39
                                                                                                                                                          34616
                  2018-2019 2018-11-28 20:00:00.000 13
      mt415
                                                                                           58
                                                                                                                                                          41603
26
                                                                    3
                                                                                                            3
27
     mt419
                  2018-2019 2018-09-19 20:00:00.000 26
                                                                                           5
                                                                                                            0
                                                                                                                                                          60274
                                                                    0
                  2018-2019 2018-11-07 20:00:00.000 26
28
      mt424
                                                                                                                                                          51328
                  2018-2019 2018-12-12 20:00:00.000 26
                                                                                                                                                          33633
29
     mt429
                                                                                           54
                                                                                                                                   0
     mt477
                  2018-2019 2019-03-06 20:00:00.000 13
                                                                                           56
                                                                                                                                                          49029
30
     mt488
                  2018-2019 2019-04-17 20:00:00 000 13
                                                                                           18
                                                                                                                                                          49117
31
                  2017-2018 2017-09-12 19:45:00.000 26
32
      mt496
                                                                                           57
                                                                                                                                                          38323
                  2017-2018 2017-10-18 19:45:00.000 26
                                                                                           21
                                                                                                                                                          57684
33
     mt499
                                                                    0
                                                                                                            0
     mt505
                  2017-2018 2017-12-05 19:45:00.000 26
                                                                                           63
                                                                                                            0
                                                                                                                                                          22470
34
                                                                    0
35
     mt51
                  2021-2022 2021-09-29 20:00:00 000 26
                                                                                                                                                          29454
                                                                    3
                                                                                           12
                                                                                                            3
                                                                                                                                   0
                  2017-2018 2017-09-27 19:45:00.000 27
36
     mt534
                                                                    0
                                                                                           12
                                                                                                            0
                                                                                                                                                          48575
     mt538
                  2017-2018 2017-10-31 19:45:00.000 27
37
                                                                                           16
                                                                                                                                                          48442
38
     mt54
                  2021-2022 2021-10-20 20:00:00.000 26
                                                                    0
                                                                                           5
                                                                                                            0
                                                                                                                                                          50000
                  2017-2018 2017-11-22 19:45:00.000 27
                                                                                                                                                          42528
39
     mt540
                                                                    3
                                                                                           40
                                                                                                            3
                  2017-2018 2017-09-13 19:45:00 000 13
40
     mt567
                                                                                           6
                                                                                                                                                          42429
     mt574
                  2017-2018 2017-11-01 19:45:00.000 13
                                                                                                                                                          41616
41
                                                                    3
                                                                                           23
                                                                                                            3
     mt577
                  2017-2018 2017-12-06 19:45:00.000 13
                                                                    5
                                                                                           55
                                                                                                            5
                                                                                                                                                          42509
42
                  2017-2018 2018-02-14 19:45:00.000 13
                                                                                                                                                          47718
43
     mt593
                                                                    0
                                                                                           18
                                                                                                            0
                  2021-2022 2021-12-08 20:00:00 000 26
44
     mt60
                                                                                           11
                                                                                                                                   0
                                                                                                                                                          37000
                  2016-2017
                             2016-09-13 19:45:00.000 26
                                                                                                                                                          42126
45
     mt633
                                                                                           6
      mt639
                  2016-2017 2016-11-01 19:45:00.000 26
46
                                                                                           11
                                                                                                            1
                                                                                                                                   0
                                                                                                                                                          51641
                  2016-2017 2016-12-06 19:45:00.000 26
47
     mt643
                                                                                           50
                                                                                                                                   2
                                                                                                                                                          55634
                  2016-2017 2016-09-27 19:45:00 000 27
48
     mt683
                                                                                           72
                                                                                                            2
                                                                                                                                   0
                                                                                                                                                          40094
                 2016-2017 2016-09-13 19:45:00.000 26
45
     mt633
                                                                                                                                           42126
                 2016-2017 2016-11-01 19:45:00.000 26
                                                                                  11
     mt639
                                                                                                                                           51641
47
     mt643
                 2016-2017 2016-12-06 19:45:00 000 26
                                                                                  50
                                                                                                                                           55634
48
     mt683
                 2016-2017
                           2016-09-27 19:45:00.000 27
                                                                                  72
                                                                                                                                           40094
49
     mt685
                           2016-10-18 19:45:00.000 27
50
     mt689
                 2016-2017 2016-11-22 19:45:00.000 27
                                                                                  25
                                                                                                                                           50046
51
     mt693
                 2016-2017 2016-09-14 19:45:00.000 13
                                                                                  70
                                                                                                                                           34325
                 2016-2017
                           2016-11-02 19:45:00.000
                                                                                  10
                                                                                                                                           32310
52
     mt699
     mt703
                 2016-2017 2016-12-07 19:45:00.000
                                                                                  73
                                                                                                                                           39310
54
     mt716
                 2016-2017 2017-02-14 19:45:00 000 26
                                                                                                                      0
                                                                                                                                           55124
55
     mt722
                 2016-2017 2017-02-22 19:45:00.000 13
                                                                                  16
                                                                                                                                           49229
 56
                 2021-2022 2022-02-15 20:00:00.000 27
```

Query 3:

```
-- All the teams that have won more than 3 matches in their home stadium.
-- (Assume a team wins only if they scored more goals then other team)
select matches.HOME_TEAM_ID as 'Team ID', teams.TEAM_NAME, teams.COUNTRY, teams.HOME_STADIUM_ID, count(*) as 'no.of Matches Won'
from teams
       join matches on matches.STADIUM_ID = teams.HOME_STADIUM_ID
                                                                                                 -- team playing in home stadium
                            and matches.HOME_TEAM_ID = teams.ID
       where matches.HOME_TEAM_SCORE > matches.AWAY_TEAM_SCORE -- team won in their home stadium group by matches.HOME_TEAM_ID, teams.TEAM_NAME, teams.COUNTRY, teams.HOME_STADIUM_ID having count(*) > 3
104 % 🕶 🖣
Team ID TEAM_NAME
2 AFC Ajax
                                  COUNTRY HOME_STADIUM_ID no.of Matches Won
                                  Netherlands 2
                Atlético Madrid
3
4
5
6
7
8
9
                Bayern München
                                  Germany
                                                                    22
                Borussia Dortmund
                                  Germany
      9
                                                                    9
20
                Chelsea FC
                                  England
                FC Barcelona
                                               12
                                   Spain
      13
15
                FC Porto
                                   Portugal
                                  Italy
Italy
                Inter
      16
18
20
21
22
23
                Juventus
                Liverpool FC
                                   England
                                               17
                                                                    17
23
                Manchester City
 11
                                               19
                                  England
 12
                Manchester United
                                  England
13
14
                                  France
Germany
                                                                    17
                Paris Saint-Germ...
                                               21
                RB Leipzig
      24
25
26
                RB Salzburg
                                   Austria
                Real Madrid
 16
17
                                                                    15
                                   Spain
                                               23
                                   Spain
                                                             opu...
                              nour mauna
                                                                                                                       ...
                                                                                                                      8
   17
             26
                             Sevilla FC
                                                             Spain
                                                                                  24
                                                                                                                      7
             28
    18
                              SL Benfica
                                                             Portugal
                                                                                  26
   19
             29
                              Sporting CP
                                                             Portugal
                                                                                  27
                                                                                                                      4
                                                                                                                      7
             50
   20
                              SSC Napoli
                                                             Italy
                                                                                  52
             55
                             AS Monaco
                                                             France
                                                                                  58
                                                                                                                      4
   21
                                                                                  37
                                                                                                                      8
             56
   22
                              AS Roma
                                                             Italy
   23
             73
                             Leicester City
                                                             England
                                                                                   79
                                                                                                                      4
```

Query 4:

30 9		<u> </u>			
⊞ F	Result	s 🗐 Messages			
	ID	TEAM_NAME	FIRST_NAME	COUNTRY	NATIONALITY
1	4	Atlético Madrid	Diego	Spain	Argentina
2	6	Besiktas	Val?rien	Turkey	France
3	11	Dinamo Kiev	Mircea	Ukraine	Romania
4	14	FC Sheriff	Stjepan	Moldova	Croatia
5	17	Lille OSC	Paulo	France	Portugal
6	18	Liverpool FC	J?rgen	England	Germany
7	19	Malmö FF	?ge	Sweden	Norway
8	20	Manchester City	Pep	England	Spain
9	21	Manchester United	Erik ten	England	Netherlands
10	24	RB Salzburg	Matthias	Austria	Germany
11	25	Real Madrid	Carlo	Spain	Italy
12	27	Shakhtar Donetsk	lgor	Ukraine	Croatia
13	28	SL Benfica	Roger	Portugal	Germany
14	30	VfL Wolfsburg	Niko	Germany	Croatia
15	34	FC Midtjylland	Albert	Denmark	Spain
16	35	Ferencvárosi TC	Stanislav	Hungary	Russia
17	39	Lokomotiv Moskva	Joe	Russia	Germany
18	40	Olympiakos Pirae	Carlos	Greece	Spain
19	40	Olympiakos Pirae	NULL	Greece	Spain
20	41	Olympique Mars	lgor	France	Croatia
21	43	Bayer Leverkusen	Xabi	Germany	Spain
22	48	Olympique Lyon	Peter	France	Netherlands
23	51	Tottenham Hotspur	Antonio	England	Italy
24	52	Valencia CF	Gennaro	Spain	Italy
25	54	AEK Athen	Mat?as	Greece	Argentina
26	55	AS Monaco	Philippe	France	Belgium
27	56	AS Roma	Jos?	Italy	Portugal
28	62	Celtic FC	Ange	Scotland	Australia
29	65	NK Maribor	Damir	Slovenia	Croatia
30	68	Spartak Moskva	Guillermo	Russia	Spain
31	68	Spartak Moskva	Fernando	Russia	Spain
32	69	Arsenal FC	Dmitriy	England	Russia
33	70	FC København	Sandro	Denmark	Germany
34	71	FK Rostov	Stephan	Russia	Switzerland
35	69	Arsenal FC	Mikel	England	Spain

Query 5:

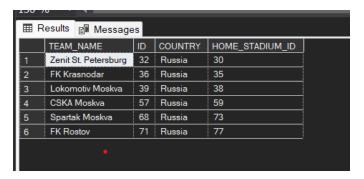
Results B	Messages						
MATCH_I	D SEASON	AWAY_TEAM_ID	HOME_TEAM_ID	AWAY_TEAM_SCORE	HOME_TEAM_SCORE	stadium_id	stadium_name
mt100	2021-2022	18	15	2	0	1	Giuseppe Meazza
mt103	2021-2022	2	28	2	2	26	Est?dio da Luz
mt104	2021-2022	21	4	1	1	4	Wanda Metropolitano
mt105	2021-2022	24	5	1	7	5	Allianz Arena
mt108	2021-2022	22	25	1	3	23	Santiago Bernab?u
mt110	2021-2022	4	21	1	0	20	Old Trafford
mt114	2021-2022	18	28	3	1	26	Est?dio da Luz
mt117	2021-2022	9	25	3	2	23	Santiago Bernab?u
mt118	2021-2022	31	5	1	1	5	Allianz Arena
mt119	2021-2022	20	4	0	0	4	Wanda Metropolitano
mt124	2021-2022	20	25	1	3	23	Santiago Bernab?u
mt125	2021-2022	25	18	1	0	31	Stade de France
mt127	2020-2021	4	5	0	4	5	Allianz Arena
mt129	2020-2021	24	4	2	3	4	Wanda Metropolitano
mt13	2021-2022	13	4	0	0	4	Wanda Metropolitano
mt132	2020-2021	39	4	0	0	4	Wanda Metropolitano
mt133	2020-2021	24	5	1	3	5	Allianz Arena
mt135	2020-2021	5	4	1	1	4	Wanda Metropolitano
mt136	2020-2021	39	5	0	2	5	Allianz Arena
mt139	2020-2021	33	15	2	2	1	Giuseppe Meazza
mt140	2020-2021	15	27	0	0	11	Olimpiyskyi
mt142	2020-2021	33	27	6	0	11	Olimpiyskyi
mt145	2020-2021	25	15	2	0	1	Giuseppe Meazza
mt146	2020-2021	25	27	0	2	11	Olimpiyskyi
mt148	2020-2021	27	15	0	0	1	Giuseppe Meazza
mt153	2020-2021	20	41	3	0	40	V?lodrome
mt157	2020-2021	13	41	2	0	40	V?lodrome

<u>MEDIUM</u>

Query 6:

) lt -					
■ F	Results 🗐	Messages				
	GOAL_ID	MATCH_ID	PID	ASSIST	GOAL_DESC	player_id
1	gl382	mt126	ply762	NULL	right-footed shot	ply762
2	gl387	mt127	ply1092	NULL	right-footed shot	ply1092
3	gl392	mt129	ply112	NULL	left-footed shot	ply112
4	gl394	mt129	ply94	NULL	own goal	ply94
5	gl398	mt130	ply1347	NULL	penalty	ply1347
6	gl406	mt131	ply127	NULL	left-footed shot	ply127
7	gl399	mt131	ply1465	NULL	left-footed shot	ply1465
8	gl401	mt131	ply1106	NULL	own goal	ply1106
9	gl407	mt133	ply398	NULL	left-footed shot	ply398
10	gl422	mt138	ply686	NULL	own goal	ply686
11	gl427	mt139	ply1126	NULL	penalty	ply1126
12	gl431	mt141	ply1149	NULL	right-footed shot	ply1149
13	gl440	mt143	ply831	NULL	right-footed shot	ply831
14	gl447	mt144	ply1474	NULL	bicycle kick	ply1474
15	gl448	mt144	ply1475	NULL	free kick	ply1475
16	gl450	mt145	ply723	NULL	own goal	ply723
17	gl477	mt157	ply413	NULL	left-footed shot	ply413
18	gl484	mt160	ply1482	NULL	own goal	ply1482
19	gl521	mt176	ply767	NULL	penalty	ply767
20	gl526	mt178	ply767	NULL	penalty	ply767
21	gl531	mt179	ply866	NULL	left-footed shot	ply866
22	gl536	mt181	ply863	NULL	right-footed shot	ply863
23	gl543	mt183	ply26	NULL	penalty	ply26
24	gl549	mt185	ply1501	NULL	penalty	ply1501
25	gl551	mt186	ply1503	NULL	own goal	ply1503
26	gl554	mt187	ply1504	NULL	own goal	ply1504

Query 7:



Query 8:

	Stadium ID	Stadium Name	COUNTRY	Team II	Matches Hosted
1	2	Johan Cruijff ArenA	Netherland	ls 2	16
2	3	Gewiss Stadium	Italy	3	7
3	4	Wanda Metropolitan	o Spain	4	20
4	5	Allianz Arena	Germany	5	29
5	6	Vodafone Park	Turkey	6	10
6	7	Signal Iduna Park	Germany	7	24
7	9	Stamford Bridge	England	9	18
8	10	Jan Breydel Stadion	Belgium	10	15
9	11	Olimpiyskyi	Ukraine	11	17
10	12	Spotify Camp Nou	Spain	12	27
11	13	Est?dio do Drag?o	Portugal	13	21
12	1	Giuseppe Meazza	Italy	15	20
13	15	Allianz Stadium	Italy	16	28
14	16	Stade Pierre Mauroy	France	17	7
15	17	Anfield	England	18	26
16	19	Etihad Stadium	England	20	29
17	20	Old Trafford	England	21	16
18	21	Parc des Princes	France	22	26
19	22	Red Bull Arena	Germany	23	23
20	22	Red Bull Arena	Germany	24	23
21	23	Santiago Bernab?u	Spain	25	26
22	24	Ram?n S?nchez Pi	. Spain	26	18
23	26	Est?dio da Luz	Portugal	28	22
24	27	Est?dio Jos? Alvala.	Portugal	29	13
25	30	Gazprom Arena	Russia	32	9
	37	Olimpico	Italy	38	14
	38	R?D-Arena	Russia	39	9
28	39	Georgios Karaiskakis	s Greece	40	9
27 3	38	R?D-Arena	Russia	39	9
	39	Georgios Karaisk	Greece	40	9
	15	BayArena	Germany	43	7
	50	Groupama Stadium	France	48	11
	52	Diego Maradona	Italy	50	14
	54	Estadio de Mestalla	Spain	52	7
_	58	Stade Louis II	France	55	12
	37	Olimpico	Italy	56	14
-	38	St. Jakob-Park	Switzerland	63	7

Query 9:

```
-- QUERY 9
  \dot{prightharpoons}select top 1 matches.SEASON, \mathsf{count}(*) as 'Left - footed goals'
   from goals
   join matches on matches.MATCH_ID = goals.MATCH_ID
   where goals.GOAL_DESC LIKE 'left%'
   group by matches.SEASON
   order by count(*) desc
    /***** OR *****/
   SELECT T.SEASON , COUNT(*) AS num_left_footed_goals -- season with max no.of left-footed goals
    FROM ( SELECT matches.SEASON, goals.MATCH_ID -- lists all matches and their seasons that had left-footed goals
           JOIN matches ON goals.MATCH_ID = matches.MATCH_ID
WHERE GOAL_DESC LIKE 'left%' ) as T
    group by T.SEASON
    having count(*) = ( select max(Temp.num_left_footed_goals)
                                                                    -- max left-footed goals from all seasons
                         from ( SELECT matches.SEASON, COUNT(*) AS num_left_footed_goals -- count of left-footed
                                 FROM goals
                                                                                                -- goals of each season
                                 JOIN matches ON matches.MATCH_ID = goals.MATCH_ID
                                 WHERE goals.GOAL_DESC LIKE 'left%'
                                 GROUP BY matches.SEASON ) as Temp )
ı5 % → ◀
Results Messages PClient Statistics
  SEASON num_left_footed_goals 2018-2019 115
```

Query 10:

```
-- OUERY 10
 \dotert select top 1 T1.NATIONALITY, \mathsf{count}(*) as \mathsf{players\_each\_country} -- \mathsf{count} players from each \mathsf{country}
   \label{from:count} \textbf{from} \quad ( \  \, \textbf{select players.PLAYER\_ID}, \  \, \textbf{count}(*) \  \, \textbf{as} \  \, \textbf{No\_of\_Goals}, \  \, \textbf{players.NATIONALITY} \\
                                                                           -- players with goals >= 1
           from players
           join goals on players.PLAYER_ID = goals.PID
                                                                            -- and their nationality
           group by players.PLAYER_ID, players.NATIONALITY ) as T1
   group by T1.NATIONALITY
  \hbox{ order by players\_each\_country desc}\\
   /***** OR *****/
   select T.NATIONALITY, count(*) as 'Max no.of goaling Players' -- country with max goaling players
    rom ( select players.PLAYER_ID, count(*) as No_of_Goals, players.NATIONALITY
           from players
                                                                -- players with goals >= 1
            join goals on players.PLAYER_ID = goals.PID
            group by players.PLAYER_ID, players.NATIONALITY ) as T
   group by T.NATIONALITY
   having count(*) =
                    (select max(T2.players_each_country)
                                                                                              -- max players from a country
                      from ( select count(*) as players_each_country, T1.NATIONALITY -- count players from each country
                             from ( select players.PLAYER_ID, count(*) as No_of_Goals, players.NATIONALITY
                                                                                            -- players with goals >= 1
-- and their nationality
                                       from players
                                       join goals on players.PLAYER_ID = goals.PID
                                       group by players.PLAYER_ID, players.NATIONALITY ) as T1
                             group by T1.NATIONALITY ) as T2)
% - 4
Results Messages Client Statistics
  NATIONALITY Max no.of goaling Players
  Spain 62
```

HARD

Query 11:

⊞ R	esults 🕫 Mes	sages			
	Stadium ID	Stadium Name	COUNTRY	left_goal	right_goal
1	2	Johan Cruijff ArenA	Netherlands	20	12
2	3	Gewiss Stadium	Italy	10	9
3	6	Vodafone Park	Turkey	13	4
4	8	Stadion Wankdorf	Switzerland	9	6
5	12	Spotify Camp Nou	Spain	33	30
6	28	Volkswagen Arena	Germany	4	3
7	36	Fatih Terim Stadium	Turkey	5	4
8	40	V?lodrome	France	3	2
9	43	Pusk?s Ar?na	Hungary	6	5
10	44	Arena Na?ional?	Romania	1	0
11	51	Sinobo Stadium	Czech Re	4	3
12	59	VEB Arena	Russia	5	4
13	63	Wembley Stadium	England	16	14
14	76	Telia Parken	Denmark	2	0
15	81	Vasil Levski	Bulgaria	6	1
16	82	Vicente Calder?n	Spain	4	3

Query 12:

M	MATCH_ID	SEASON	DATE_TIME	STADIUM_ID	HOME_TEAM_SCORE	AWAY_TEAM_ID	HOME_TEAM_SCORE	AWAY_TEAM_SCORE	ATTENDANCE	COUNTRY
1 m	nt122	2021-2022	2022-04-27 20:00:00.000	17	2	31	2	0	51586	England
2 n	nt121	2021-2022	2022-04-26 20:00:00.000	19	4	25	4	3	55097	England
3 m	nt120	2021-2022	2022-04-13 20:00:00.000	17	3	28	3	3	51373	England
4 n	nt115	2021-2022	2022-04-06 20:00:00.000	9	1	25	1	3	38689	England
5 m	nt113	2021-2022	2022-04-05 20:00:00.000	19	1	4	1	0	52018	England
6 m	nt110	2021-2022	2022-03-15 20:00:00.000	20	0	4	0	1	73008	England
7 m	nt107	2021-2022	2022-03-09 20:00:00.000	19	0	29	0	0	51213	England
8 m	nt106	2021-2022	2022-03-08 20:00:00.000	17	0	15	0	1	51747	England
9 m	nt101	2021-2022	2022-02-22 20:00:00.000	9	2	17	2	0	38832	England
10 m	nt71	2021-2022	2021-12-08 20:00:00.000	20	1	8	1	1	73156	England
11 m	nt9	2021-2022	2021-11-24 20:00:00.000	19	2	22	2	1	52030	England
12 m	nt21	2021-2022	2021-11-24 20:00:00.000	17	2	13	2	0	52209	England
13 m	nt93	2021-2022	2021-11-23 20:00:00.000	9	4	16	4	0	39513	England
14 m	nt8	2021-2022	2021-11-03 20:00:00.000	19	4	10	4	1	50228	England
15 m	nt20	2021-2022	2021-11-03 20:00:00.000	17	2	4	2	0	51347	England
16 m	nt90	2021-2022	2021-10-20 20:00:00.000	9	4	19	4	0	39095	England
17 m	nt65	2021-2022	2021-10-20 20:00:00.000	20	3	3	3	2	72279	England
18 m	nt64	2021-2022	2021-09-29 20:00:00.000	20	2	31	2	1	73130	England
19 m	nt1	2021-2022	2021-09-15 20:00:00.000	19	6	23	6	3	38062	England
20 m	nt14	2021-2022	2021-09-15 20:00:00.000	17	3	1	3	2	51445	England
21 m	nt85	2021-2022	2021-09-14 20:00:00.000	9	1	32	1	0	39252	England
22 m	nt249	2020-2021	2021-05-05 20:00:00.000	9	2	25	2	0	0	England
23 m	nt248	2020-2021	2021-05-04 20:00:00.000	19	2	22	2	0	0	England
24 m	nt245	2020-2021	2021-04-14 20:00:00.000	17	0	25	0	0	0	England
25 m	nt238	2020-2021	2021-04-06 20:00:00.000	19	2	7	2	1	0	England
26 m	nt237	2020-2021	2021-03-17 20:00:00.000	9	2	4	2	0	0	England
27 m	nt160	2020-2021	2020-12-09 20:00:00.000	19	3	41	3	0	1	England
28 m	nt184	2020-2021	2020-12-08 20:00:00.000	9	1	36	1	1	2000	England

N	MATCH_ID	SEASON	DATE_TIME	STADIUM_ID	HOME_TEAM_SCORE	AWAY_TEAM_ID	HOME_TEAM_SCORE	AWAY_TEAM_SCORE	ATTENDANCE	COUNTRY
29 r	mt219	2020-2021	2020-12-02 20:00:00.000	20	1	22	1	3	638	England
Click	to select all	grid cells	2020-12-01 20:00:00.000	17	1	2	1	0	0	England
31 r	nt169	2020-2021	2020-11-25 20:00:00.000	17	0	3	0	2	0	England
32 r	mt216	2020-2021	2020-11-24 20:00:00.000	20	4	37	4	1	545	England
33 r	mt178	2020-2021	2020-11-04 20:00:00.000	9	3	42	3	0	0	England
34 r	mt155	2020-2021	2020-11-03 20:00:00.000	19	3	40	3	0	0	England
35 r	mt213	2020-2021	2020-10-28 20:00:00.000	20	5	23	5	0	577	England
36 r	mt165	2020-2021	2020-10-27 20:00:00.000	17	2	34	2	0	0	England
37 r	mt150	2020-2021	2020-10-21 20:00:00.000	19	3	13	3	1	0	England
38 r	nt174	2020-2021	2020-10-20 20:00:00.000	9	0	26	0	0	0	England
39 r	nt359	2019-2020	2020-08-07 20:00:00.000	19	2	25	2	1	0	England
40 r	mt358	2019-2020	2020-03-11 20:00:00.000	17	2	4	2	3	45000	England
41 r	mt351	2019-2020	2020-02-25 20:00:00.000	9	0	5	0	3	36761	England
42 r	nt350	2019-2020	2020-02-19 20:00:00.000	53	0	23	0	1	60095	England
43 r	mt345	2019-2020	2019-12-10 20:00:00.000	9	2	17	2	1	40016	England
44 r	nt307	2019-2020	2019-11-27 20:00:00.000	17	1	50	1	1	52128	England
45 r	mt283	2019-2020	2019-11-26 20:00:00.000	19	1	27	1	1	52020	England
46 r	mt271	2019-2020	2019-11-26 20:00:00.000	53	4	40	4	2	57024	England
47 r	nt305	2019-2020	2019-11-05 20:00:00.000	17	2	47	2	1	52611	England
48 r	nt341	2019-2020	2019-11-05 20:00:00.000	9	4	2	4	4	39132	England
49 r	mt267	2019-2020	2019-10-22 20:00:00.000	53	5	44	5	0	51743	England
50 r	nt280	2019-2020	2019-10-22 20:00:00.000	19	5	3	5	1	49308	England
51 r	mt302	2019-2020	2019-10-02 20:00:00.000	17	4	24	4	3	52234	England
52 r	nt278	2019-2020	2019-10-01 20:00:00.000	19	2	45	2	0	49046	England
53 r	mt265	2019-2020	2019-10-01 20:00:00.000	53	2	5	2	7	60127	England
54 r	mt335	2019-2020	2019-09-17 20:00:00.000	9	0	52	0	1	39469	England
55 r	nt492	2018-2019	2019-05-07 20:00:00.000	17	4	12	4	0	55212	England
56 r	nt490	2018-2019	2019-04-30 20:00:00.000	53	0	2	0	1	60243	England

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	MATCH_ID	SEASON	DATE_TIME	STADIUM_ID	HOME_TEAM_SCORE	AWAY_TEAM_ID	HOME_TEAM_SCORE	AWAY_TEAM_SCORE	ATTENDANCE	COUNTRY
57	mt489		2019-04-17 20:00:00 000		4	51	4	3	53348	England
58	mt485	20 Click to	select the whole column	20	0	12	0	1	74093	England
59	mt482	2018-2019	2019-04-09 20:00:00.000	17	2	13	2	0	52465	England
60	mt483	2018-2019	2019-04-09 20:00:00.000	53	1	20	1	0	60044	England
61	mt478	2018-2019	2019-03-12 20:00:00.000	19	7	58	7	0	51518	England
62	mt471	2018-2019	2019-02-19 20:00:00.000	17	0	5	0	0	52250	England
63	mt468	2018-2019	2019-02-13 20:00:00.000	63	3	7	3	0	71214	England
64	mt466	2018-2019	2019-02-12 20:00:00.000	20	0	22	0	2	74054	England
65	mt441	2018-2019	2018-12-12 20:00:00.000	19	2	53	2	1	50411	England
66	mt404	2018-2019	2018-12-11 20:00:00.000	17	1	50	1	0	52015	England
67	mt391	2018-2019	2018-11-28 20:00:00.000	63	1	15	1	0	57132	England
68	mt463	2018-2019	2018-11-27 20:00:00.000	20	1	8	1	0	72876	England
69	mt436	2018-2019	2018-11-07 20:00:00.000	19	6	27	6	0	52286	England
70	mt388	2018-2019	2018-11-06 20:00:00.000	63	2	59	2	1	46588	England
71	mt399	2018-2019	2018-10-24 20:00:00.000	17	4	44	4	0	53024	England
72	mt459	2018-2019	2018-10-23 20:00:00.000	20	0	16	0	1	73946	England
73	mt384	2018-2019	2018-10-03 20:00:00.000	63	2	12	2	4	82137	England
74	mt457	2018-2019	2018-10-02 20:00:00.000	20	0	52	0	0	73569	England
75	mt431	2018-2019	2018-09-19 20:00:00.000	19	1	48	1	2	40111	England
76	mt394	2018-2019	2018-09-18 20:00:00.000	17	3	22	3	2	52478	England
77	mt615	2017-2018	2018-04-24 19:45:00.000	17	5	56	5	2	51236	England
78	mt612	2017-2018	2018-04-10 19:45:00.000	19	1	18	1	2	53461	England
79	mt610	2017-2018	2018-04-04 19:45:00.000	17	3	20	3	0	50685	England
80	mt603	2017-2018	2018-03-13 19:45:00.000	20	1	26	1	2	74909	England
81	mt601	2017-2018	2018-03-07 19:45:00.000	63	1	16	1	2	84010	England
82	mt602	2017-2018	2018-03-07 19:45:00.000	19	1	63	1	2	49411	England
83	mt599	2017-2018	2018-03-06 19:45:00.000	17	0	13	0	0	48768	England
84	mt595	2017-2018	2018-02-20 19:45:00.000	9	1	12	1	1	37741	England

1	MATCH_ID	SEASON	DATE_TIME	STADIUM_ID	HOME_TEAM_SCORE	AWAY_TEAM_ID	HOME_TEAM_SCORE	AWAY_TEAM_SCORE	ATTENDANCE	COUNTRY
85 1	mt590	2017-2018	2017-12-06 19:45:00.000	63	3	61	3	0	42679	England
86 1	mt553	2017-2018	2017-12-06 19:45:00.000	17	7	68	7	0	48779	England
87 1	mt529	2017-2018	2017-12-05 19:45:00.000	9	1	4	1	1	40875	England
88	mt506	2017-2018	2017-12-05 19:45:00.000	20	2	57	2	1	74669	England
89 1	mt564	2017-2018	2017-11-21 19:45:00.000	19	1	64	1	0	43548	England
90 1	mt550	2017-2018	2017-11-01 19:45:00.000	17	3	65	3	0	47957	England
91 1	mt585	2017-2018	2017-11-01 19:45:00.000	63	3	25	3	1	83782	England
92 1	mt501	2017-2018	2017-10-31 19:45:00.000	20	2	28	2	0	74437	England
93 1	mt524	2017-2018	2017-10-18 19:45:00.000	9	3	56	3	3	41105	England
94 1	mt559	2017-2018	2017-10-17 19:45:00.000	19	2	50	2	1	48520	England
95 1	mt557	2017-2018	2017-09-26 19:45:00.000	19	2	27	2	0	45310	England
96 1	mt543	2017-2018	2017-09-13 19:45:00.000	17	2	26	2	2	52332	England
97 1	mt579	2017-2018	2017-09-13 19:45:00.000	63	3	7	3	1	67343	England
98 1	mt520	2017-2018	2017-09-12 19:45:00.000	9	6	66	6	0	41150	England
99 1	mt495	2017-2018	2017-09-12 19:45:00.000	20	3	63	3	0	73854	England
100 1	mt736	2016-2017	2017-04-18 19:45:00.000	79	1	4	1	1	31548	England
101	mt729	2016-2017	2017-03-14 19:45:00.000	79	2	26	2	0	31520	England
102 1	mt725	2016-2017	2017-03-07 19:45:00.000	75	1	5	1	5	59911	England
103 1	mt720	2016-2017	2017-02-21 19:45:00.000	19	5	55	5	3	53351	England
104	mt679	2016-2017	2016-12-07 19:45:00.000	63	3	57	3	1	62034	England
105	mt655	2016-2017	2016-12-06 19:45:00.000	19	1	62	1	1	51297	England
106	mt628	2016-2017	2016-11-23 19:45:00.000	75	2	22	2	2	59628	England
107 1	mt701	2016-2017	2016-11-22 19:45:00.000	79	2	10	2	1	31443	England
108	mt675	2016-2017	2016-11-02 19:45:00.000	63	0	43	0	1	85512	England
109 1	mt651	2016-2017	2016-11-01 19:45:00.000	19	3	12	3	1	53340	England
110 1	mt624	2016-2017	2016-10-19 19:45:00.000	75	6	74	6	0	59944	England
111 1	mt697	2016-2017	2016-10-18 19:45:00.000	79	1	70	1	0	31037	England
112 1	mt622	2016-2017	2016-09-28 19:45:00.000	75	2	63	2	0	59993	England

110	mt624	2016-2017	2016-10-19 19:45:00.000	75	6	74	6	0	59944	England
111	mt697	2016-2017	2016-10-18 19:45:00.000	79	1	70	1	0	31037	England
112	mt622	2016-2017	2016-09-28 19:45:00.000	75	2	63	2	0	59993	England
113	mt695	2016-2017	2016-09-27 19:45:00.000	79	1	13	1	0	31805	England
114	mt669	2016-2017	2016-09-14 19:45:00.000	63	1	55	1	2	85011	England
115	mt645	2016-2017	2016-09-14 19:45:00.000	19	4	33	4	0	30270	England

Query 13:

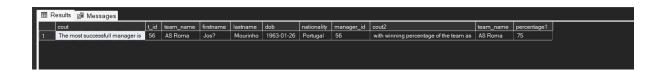
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Query 14:



Query 15:



BONUS

Query 16:

