T.C.

MARMARA UNIVERSITY

FACULTY of ENGINEERING

COMPUTER ENGINEERING DEPARTMENT

CSE 3055 – Database Systems Homework VI Report

Cem GÜLEÇ - 150117828

I hereby swear that the work done on this homework is totally my own; and on my honor, I have neither given nor received any unauthorized and/or inappropriate assistance for this homework. I understand that by the school code, violation of these principles will lead to a zero grade and is subject to harsh discipline issues.

05 January 2021

Resulting output:

	Pos	TName	GP	W	T	L	GF	GA	GD	Pts
1	1	Beşiktaş	34	0	0	0	0	0	0	0
2	1	Fenerbahçe	34	0	0	0	0	0	0	0
3	1	Galatasaray	34	0	0	0	0	0	0	0
4	1	Trabzonspor	34	0	0	0	0	0	0	0
5	1	Akhisar Belediye	34	0	0	0	0	0	0	0
6	1	Bursaspor	34	0	0	0	0	0	0	0
7	1	Çaykur Rizespor	34	0	0	0	0	0	0	0
8	1	Elazığspor	34	0	0	0	0	0	0	0
9	1	Eskişehirspor	34	0	0	0	0	0	0	0
10	1	Gaziantepspor	34	0	0	0	0	0	0	0
11	1	Gençlerbirliği	34	0	0	0	0	0	0	0
12	1	Kardemir Kara...	34	0	0	0	0	0	0	0
13	1	Kasımpaşa	34	0	0	0	0	0	0	0
14	1	Kayseri Erciyes...	34	0	0	0	0	0	0	0
15	1	Kayserispor	34	0	0	0	0	0	0	0
16	1	Medical Park A...	34	0	0	0	0	0	0	0
17	1	Sivasspor	34	0	0	0	0	0	0	0
18	1	Torku Konyasp...	N...	0	0	0	0	0	0	0

SQL Queries:

1. Creating table

```sql
CREATE TABLE StandingsTable(TName nvarchar(50), GP smallint, W smallint, T smallint, L smallint, GF smallint, GA smallint, GD smallint, Pts smallint)
```

2. Collecting each team's number of goals:

```sql
WHILE @MatchID<= (SELECT COUNT(matchID) FROM match)
BEGIN
    SELECT @HomeTeamGoal = COUNT(*)
    FROM Match m inner join Goals g on m.matchID=g.matchID
                 inner join PlayerTeam pt on pt.teamID=m.homeTeamID
    WHERE g.IsOwnGoal=0 AND pt.playerID=g.playerID AND m.matchID=@MatchID
          AND pt.season='13-14' AND m.dateOfMatch < @aDate
    GROUP BY m.matchID

    SELECT @HomeTeamGoal = COUNT(*)
    FROM Match m inner join Goals g on m.matchID=g.matchID
                 inner join PlayerTeam pt on pt.teamID=m.VisitingTeamID
    WHERE g.IsOwnGoal=1 AND pt.playerID=g.playerID AND m.matchID=@MatchID
          AND pt.season='13-14' AND m.dateOfMatch < @aDate
    GROUP BY m.matchID

    SELECT @VisitingTeamGoal = COUNT(*)
    FROM Match m inner join Goals g on m.matchID=g.matchID
                 inner join PlayerTeam pt on pt.teamID=m.VisitingTeamID
    WHERE g.IsOwnGoal=0 AND pt.playerID=g.playerID AND m.matchID=@MatchID
          AND pt.season='13-14' AND m.dateOfMatch < @aDate
    GROUP BY m.matchID

    SELECT @VisitingTeamGoal = COUNT(*)
    FROM Match m inner join Goals g on m.matchID=g.matchID
                 inner join PlayerTeam pt on pt.teamID=m.HomeTeamID
    WHERE g.IsOwnGoal=1 AND pt.playerID=g.playerID AND m.matchID=@MatchID
          AND pt.season='13-14' AND m.dateOfMatch < @aDate
    GROUP BY m.matchID
SET @MatchID+=1
```

3. Updating accordingly

```sql
UPDATE StandingsTable
Set GP = (HT.MatchPlayed+VT.MatchPlayed)
From (Select th.TeamID, Count(*) MatchPlayed
      From Match m inner join Team th on m.HomeTeamID=th.TeamID
      Where m.DateOfMatch<=@aDate
      Group By th.TeamID) HT

      inner join Team t on HT.TeamID=t.TeamID

      inner join (Select tv.TeamID, Count(*) MatchPlayed
      From Match m inner join Team tv on m.VisitingTeamID=tv.TeamID
      Where m.DateOfMatch<=@aDate
      Group By tv.TeamID) VT     on VT.TeamID=t.TeamID

SET @TeamName = (Select t.Name FROM Team t Where t.TeamID=@currentTeam)

INSERT INTO StandingsTable (TName, W, T, L, GF, GA, GD, Pts)
VALUES (@TeamName, @win, @tie, @lose, @goalsForward, @goalsAgainst, (@goalsForward-@goalsAgainst), @point)
```

Notes:

I use 2 loop, one for iterating over matches 1 for iterating over teamIDs. After these iterations done, I collect total number of goals scored by each team corresponding to their teamID.