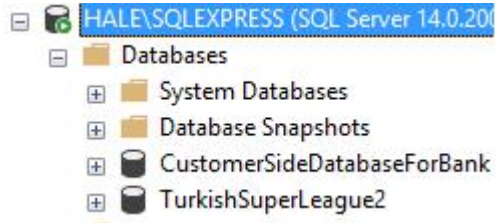**Hale Şahin**

HOMEWORK 2

1)

Turkish Super League database was loaded in the MSSQL.

2)

```
--soru 1
update player set age = DATEDIFF(DAY,birthDate,GETDATE())/365;
```

This is update age for all players, it calculates from their given birthday. Here is the updated table output in the below.

	playerID	firstName	lastName	nationality	birthDate	age	position
1	1	TOLGA	ZENGİN	Turkey	1983-10-10 00:00:00	35	Goalkeeper
2	2	OLCAY	ŞAHAN	Turkey	1987-05-26 00:00:00	31	Midfielder
3	3	ATIBA	HUTCHINSON	Canada	1983-02-08 00:00:00	35	Midfielder
4	4	VELİ	KAVLAK	Turkey	1988-11-03 00:00:00	30	Midfielder
5	5	HUGO ...	PEREIRA D...	Portugal	1984-05-23 00:00:00	34	Forward
6	6	RAMON	DE MORAES...	Brazil	1988-05-06 00:00:00	30	Defender
7	7	GÖKH...	TÖRE	Turkey	1992-01-20 00:00:00	26	Midfielder
8	8	OĞUZ...	ÖZYAKUP	Turkey	1992-09-23 00:00:00	26	Midfielder
9	9	SERDAR	KURTULUŞ	Turkey	1987-07-23 00:00:00	31	Defender
10	10	PEDR...	FRANCO UL...	Colombia	1991-04-23 00:00:00	27	Defender
11	11	ERSA...	GÜLÜM	Turkey	1987-05-17 00:00:00	31	Defender
12	12	MANU...	TAVARES F...	Portugal	1986-02-05 00:00:00	32	Midfielder
13	13	NECİP	UYSAL	Turkey	1991-01-24 00:00:00	27	Midfielder
14	14	TOMAS	SIVOK	Czech ...	1983-09-15 00:00:00	35	Defender
15	15	JULIEN	ESCUDE	France	1979-08-17 00:00:00	39	Defender
16	16	DANY ...	NOUNKEU T...	France	1986-04-11 00:00:00	32	Defender
17	17	JERMA...	JONES	Germany	1981-11-03 00:00:00	37	Midfielder
18	18	MUST...	PEKTEMEK	Turkey	1988-08-11 00:00:00	30	Forward
19	19	FILIP	HOLOSKO	Slovakia	1984-01-17 00:00:00	34	Forward
20	20	İSMAİL	KÖYBAŞI	Turkey	1989-07-10 00:00:00	29	Defender

3)

```
select pt.playerID, p.firstName, ' ', p.lastName
from player_team pt,team t,player p
where pt.playerID=p.playerID and pt.teamID=t.teamID and t.teamID  IN (select t.teamID from team t where name='Beşiktaş')
and p.firstName NOT LIKE '%nec%'
and p.age < (select AVG(age) from player)
```

This is the query for third question.I used sub-query for the finding players who plays in Beşiktaş.

	playerID	firstName	(No column name)	lastName
1	7	GÖKHAN		TÖRE
2	8	OĞUZHAN		ÖZYAKUP
3	10	PEDRO CAMILO		FRANCO ULLOA
4	20	İSMAİL		KÖYBAŞI
5	22	ÖMER HASAN		ŞİŞMANOĞLU
6	23	KERİM		KOYUNLU
7	24	MUHAMMED		DEMİRCİ
8	26	BRUNO		FERREIRA BO...
9	31	EMRE		TALİ
10	33	GÜNAY		GÜVENÇ

This is the output table.

4)

```
with updatedCityTable as (
  select  t.teamId, t.city,
  t.city + ' #p' + CONVERT(varchar(10), count(pt.playerId)) + ' g' + CONVERT(varchar(10), t2.totalgoals) updatedcity
from  team t, player_team pt, (
    select  count(*) totalgoals,
            pt.teamID
    from    goals g , player_team pt where isOwnGoal=0 and g.playerId = pt.playerId
    group by pt.teamID
   ) t2 where t.teamID = t2.teamID and pt.teamID = t.teamID
group By t.teamId,t.city,t2.totalgoals
)
update t
set t.city = c.updatedcity
from team t, updatedCityTable c where t.teamID = c.teamID and t.city = c.city
```

Query for the 4th question, I used with as clause in here, it is works like holding a table with some query executed, it saves the resulting table of that query temporarily, and you can select some records on the saved table in another query.Result of this in the below.

```sql
select * from team
```

	teamID	name	city
1	1	Beşiktaş	İstanbul #p37 g58
2	2	Fenerbahçe	İstanbul #p32 g100
3	3	Galatasaray	İstanbul #p37 g65
4	4	Trabzonspor	Trabzon #p34 g88
5	5	Akhisar Belediye	Manisa #p31 g44
6	6	Bursaspor	Bursa #p34 g40
7	7	Çaykur Rizespor	Rize #p31 g47
8	8	Elazığspor	Elazığ #p30 g32
9	9	Eskişehirspor	Eskişehir #p29 g47
10	10	Gaziantepspor	Gaziantep #p30 ...
11	11	Gençlerbirliği	Ankara #p29 g46
12	12	Kardemir Kara...	Karabük #p30 g31
13	13	Kasımpaşa	İstanbul #p25 g57
14	14	Kayseri Erciye...	Kayseri #p29 g36
15	15	Kayserispor	Kayseri #p29 g29
16	16	Medical Park ...	Antalya #p29 g33
17	17	Sivasspor	Sivas #p25 g56
18	18	Torku Konyas...	Konya #p25 g47

5)

```sql
with goalPlayer as (
select Top 10 g.playerID, count(g.playerID) as goalNumber
from goals g where isOwnGoal=0 group by g.playerID order by goalNumber DESC),
playerMatch as(
select gp.playerID,matchID as macID from goals g,goalPlayer gp where gp.playerID=g.playerID ),
playerMatchDistinct as(
select distinct playerID,pm.macID from playerMatch pm),
notScored as(
select pm.playerID,306-count(pm.playerID) as NotScored from playerMatchDistinct pm group by pm.playerID), --306 is from the max match number
fiveColumns as(
select firstName,lastName,p.playerID,goalNumber,ns.NotScored from player p, goalPlayer gp,notScored ns
 where p.playerID=ns.playerID and p.playerID=gp.playerID),
lastRecord as(
 select p.playerID,306-ns.NotScored as perMatch, gp.goalNumber from notScored ns,player p, goalPlayer gp
 where p.playerID=ns.playerID and gp.playerID = p.playerID)
 select fc.firstName,fc.lastName,fc.playerID,fc.goalNumber,fc.NotScored,
 CAST(lr.goalNumber as float)/CAST(lr.perMatch as float) as GoalPerMatch
 from fiveColumns fc,lastRecord lr where lr.playerID=fc.playerID
```

In this query I used with as for each step, because the problem was complicated I made it but dividing
into parts.
Here is the result;

	firstName	lastName	playerID	goalNumber	NotScored	GoalPerMatch
1	AATIF	CHAHECHOUHE	453	18	21	1.38461538461538
2	BURAK	YILMAZ	60	16	19	1.06666666666667
3	EZEQUIEL OSCAR	SCARIONE	346	16	19	1.06666666666667
4	MOUSSA	SOW	38	15	21	1.15384615384615
5	THEOFANIS	GKEKAS	482	14	24	1.4
6	SORİN BOGDAN	STANCU	296	13	23	1.18181818181818
7	HUGO MIGUEL	PEREIRA DE A...	5	13	23	1.18181818181818
8	PAULO HENRIQ...	CARNEIRO FIL...	99	13	21	1
9	CENK	TOSUN	268	13	22	1.08333333333333
10	DENİZ	YILMAZ	212	12	24	1.2

	firstName	lastName	playerID	goalNumber	NotScored	GoalPerMatch
1	AATIF	CHAHECHOUHE	453	18	21	1.38461538461538
2	BURAK	YILMAZ	60	16	19	1.06666666666667
3	EZEQUIEL OSCAR	SCARIONE	346	16	19	1.06666666666667