1. [**5 marks**] Find the player(s) that has the best ratio of value-to-goals and print his first name, last name and the name of the national team into which he belongs. Smallest ratio is the best since it denotes that a player has scored many goals and his value is not big enough making him the ideal player for purchasing him during the summer transfers period.

Output Table: **Query1**

Attributes: *fname* (first name) [VARCHAR(20)]

*lname* (last name) [VARCHAR(20)]

*country* (country name) [VARCHAR(20)]

CREATE VIEW Query1 AS

SELECT player.fname, player.lname, country

FROM player, country

WHERE player.cid = country.cid AND

value/ goals >= ALL (SELECT value/goals FROM player)

2. [**5 marks**] Find the top-3 names of the football clubs that have the most players participating into World Cup 2014. *Note*: Explore the *LIMIT* clause of PostgreSQL to answer this query.

Output Table: **Query2**

Attributes: *name* (football club name) [VARCHAR(20)]

*num* (number of players) [INTEGER]

order by: *num* DESC, *name* ASC

CREATE VIEW Query2 AS

SELECT name, count(\*) as num

FROM player, club

WHERE player.fcid = club.fcid

GROUP BY fcid

ORDER BY num DESC, name ASC

LIMIT 3

3. [**5 marks**] Find out whether the first match of Brazil is also the opening match (i.e., first match) of World Cup 2014 competition.

Output Table: **Query3**

Attributes: *isOpeningGame* (boolean attribute) [BOOLEAN]

INSERT INTO isOpeningGame

VALUES (EXISTS IsOpeningBrazilian.\*)

4. [**5 marks**] Report the MID(s) of the matches for which at least two tickets were bought on the date of the match. Present the results in a descending order.

Output Table: **Query4**

Attributes: *mid* (the match id) [INTEGER]

CREATE VIEW Query4 AS

SELECT mid

FROM ticket JOIN match ON dateIssued = date AND ticket.mid = match.mid

GROUP BY mid

HAVING count(\*) > 1

ORDER BY \* DESC

5. [**5 marks**] Find the national team(s) that has played matches in all the stadiums of World Cup 2014.

Output Table: **Query5**

Attributes: *name* (the name of the national team) [VARCHAR(20)]

CREATE VIEW Query5 AS

SELECT name

FROM stadium, match, competes, country, club

WHERE stadium.sid = match.sid AND

match.mid = competes.mid AND

(competes.country1 = country.cid OR competes.country2 = country.cid) AND

country.coach = club.coach

GROUP BY fcid

HAVING (SELECT sid FROM stadium) = sid

6. [**10 marks**] Find the pid, the first and the last name(s) of the football player(s) that played in all the matches of their national team and their participation time was more than 75 minutes on average.

Output Table: **Query6**

Attributes: *pid* (player id) [INTEGER]

*fname* (first name) [VARCHAR(20)]

*lname* (last name) [VARCHAR(20)]

*minutes* (AVG minutes played) [NUMERIC]

Order by: *minutes* DESC

CREATE VIEW Query6 AS

SELECT pid, fname, lname, avg(minutes) as minutes

FROM appearance JOIN player ON player.pid = appearance.pid

GROUP BY pid

HAVING (SELECT mid FROM matches) = mid

ORDER BY minutes DESC

7. [**10 marks**] Retrieve the name(s) and coach(es) of national team(s) that have the lowest budget (i.e., the total sum of values of the players in a national team) and happen to have a player that is the top scorer of World Cup 2014.

Output Table: **Query7**

Attributes: *name* (name of the national team) [VARCHAR(20)]

*coach* (name of the coach) [VARCHAR(20)]

*budget* (total team budget) [INTEGER]

CREATE VIEW Query7 AS

(SELECT name, coach, sum(value) as budget

FROM club JOIN player ON club.fcid = player.fcid

GROUP BY fcid

HAVING budget <= (SELECT name, coach, sum(value) as budget

FROM club JOIN player ON club.fcid = player.fcid

GROUP BY fcid)) AND ANY (player.id) = ANY (TopPlayer)