Assignment 2 Answer Key

Notes:

Any query involving goals scored/saved by players depends on how they populated the data. If there are zeroes in the Count attribute they need an extra `Count`>0 in WHERE clause (see Q2).

Check that the Match table is referred to as `Match`, or else their query doesn't run. This could indicate whether someone has cheated with their screenshot. Same tip goes for `Count` attribute.

For questions asking about maximums both the >= ALL and SELECT(MAX(solutions have been given. MAX only works if you alias carefully.

Where 2 solutions are given a line has been used to separate them

1. Find all the Australian Players that played in the 2018 World Cup

SELECT P.ID

FROM Player P, Member M, Teammember TM, Team T

WHERE P.ID=M.ID

AND M.ID=TM.MemberID

AND TM.TeamID=T.TeamID AND TM.Year=T.Year

AND T.Country='Australia' AND T.Year=2018

2. Find the players that have never scored a goal

If there are no zeroes in the Count attribute of Goals

SELECT ID

FROM Player

WHERE ID NOT IN

(SELECT PlayerID

FROM Goals)

If there are zeroes in the Count attribute of Goals (must have `Count`, not just Count)

SELECT ID

FROM Player

WHERE ID NOT IN

(SELECT PlayerID

FROM Goals

WHERE `Count`>0)

3. Find all the pool games played by host countries

SELECT DISTINCT PG.ID

FROM PoolGame PG, `Match` M, Team T, Tournament TNT

WHERE PG.ID=M.ID

AND T.Year=TNT.Year

AND T.Country=TNT.Country

AND (M.HomeTeamID=T.ID AND M.HomeYear=T.Year

OR

M.AwayTeamID=T.ID AND M.AwayYear=T.Year)

4. Find all the Australian players linked to an English club team

SELECT P.ID

FROM Player P, Member M, Teammember TM, Team T, Homeclub H

WHERE P.ID=M.ID

AND M.ID=TM.MemberID

AND TM.Year=T.Year AND TM.TeamID=T.ID

AND P.HomeClubName=H.Name

AND H.Country='England' AND T.Country='Australia'

5. Rank the teams by the number of support staff attending the 2018 World Cup

SELECT T.ID, T.Year

FROM Team T, Teammember TM, Member M, Supportstaff SS

WHERE T.ID=TM.TeamID AND T.Year=TM.Year

AND TM.MemberID=M.ID

AND M.ID=SS.ID

AND TM.Year = 2018

GROUP BY T.ID, T.Year

ORDER BY COUNT(*) DESC

6. Find the names & number of goals saved by all players

SELECT P.ID, Name, SUM(`Count`)

FROM Member M, Player P, Saves S

WHERE M.ID=P.ID AND P.ID=S.PlayerID

GROUP BY P.ID

7. Find the game that sold the most tickets

SELECT M.ID

FROM `Match` M, Ticket T

WHERE M.ID=T.MatchID

GROUP BY M.ID

HAVING COUNT(*) >= ALL

(SELECT COUNT(*)

FROM Ticket T

GROUP BY M.ID)

SELECT M.ID

FROM Ticket T

GROUP BY M.ID

HAVING COUNT(*) =

(SELECT MAX(B.NumSold)

 FROM (SELECT COUNT(*) NumSold

FROM Ticket T

GROUP BY M.ID) B)

8. Find the player who scored the most goals in elimination games

SELECT P.ID

FROM Eliminationgame EG, `Match` M, Goals G, Player P

WHERE EG.ID=M.ID

AND M.ID=G.MatchID

AND G.PlayerID=P.ID

GROUP BY P.ID

HAVING SUM(`Count`) >= ALL

(SELECT SUM(`Count`)

FROM Eliminationgame EG, `Match` M, Goals G, Player P

WHERE EG.ID=M.ID AND M.ID=G.MatchID

AND G.PlayerID=P.ID

GROUP BY P.ID)

SELECT P.ID

FROM Eliminationgame EG, `Match` M, Goals G, Player P

WHERE EG.ID=M.ID

AND M.ID=G.MatchID

AND G.PlayerID=P.ID

GROUP BY P.ID

HAVING SUM(`Count`) =

(SELECT MAX(B.Totals)

FROM (SELECT SUM(`Count`) Totals

FROM Eliminationgame EG, `Match` M, Goals G, Player P

WHERE EG.ID=M.ID AND M.ID=G.MatchID

AND G.PlayerID=P.ID

GROUP BY P.ID) B)

9. Find countries that have played in all World Cups

SELECT Name

FROM Country C

WHERE NOT EXISTS

(SELECT *

FROM Tournament TNT

WHERE NOT EXISTS

(SELECT *

FROM Team T

WHERE C.Name=T.Country AND TNT.Year=T.Year))

SELECT C.Name

FROM Team T

GROUP BY C.Name

HAVING COUNT(*) =

(SELECT COUNT(*)

FROM Tournament)

10. Find players who have scored goals in all of Iceland's games

SELECT P.ID

FROM Player P

WHERE NOT EXISTS

  (SELECT *

  FROM `Match` M, Team T

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WHERE T.Country='Iceland'

AND

(M.HomeTeamID=T.ID AND M.HomeYear=T.Year

OR

M.AwayTeamID=T.ID AND M.AwayYear=T.Year)

AND NOT EXISTS

    (SELECT *

    FROM Goals G

    WHERE G.PlayerID=P.ID AND G.MatchID=M.ID))
```

```
SELECT P.ID

FROM Player P, Goals G, `Match` M, Team T

WHERE G.PlayerID=P.ID

AND G.MatchID=M.ID

AND T.Country='Iceland'

AND (M.HomeTeamID=T.TeamID AND M.HomeYear=T.Year

OR

M.AwayTeamID=T.TeamID AND M.AwayYear=T.Year)

GROUP BY P.ID

HAVING COUNT(*) =

(SELECT COUNT(*)

FROM Team T, `Match` M

WHERE T.Country='Iceland'

AND (M.HomeTeamID=T.TeamID AND M.HomeYear=T.Year

OR

M.AwayTeamID=T.TeamID AND M.AwayYear=T.Year))
```