ASSIGNMENT 2

MELBOURNE TOUCH RUGBY - SQL

Student Name : Syed Ahammad Newaz Saif

Student ID : 684933

Q.1 Count the number of players by the first letter of their surname. List the results in alphabetical order. (1 mark). Hint: The function LEFT(str, n) returns the first n characters of the string value str.

Ans.1   SELECT LEFT(lastname,1) AS Surnames, COUNT(*) AS Counts
       FROM player GROUP BY   LEFT(lastname,1) ORDER BY LEFT(lastname,1)

Surnames	Counts
A	7
B	16
C	6
D	15
E	5
F	8
G	8
H	10
J	3
K	2

18 rows returned

Q.2 List the game ID, year, and participating team names for every cancelled game. (1 mark).

Ans.2 SELECT GameID, SeasonYear, firstTEAM.TeamName AS FirstTeam,
   secondTEAM.TeamName AS   SecondTeam
   FROM game
   INNER JOIN season
   ON game.SeasonID = season.SeasonID
   INNER JOIN team AS firstTEAM
   ON game.Team1 = firstTEAM.TeamID
   INNER JOIN team AS secondTEAM
   ON game.Team2 = secondTEAM.TeamID
   WHERE game.T1Score IS NULL OR game.T2Score IS NULL;

	GameID	SeasonYear	FirstTeam	SecondTeam
▶	44	2017	Footscray Women	Moorabbin Women

1 row returned.

Q.3 List the first and last names of players who have played more than 20 games in total across all competitions. (1 mark).

Ans.3 SELECT FirstName, LastName
FROM
(
  SELECT FirstName,LastName, COUNT(*) AS MatchesPlayed
    FROM game
    INNER JOIN playerteam
    ON game.GameID = playerteam.GameID
  INNER JOIN player
  ON playerteam.PlayerID = player.PlayerID
  GROUP BY FirstName, LastName
) AS NewTable
WHERE MatchesPlayed > 20;

FirstName	LastName
Diana	Rigg
Cinda	Rella
Bo	Peep

3 rows returned.

Q.4 For all current members of the Melbourne City club who have played fewer than 12 games across all competitions, list their first and last names and the number of games they have played. Place the players who have played the most games first. (2 marks).

Ans.4 SELECT FirstName, LastName, MatchesPlayed FROM
   (
     SELECT FirstName, LastName, ClubName , COUNT(*) AS
     MatchesPlayed
     FROM game
     INNER JOIN playerteam
     ON game.GameID = playerteam.GameID
     INNER JOIN player
     ON playerteam.PlayerID = player.PlayerID
     INNER JOIN clubplayer
     ON player.PlayerID = clubplayer.PlayerID
     INNER JOIN club
     ON clubplayer.ClubID = club.ClubID
     WHERE ToDate IS NULL
     GROUP BY FirstName, LastName, ClubName
) AS NEW_TABLE
   WHERE ClubName = 'Melbourne City' AND MatchesPlayed < 12
   ORDER BY MatchesPlayed DESC;

FirstName	LastName	MatchesPlayed
Kimberley	Ranges	11
Linda	Evangalista	10
Callum	Hotspor	10
Melanie	Griffith	9
Don	Dunstan	8

5 rows returned.

Q.5 List the names of men who play in the Bingham Trophy but not the Dewar Shield competition. (2 marks).

Ans.5 SELECT DISTINCT FirstName, LastName
FROM player
NATURAL JOIN playerteam
NATURAL JOIN game
NATURAL JOIN season
NATURAL JOIN competition
WHERE sex = 'M' AND CompetitionID = 3
AND playerID NOT IN
(
   SELECT playerID
   FROM player
   NATURAL JOIN playerteam
   NATURAL JOIN game
   NATURAL JOIN season
   NATURAL JOIN competition
   WHERE CompetitionID = 1
);

	FirstName	LastName
▶	Steven	Spielberg
	Stuart	Mills
	Seth	Greene
	Silvio	Auric
	Simon	Brown
	Sandy	Pentland
	Beaker	LeLab

7 rows returned.

Q.6 List the full name (in one column) and current club of players who did not play a game in any competition in the 2017 season. (2 marks).

Ans.6 SELECT DISTINCT CONCAT(FirstName, LastName) AS FullName, ClubName
     FROM player
     NATURAL JOIN clubplayer
     NATURAL JOIN club
     WHERE playerID NOT IN
     (
      SELECT playerID
      FROM player
      NATURAL JOIN playerteam
      NATURAL JOIN game
      WHERE Year(MatchDate) = 2017
     );

FullName	ClubName
► RodTemperton	Melbourne City

1 row returned.

Q.7 Which club currently has the fewest female players? Print the club name and the number of female players in it. (2 marks).

Ans.7 SELECT ClubName , COUNT(*) AS FemaleCounts
FROM club
NATURAL JOIN clubplayer
NATURAL JOIN player
WHERE Sex = 'F'
GROUP BY ClubName
ORDER BY FemaleCounts
LIMIT 1;

Animatus Rugby Club has the fewest female players.

ClubName	FemaleCounts
▶ Animatus Rugby Club	8

1 row returned.

Q.8 A team has a "winless season" when it does not win any of the games it plays in that season. Find the teams that have had exactly one winless season. List the team name and the year in which their winless season occurred. (3 marks).

Ans.8 SELECT TeamName, SeasonYear
   FROM (SELECT FirstTeam.SeasonYear,FirstTeam.Team1,
   SUM(FirstTeamVictory+ IFNULL(Second Team Victory, 0)) AS
   VICTORIES
   FROM (SELECT SeasonYear, Team1, SUM(T1Victory) AS
   FirstTeamVictory
        FROM (SELECT SeasonYear, Team1, (T1Score > T2Score) AS
        T1Victory
            FROM game NATURAL JOIN season
) FirstTeamVictories
           GROUP BY SeasonYear, Team1
) AS FirstTeam
  LEFT OUTER JOIN
  (SELECT SeasonYear, Team2, SUM(T2Victory) AS SecondTeamVictory
   FROM (SELECT SeasonYear, Team2, (T1Score < T2Score) As T2Victory
       FROM game NATURAL JOIN season
) FirstTeamVictories
   GROUP BY SeasonYear, Team2
) AS SecondTeam
  ON FirstTeam.SeasonYear = SecondTeam.SeasonYear AND
  FirstTeam.Team1 = SecondTeam.Team2
  GROUP BY FirstTeam.SeasonYear, FirstTeam.Team1
  HAVING VICTORIES = 0) WINLESS

TeamName	SeasonYear
Powerhouse Men	2018
Footscray Mixed	2018

2 rows returned.

Q.9 Find the first and last names of players who have played against all their former clubs. (3 marks) .

Ans.9 SELECT DISTINCT FirstName, LastName
　　FROM player
　　WHERE playerid IN
　　(SELECT DISTINCT SubQuery2.playerID
　　　FROM
　　　(SELECT GameID, PlayerID, OpponentTeam, TeamID AS
　　　OpponentTeamID,   TeamName AS OpponentName, ClubID AS
　　　OpponentTeamClubID
　　　　FROM
　　　　(SELECT GameID, PlayerID, ClubID AS PresentClubID, ClubName
　　　　as PresentClubName,
　　　　　　　CASE WHEN Team2 = TeamID THEN Team1
　　　　　　　　　WHEN Team1 = TeamID THEN Team2
　　　　　　　　　END AS OpponentTeam
　　　　　　FROM game
　　　　　　NATURAL JOIN playerteam
　　　　　　NATURAL JOIN team
　　　　　　NATURAL JOIN club
　　　　　　WHERE PlayerID IN
　　　　　　(SELECT DISTINCT PlayerID
　　　　　　　FROM player
　　　　　　　NATURAL JOIN clubplayer
　　　　　　　NATURAL JOIN club
　　　　　　　WHERE ToDate IS NOT NULL
　　　　　　　)
　　　　) AS SubQuery1
　　　LEFT OUTER JOIN team ON SubQuery1.OpponentTeam = team.TeamID

```
    ) AS SubQuery2
  RIGHT OUTER JOIN
  (      SELECT PlayerID, ClubID as PreviousClubID
         FROM
         (      SELECT DISTINCT PlayerID
                FROM game
                NATURAL JOIN playerteam
                NATURAL JOIN team
                NATURAL JOIN club
                WHERE PlayerID IN
                (      SELECT DISTINCT PlayerID
                       FROM player
                       NATURAL JOIN clubplayer
                       NATURAL JOIN club
                       WHERE ToDate IS NOT NULL
                )
         ) AS SubQuery1
       NATURAL JOIN clubplayer
       NATURAL JOIN club
        WHERE todate IS NOT NULL
  ) AS SubQuery3
ON SubQuery2.OpponentTeamClubID = SubQuery3.PreviousClubID );
```

FirstName	LastName
Arthur	Dayley
Karin	Carpenter

2 rows returned.

Q.10 How many points did the 'Melbourne City Women' team score in the Williams Plate in 2017? (3 marks).

Ans.10 SELECT SUM(T1Score) AS POINTS_IN_2017
    FROM
    (SELECT * FROM
    (SELECT Team1, T1Score
     FROM game
     WHERE YEAR(MatchDate) = 2017
     AND Team1 IN
     (SELECT TeamID
      FROM team
      WHERE TeamType = 'Women 6-a-side'
      AND ClubID IN
      (SELECT ClubID
       FROM club
       WHERE ClubName = 'Melbourne City'
)
)
) AS FirstTeamStatistics

    UNION ALL

    (SELECT Team2, T2Score
     FROM game
     WHERE YEAR(MatchDate) = 2017
     AND Team2 IN
     (SELECT TeamID
      FROM team
      WHERE TeamType = 'Women 6-a-side'
      AND ClubID IN

```
      ( SELECT ClubID
        FROM club
        WHERE ClubName = 'Melbourne City'
        )
    )
  )
) AS SecondTeamStatistics;
```

POINTS_IN_2017
▶ 128

1 row returned.