

Q1. List the first name and last name of all players who have ever played in the league and their current club if applicable. List the players in ascending alphabetical order, primarily on last name and secondarily on first name. A game is still considered to have been 'played' even if it was cancelled or a walkover.

```
SELECT player.FirstName, player.LastName, club.ClubName
FROM player LEFT JOIN clubplayer
      ON player.playerID = clubplayer.PlayerID
      NATURAL JOIN club
WHERE player.PlayerID in (
      SELECT player.PlayerID
      FROM player NATURAL JOIN playerteam
      GROUP BY player.PlayerID
) AND clubplayer.ToDate IS NULL
ORDER BY player.LastName ASC, player.FirstName ASC;
```

FirstName	LastName	ClubName
Katrina	Adams	Moorabbin Rugby
Francesca	Angelou	Melbourne City
Kristina	Applegate	Powerhouse Rugby
Diane	Arbus	Melbourne City
Stella	Artois	Moorabbin Rugby
Silvio	Auric	Footscray Rugby Club
Eric	Bana	Moorabbin Rugby
Bruce	Banner	Melbourne University Rugby Club
Rhonda	Bassett	Moorabbin Rugby
Arnold	Bax	Powerhouse Rugby

142 rows

Q2. List the full name (presented as a single string) of female players who have played for more than one team.

```
SELECT CONCAT(player.FirstName, ' ',player.LastName) As FullName
FROM player
WHERE playerID in
      (SELECT PlayerID
      FROM playerteam
      GROUP BY PlayerID
      HAVING COUNT(TeamID) > 1) AND
      Sex = 'F';
```

FullName	
▶ Sally Davis	
Tiffany Lightshade	
Barbara Standwick	
Kate Hudson	
Mia Farrow	
Fiona Bruce	
Rosalyn McQuarrie	
Donna Reed	
Lauren Jackson	
Susanne Hoffs	

71 row(s) returned

Q3. List the full name (presented as a single string) of players who have never played in a 'mixed' competition.

```
SELECT CONCAT(player.FirstName, ' ', player.LastName) AS FullName
FROM player NATURAL JOIN playerteam NATURAL JOIN game NATURAL JOIN season
NATURAL JOIN competition
WHERE NOT(competition.CompetitionType = 'Mixed')
GROUP BY player.PlayerID
```

FullName	
▶ Arthur Dayley	
Bruce Banner	
Cory Feldman	
Dave Ganey	
Ernie Muppet	
Forrest Gump	
Alex Skaarsgard	
Brian Blessed	
Callum Hotspor	
Don Dunstan	

130 row(s) returned

Q4. List the season year(s) with the highest number of cancelled games, and the corresponding number of cancelled games in the year(s).

```
SELECT season.SeasonYear, COUNT(season.CompetitionID) As CancelGameNum
FROM season
WHERE SeasonID in (
    SELECT SeasonID
    FROM game
    WHERE T1Score IS NULL and T2Score IS NULL
)
GROUP BY season.SeasonYear
ORDER BY COUNT(season.CompetitionID) Desc;
```

	SeasonYear	CancelGameNum	
	2017	1	
►	2018	1	

2 row(s) returned

Q5. List the name of the clubs where the number of current male members is not the same as the number of current female members. For these clubs, present the number of current male and female players, and the absolute difference between the number of current males and females in the club. Order the results by the absolute difference between current males and females in the club, with the club having the highest difference listed first.

```
SELECT club.ClubName, MaleTable.MaleNum, FemaleTable.FemaleNum,
ABS(MaleTable.MaleNum - FemaleTable.FemaleNum) As GenderGap
FROM club NATURAL JOIN
    (SELECT club.ClubID, Count(player.Sex) As MaleNum
    FROM player NATURAL JOIN clubplayer NATURAL JOIN club
    WHERE clubplayer.ToDate IS NULL AND player.Sex = 'M'
    GROUP BY club.ClubID) As MaleTable
NATURAL JOIN
    (SELECT club.ClubID, Count(player.Sex) As FemaleNum
    FROM player NATURAL JOIN clubplayer NATURAL JOIN club
    WHERE clubplayer.ToDate IS NULL AND player.Sex = 'F'
    GROUP BY club.ClubID) As FemaleTable
WHERE MaleTable.MaleNum != FemaleTable.FemaleNum
ORDER BY GenderGap DESC
```

ClubName	MaleNum	FemaleNum	GenderGap
▶ Melbourne City	11	9	2
Melbourne University Rugby Club	8	9	1
Moorabbin Rugby	8	9	1
Animatus Rugby Club	9	8	1

4 row(s) returned

Q6. List the first name, sex, and number of games played in 2018 and 2017 of players who played more games in 2017 than in 2018. There might be players that didn't play in 2018 but did in 2017. You should take these cases in account as well. A game is still considered to have been 'played' even if it was cancelled or a walkover.

```
SELECT player.FirstName, player.Sex, GameTable2017.GamePlayed2017,
GameTable2018.GamePlayed2018
FROM player NATURAL JOIN playerteam NATURAL JOIN
    (SELECT playerteam.PlayerID, COUNT(playerteam.GAMEID) AS GamePlayed2017
    FROM playerteam NATURAL JOIN game NATURAL JOIN season
    WHERE season.SeasonYear = '2017'
    GROUP BY playerteam.PlayerID) AS GameTable2017 NATURAL JOIN
    (SELECT playerteam.PlayerID, COUNT(playerteam.GAMEID) AS GamePlayed2018
    FROM playerteam NATURAL JOIN game NATURAL JOIN season
    WHERE season.SeasonYear = '2018'
    GROUP BY playerteam.PlayerID) AS GameTable2018
WHERE GameTable2017.GamePlayed2017 > GameTable2018.GamePlayed2018
GROUP BY playerteam.PlayerID
```

FirstName	Sex	GamePlayed2017	GamePlayed2018	
Garret	M	8	5	
Bernyce	F	8	7	
Florence	F	10	9	
Ruth	F	9	8	
▶ Diana	F	11	10	
Barbara	F	6	5	
Kate	F	5	4	
Mia	F	5	4	
Fiona	F	9	8	
Brittany	F	7	6	

49 row(s) returned

Q7. List the name of all teams that scored more than 100 points in the Bingham Trophy in 2017, along with the total points they scored. Order the result according to the points the team scored, highest scoring team first.

```

SELECT team.TeamName, ScoreTable.TotalScore
FROM team NATURAL JOIN (
    SELECT team.TeamName,
        CASE WHEN Team1Table.T1Total IS NULL AND Team2Table.T2Total > 100 THEN
            Team2Table.T2Total
        WHEN Team1Table.T1Total > 100 AND Team2Table.T2Total IS NULL THEN
            Team1Table.T1Total
        WHEN (Team1Table.T1Total + Team2Table.T2Total) > 100 THEN
            Team1Table.T1Total + Team2Table.T2Total
        END AS TotalScore
    FROM team LEFT JOIN (
        SELECT Team1, SUM(T1Score) AS T1Total
        FROM game
        WHERE game.SeasonID IN
            (SELECT SeasonID
             FROM competition NATURAL JOIN season
             Where CompetitionName = 'Bingham Trophy' And season.SeasonYear =
'2017')
        GROUP BY Team1) AS
        Team1Table ON
        team.TeamID = Team1Table.Team1 LEFT JOIN(
        SELECT Team2, SUM(T2Score) AS T2Total
        FROM game
        WHERE game.SeasonID IN
            (SELECT SeasonID
             FROM competition NATURAL JOIN season
             Where CompetitionName = 'Bingham Trophy' And season.SeasonYear = '2017' )
        GROUP BY Team2) AS
        Team2Table ON
        team.TeamID = Team2Table.Team2
    WHERE NOT(Team1Table.T1Total IS NULL AND Team2Table.T2Total IS NULL)) AS
        ScoreTable
WHERE ScoreTable.TotalScore IS NOT NULL
ORDER BY TotalScore DESC;

```

TeamName	TotalScore
► Melbourne City Mixed	129
Monash Uni Mixed	119
Powerhouse mixed	117
Animatus Mixed	111
Melbourne Uni Mixed	104

5 row(s) returned

Q8. For the player who has spent the fewest number of days as a member of 'Melbourne City' club as of April 30th 2020, give the full name (presented as a single string) and the total number of days spent as a member. Only consider players who have been a member of the club at some point (i.e. do not include players who have never been signed up with Melbourne City). Assume there are no joint shortest serving players.

```
SELECT CONCAT(player.FirstName, ' ', player.LastName) As FullName,  
       CASE WHEN clubplayer.ToDate IS NULL THEN  
           DATEDIFF('2020-04-30', clubplayer.FromDate)  
       ELSE  
           DATEDIFF(clubplayer.ToDate, clubplayer.FromDate)  
       END As ServingDay  
FROM player NATURAL JOIN clubplayer NATURAL JOIN club  
WHERE club.ClubName = 'Melbourne City'  
ORDER BY ServingDay ASC  
LIMIT 1
```

FullName	ServingDay
Karin Carpenter	32

1 row(s) returned

Q9. A 'foreign game' is when a player has played a game in a team which was not part of the club they were a member of at the time. Find the first and last names and the number of 'foreign games' played for the 20 players who have played the most 'foreign games'. List them from highest number of foreign games to lowest.

```
SELECT FirstName, LastName, COUNT(PlayerID) As ForeignGameNum
FROM player NATURAL JOIN
      (SELECT PlayerID, ClubID As Belonged_To, Played.Played_For
      FROM clubplayer NATURAL JOIN
            (SELECT PlayerID, TeamID AS Played_For
            FROM playerteam
            GROUP BY PlayerID, TeamID
            ORDER BY playerID) AS Played
      WHERE ClubID <> Played.Played_For
      ORDER BY PlayerID) AS ForeignTable
GROUP BY PlayerID
ORDER BY COUNT(PlayerID) DESC
```

FirstName	LastName	ForeignGameNum	
Karin	Carpenter	6	
Stella	Artois	3	
Florence	Henderson	3	
Trudy	Bennett	3	
Ruth	Prawer Jhabvala	3	
Bernyce	Findlay	3	
Diana	Rigg	3	
Arthur	Dayley	3	
Dominic	West	2	
▶ Barbara	Standwick	2	

140 row(s) returned

Q10. Return the team name, the highest number of walkovers (forfeits) the team has ever given away in a season, and the season year(s) during which this occurred for teams who have given away 2 or more walkovers in the same season. Assume that any game with one team scoring 28 and the other scoring 0 implies that the game was a walkover.

```
SELECT team.TeamName, WalkoverTable.WalkoverNum_Team1 As WalkoverNum,  
WalkoverTable.SeasonYear  
FROM team RIGHT JOIN  
    (SELECT game.Team1, COUNT(game.Team1) As WalkoverNum_Team1,  
    season.SeasonYear  
    FROM game NATURAL JOIN season  
    WHERE (game.T1Score = 0 AND game.T2Score = 28)  
    GROUP BY game.Team1, season.SeasonYear  
    UNION  
    SELECT game.Team2, COUNT(game.Team2) As WalkoverNum_Team2,  
    season.SeasonYear  
    FROM game NATURAL JOIN season  
    WHERE (game.T1Score = 28 AND game.T2Score = 0)  
    GROUP BY game.Team2, season.SeasonYear) As  
WalkoverTable ON  
team.TeamID = WalkoverTable.Team1  
WHERE WalkoverTable.WalkoverNum_Team1 >= 2;
```

TeamName	WalkoverNum	SeasonYear
Powerhouse Men	2	2017
Footscray Mixed	2	2017
Powerhouse Men	2	2018

3 row(s) returned