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Objective: To Identify the Top performing teams in the premier league table of 2023/2024 that is currently ongoing.

Data collected to achieve the goal: The premier league table of the 2023/24 season that is currently ongoing.

What questions would you ask to better achieve the goal?

   i.   Teams with the highest points
  ii.   Teams with the highest winnings
 iii.   Teams with the lowest loss
  iv.   Teams with the highest goal difference
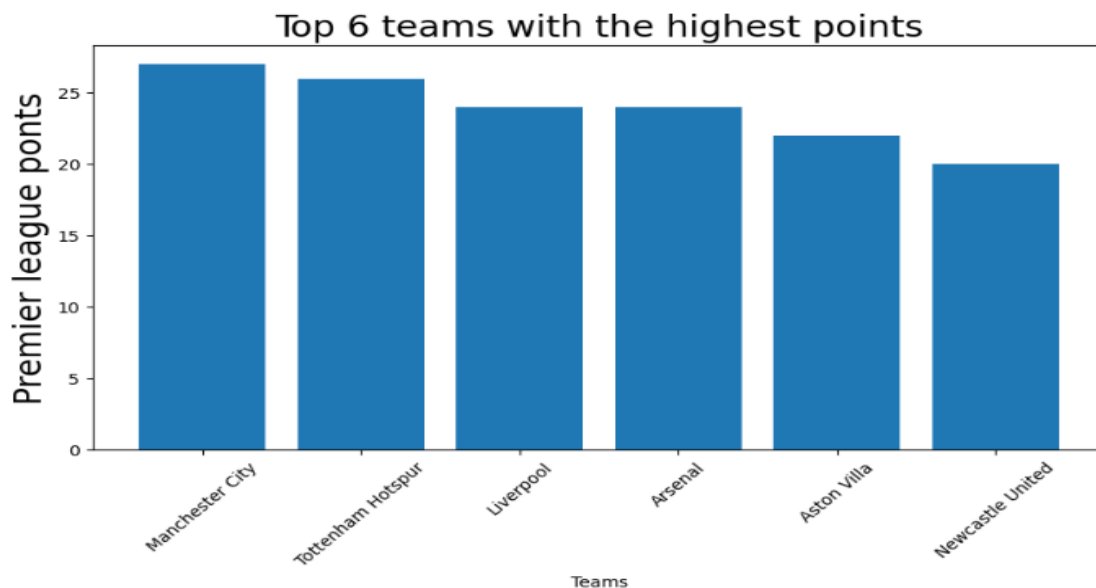
Codes to the analysis:

1.

```
In [49]:    1  # sorting the table by the PTS col
            2  df0 = df.sort_values('Point', ascending = True).head(6)

In [58]:    1  # plotting a bar chart to show the team with the highest and Lowet point
            2  fig = plt.figure(figsize = (10, 5))
            3  plt.barh(df0['Team'], df0['Point'] )
            4  plt.xticks(rotation = 45)
            5  plt.xlabel('Teams')
            6  plt.ylabel('Premier league ponts', fontsize = 20)
            7  plt.title('Top 6 teams with the highest points', fontsize = 20)
```

Here, the records were sorted and the top 6 teams with the highest points were captured and visualized. Below is the visualization report:
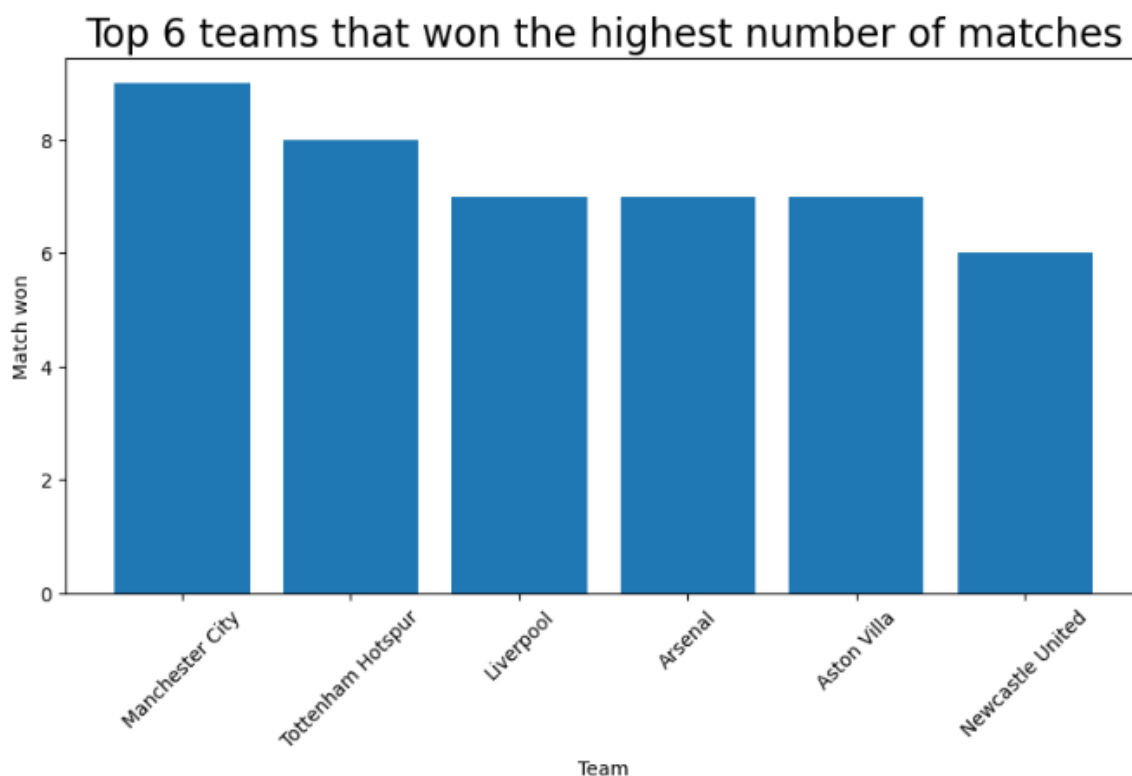
This shows that Man city has the highest point followed by Tottenham, Liverpool, arsenal, Aston villa and Newcastle.

2.

```
In [80]:    1  # sorting the table values based on the winnings col
            2  df1 = df.sort_values('Winning', ascending = False).head(6)
```

```
In [82]:    1  # plotting a chart to see the teams with the highest and lowest winnings
            2  fig = plt.figure(figsize = (10, 5))
            3  plt.bar(df1['Team'], df1['Winning'] )
            4  plt.xticks(rotation = 45)
            5  plt.xlabel('Team')
            6  plt.ylabel('Match won')
            7  plt.title('Top 6 teams that won the highest number of matches', fontsize = 20)
```

Here, the records were sorted according to winnings in descending order and the top 6 teams with the highest winnings were captured and visualized. Below is the visualization:

Manchester City, Tottenham hotspur, Liverpool, Arsenal, Aston villa and Newcastle United are the teams with the highest number of winnings. They are the same teams as the top 6 teams with the highest points.
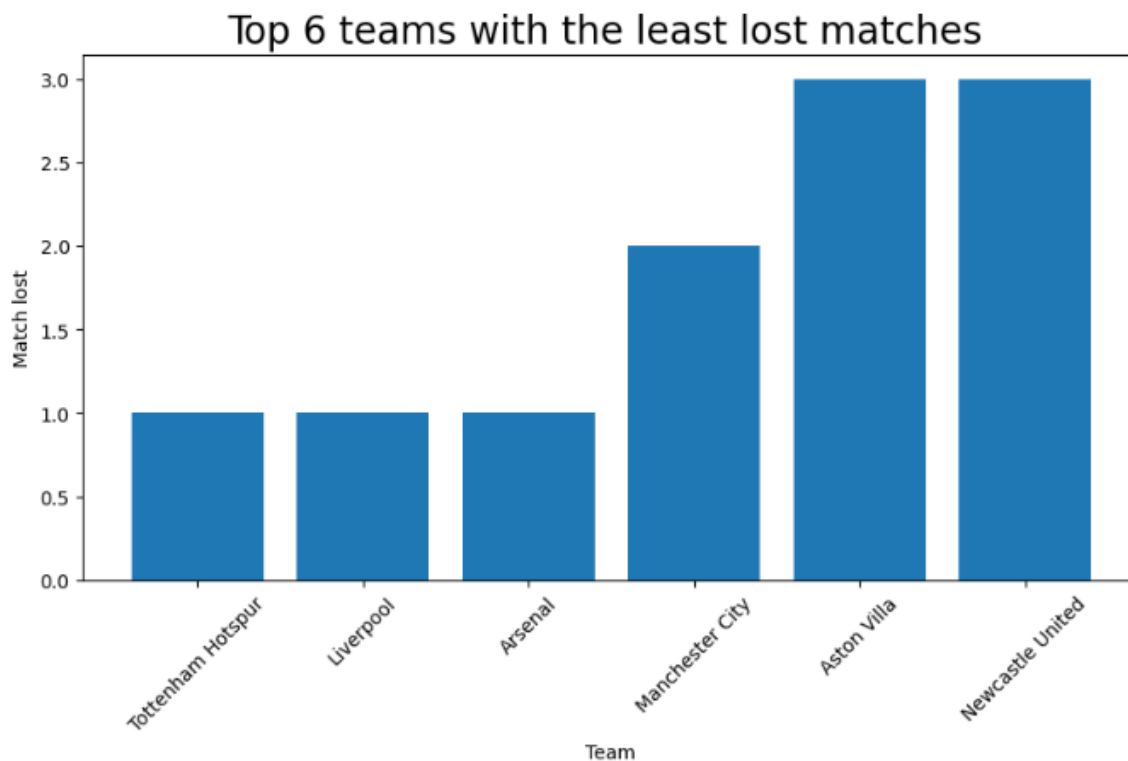
3.

```
In [84]:   1  # sorting the values by the match loss col
           2  df2 = df.sort_values('Lost', ascending = True).head(6)

In [85]:   1  # plotting the matches lost by teams
           2  fig = plt.figure(figsize = (10, 5))
           3  plt.bar(df2['Team'], df2['Lost'] )
           4  plt.xticks(rotation = 45)
           5  plt.xlabel('Team')
           6  plt.ylabel('Match lost')
           7  plt.title('Top 6 teams with the least lost matches ', fontsize = 20)
           8
```

Here, records were sorted in ascending order, and the least 6 were captured and visualized. Below is the visualization:

Top 6 teams with the least lost matches

This shows that Tottenham, followed by Liverpool and Arsenal, have just one lost match, followed by Manchester city with 2 lost matches, then Aston Villa and Newcastle United with 3 lost matches. Even though Manchester city has the highest points and winnings, it is not the team with the least lost Matches.
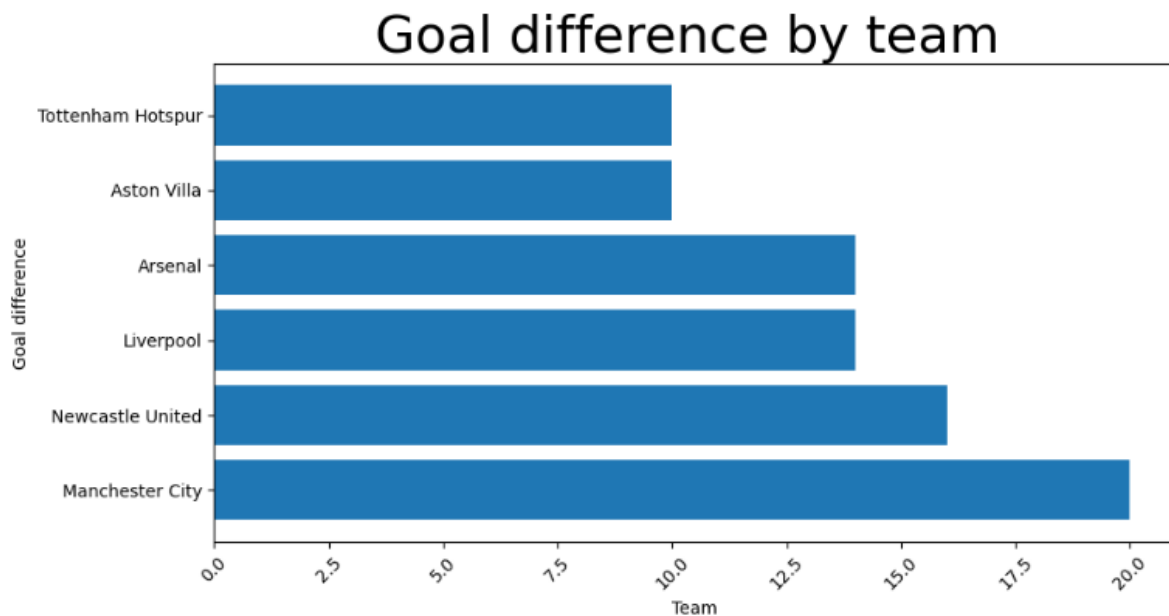
4.

```
In [65]:   1  # sorting values by the Goal difference col
           2  df3 = df.sort_values('Goal difference', ascending = False).head(6)

In [68]:   1  # plotting the Goal difference between the teams
           2  fig = plt.figure(figsize = (10, 5))
           3  plt.barh(df3['Team'], df3['Goal difference'] )
           4  plt.xticks(rotation = 45)
           5  plt.xlabel('Team')
           6  plt.ylabel('Goal difference')
           7  plt.title('Goal difference by team ', fontsize = 30)
```

Records were sorted in descending order, and the top 6 teams were captured and visualized. Below is the visualization and finding.
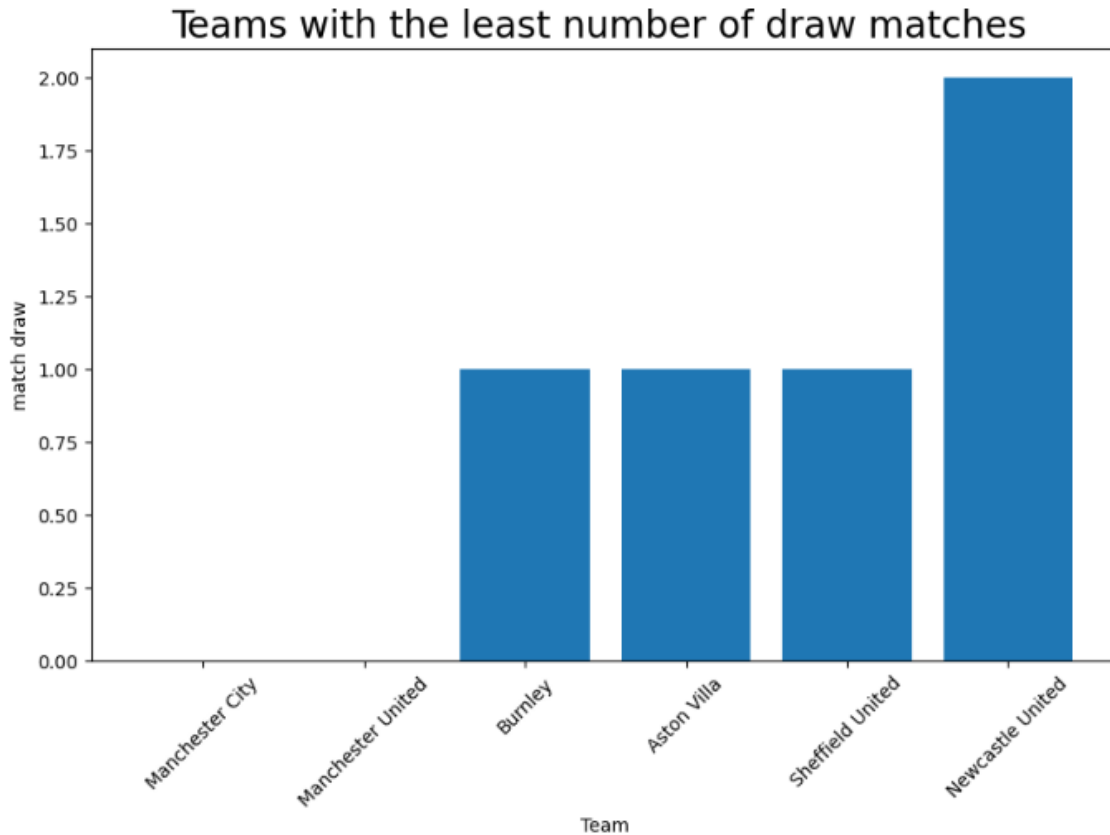
Goal difference by team

Manchester City has the highest goal of 20, followed by Newcastle United and Liverpool. Even though Tottenham has the least lost matches, there is a 10-goal difference between the team and Manchester City.

5.

```
In [86]:   1  # sorting the table values by the draw column
           2  df4 = df.sort_values('Draw', ascending = True).head(6)
```

```
In [89]:   1  # plotting match draw by teams
           2  fig = plt.figure(figsize = (10, 6))
           3  plt.bar(df4['Team'], df4['Draw'] )
           4  plt.xticks(rotation = 45)
           5  plt.xlabel('Team')
           6  plt.ylabel('match draw')
           7  plt.title('Teams with the least number of draw matches ', fontsize = 20)
```

Records were sorted in ascending order, and the top 6 teams with the least drawing games were captured and visualized. Below is the visualization:

Teams with the least number of draw matches

Here, Manchester city and Manchester united have no match that the goal difference was a draw.

But Manchester city has not once appeared in the top 6 with regards to the context used to identify the top performing teams this season.

Summary:

With regards to the points, Manchester City, Tottenham, and Liverpool are leading. Also, Manchester City, Tottenham and Liverpool are the top 3 teams with the highest won games. Furthermore, Tottenham, Liverpool, and Arsenal are the teams that have the least lost games, with just losing one game. Manchester City, Newcastle United and Liverpool are the top 3 teams with the highest number of goals scored. Lastly, Manchester City, Manchester United that is nowhere to be found in the context that the best teams are compared, and Burnley, which has the same fate as Manchester United, have the least number of draw games.

Conclusion:

Based on the analysis shown by the visualization and the criteria to which the teams were compared, the best performing team in the 2023/2024 Premiere league table is, in the order, Manchester City, Tottenham and Liverpool.