Premier League data Plotted using APis

Using an api from football-data.org, with auth token: de27c6f949e040418ee4fcb5206ca657 I have plotted data from that api, getting tables and sorting them

In [20]:
```
import requests
url = "https://api.football-data.org/v4/competitions/PL/matches"
headers = {"X-Auth-Token": "de27c6f949e040418ee4fcb5206ca657"}
response = requests.get(url, headers=headers)

if response.status_code == 200:
    data = response.json()
else:
    print(f"Error: {response.status_code}, {response.text}")
```

In [21]:
```
import pandas as pd
df = pd.DataFrame(data['matches'])
df.head(3)
```

Out[21]:

	area	competition	season	id	utcDate	status	matchday	
0	{'id': 2072, 'name': 'England', 'code': 'ENG',...	{'id': 2021, 'name': 'Premier League', 'code':...	{'id': 2287, 'startDate': '2024-08-16', 'endDa...	497410	2024-08-16T19:00:00Z	FINISHED	1	REGULAR
1	{'id': 2072, 'name': 'England', 'code': 'ENG',...	{'id': 2021, 'name': 'Premier League', 'code':...	{'id': 2287, 'startDate': '2024-08-16', 'endDa...	497411	2024-08-17T11:30:00Z	FINISHED	1	REGULAR
2	{'id': 2072, 'name': 'England', 'code': 'ENG',...	{'id': 2021, 'name': 'Premier League', 'code':...	{'id': 2287, 'startDate': '2024-08-16', 'endDa...	497412	2024-08-17T14:00:00Z	FINISHED	1	REGULAR

Selecting the name of a team alone from the "homeTeam" data

In [22]:
```
df['home_team_name'] = df['homeTeam'].apply(lambda x: x['name'] if isinstance(x, di
df['away_team_name'] = df['awayTeam'].apply(lambda x: x['name'] if isinstance(x, di

df['home_goals'] = df['score'].apply(lambda x: x['fullTime']['home'] if isinstance(
df['away_goals'] = df['score'].apply(lambda x: x['fullTime']['away'] if isinstance(
```

```
df['utcDate'] = pd.to_datetime(df['utcDate'])

# Format as 'Day, Month Date, Year - HH:MM AM/PM'
df['match_date'] = df['utcDate'].dt.strftime('%A, %B %d, %Y - %I:%M %p')
```

Plotting the matches in order of most recent

In [23]:
```
df_pl = df[df['status'] == 'FINISHED'].copy()

df_pl= df_pl[['home_team_name','status', 'away_team_name', 'home_goals', 'away_goal

df_pl['match_date'] = pd.to_datetime(df_pl['match_date'], format='%A, %B %d, %Y - %
df_pl = df_pl.sort_values(by='match_date', ascending=False)

df_pl.head(10)
```

Out[23]:

	home_team_name	status	away_team_name	home_goals	away_goals	match_date
288	Leicester City FC	FINISHED	Manchester United FC	0.0	3.0	2025-03-16 19:00:00
287	Fulham FC	FINISHED	Tottenham Hotspur FC	2.0	0.0	2025-03-16 13:30:00
286	Arsenal FC	FINISHED	Chelsea FC	1.0	0.0	2025-03-16 13:30:00
285	AFC Bournemouth	FINISHED	Brentford FC	1.0	2.0	2025-03-15 17:30:00
284	Southampton FC	FINISHED	Wolverhampton Wanderers FC	1.0	2.0	2025-03-15 15:00:00
283	Manchester City FC	FINISHED	Brighton & Hove Albion FC	2.0	2.0	2025-03-15 15:00:00
282	Ipswich Town FC	FINISHED	Nottingham Forest FC	2.0	4.0	2025-03-15 15:00:00
281	Everton FC	FINISHED	West Ham United FC	1.0	1.0	2025-03-15 15:00:00
280	West Ham United FC	FINISHED	Newcastle United FC	0.0	1.0	2025-03-10 20:00:00
279	Manchester United FC	FINISHED	Arsenal FC	1.0	1.0	2025-03-09 16:30:00

To Get Standings

to get the top 10 on the Premier League table

In [24]:
```
import requests
url = "https://api.football-data.org/v4/competitions/PL/standings"
headers = {"X-Auth-Token": "de27c6f949e040418ee4fcb5206ca657"}
```

```
response = requests.get(url, headers=headers)

if response.status_code == 200:
    data = response.json()
else:
    print(f"Error: {response.status_code}, {response.text}")
# Extract standings data
standings = data['standings'][0]['table']  # The first element contains league tabl

# Convert to DataFrame
df = pd.DataFrame(standings)
```

In [25]:
```
df['team_name'] = df['team'].apply(lambda x: x['name'] if isinstance(x, dict) else


df_standings= df[['position','team_name','playedGames','won','draw','lost','points'

df_standings.head(10)
```

Out[25]:

	position	team_name	playedGames	won	draw	lost	points	goalsFor	goalsAgainst
0	1	Liverpool FC	29	21	7	1	70	69	27
1	2	Arsenal FC	29	16	10	3	58	53	24
2	3	Nottingham Forest FC	29	16	6	7	54	49	35
3	4	Chelsea FC	29	14	7	8	49	53	37
4	5	Manchester City FC	29	14	6	9	48	55	40
5	6	Newcastle United FC	28	14	5	9	47	47	38
6	7	Brighton & Hove Albion FC	29	12	11	6	47	48	42
7	8	Fulham FC	29	12	9	8	45	43	38
8	9	Aston Villa FC	29	12	9	8	45	41	45
9	10	AFC Bournemouth	29	12	8	9	44	48	36