Assignment 1

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DB source name:

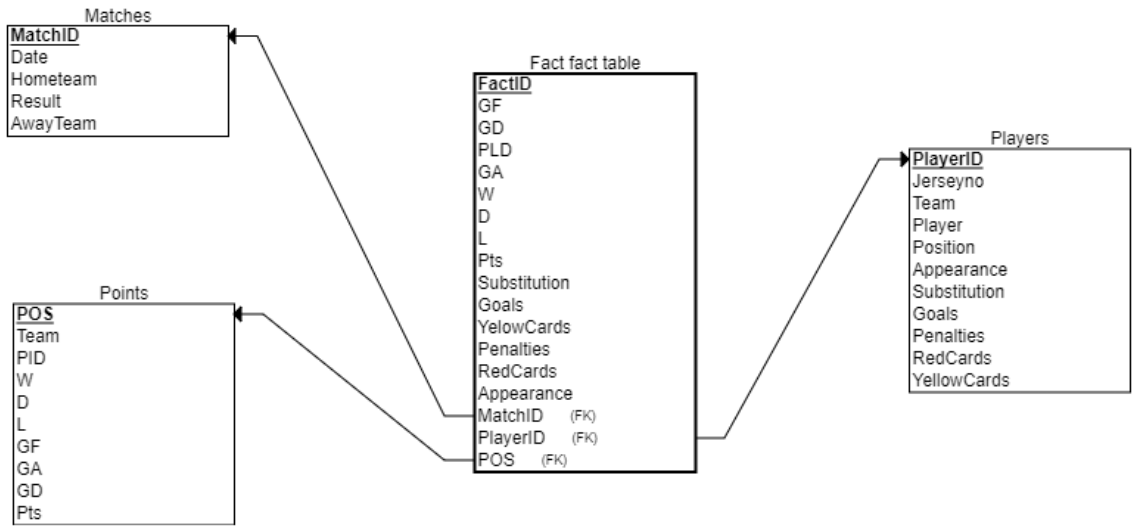
English Premier League

URL:
https://www.kaggle.com/datasets/azminetoushikwasi/epl-21-22-matches-players

Motivation for creating this schema:

The English Premier League star schema is what we have chosen to create in order to analyse and assess player performance, highlighting both the players who excel and those who don't, as well as identifying the club that performs the best overall. We'll be able to examine player data in great depth thanks to the schema, which will provide a thorough evaluation of each player's contributions and the dynamics of the squad across predetermined time periods.

Star schema:



Schema description:

Dimensions: points, Matches and Players.

Dimension levels:

Players Dimension:

PlayerID (Primary Key) - Lowest level of granularity

Jerseyno - Lowest level of granularity

Team - Lowest level of granularity

Player - Lowest level of granularity

Position - Lowest level of granularity

Appearance - Aggregated level

Substitution - Aggregated level

Goals - Aggregated level

Penalties - Aggregated level

RedCards - Aggregated level

Yellow cards - Aggregated level

Matches Dimension:

MatchID (Primary Key) - Lowest level of granularity

Date - Lowest level of granularity

Hometeam - Lowest level of granularity

Result - Lowest level of granularity

AwayTeam - Lowest level of granularity

Points Dimension:

Pos - Lowest level of granularity

Team - Lowest level of granularity

PLD - Aggregated level

W - Aggregated level

D - Aggregated level

L - Aggregated level

GF - Aggregated level

GA - Aggregated level

GD - Aggregated level

Pts - Aggregated level

Measures:

1-GF

2-PLD

3-GA

4-W

5-GD

6-D

7-L

8-Pts

9-Substitution

10-Goals

11-YellowCards

12-Penalties

13-RedCards

14-Appearance

Query for temp ALL_Match dimension:

```
CREATE TABLE ALL_Match
(
  Date DATE NOT NULL,
  Hometeam VARCHAR(50) NOT NULL,
  Result TIME NOT NULL,
  AwayTeam VARCHAR(50) NOT NULL
);
```

Query for Matches dimension:

```
CREATE TABLE Matches
(
  MatchID INT IDENTITY (1,1) PRIMARY KEY,
  Date DATE NOT NULL,
  Hometeam VARCHAR(50) NOT NULL,
  Result TIME NOT NULL,
  AwayTeam VARCHAR(50) NOT NULL,
);
```

Query for temp ALL_Player dimension:

```
CREATE TABLE ALL_Player
(
  Team VARCHAR(50) NOT NULL,
  Jerseyno INT NOT NULL,
  Player VARCHAR(50) NOT NULL,
  Position VARCHAR(50) NOT NULL,
  Appearance INT NOT NULL,
  Substitution INT NOT NULL,
  Goals INT NOT NULL,
  Penalties INT NOT NULL,
  RedCards FLOAT NOT NULL,
  YellowCards FLOAT NOT NULL,
);
```

Query for Players dimension:

```
CREATE TABLE Players
(
  PlayerID INT IDENTITY (1,1) PRIMARY KEY,
  Team VARCHAR(50) NOT NULL,
  Jerseyno INT NOT NULL,
  Player VARCHAR(50) NOT NULL,
  Position VARCHAR(50) NOT NULL,
  Appearance INT NOT NULL,
  Substitution INT NOT NULL,
  Goals INT NOT NULL,
  Penalties INT NOT NULL,
  RedCards FLOAT NOT NULL,
  YellowCards FLOAT NOT NULL,
);
```

Query for points dimension:

```
CREATE TABLE Points
(
  POS INT NOT NULL,
  Team VARCHAR(50) NOT NULL,
  PLD INT NOT NULL,
  W INT NOT NULL,
```

```
  D INT NOT NULL,
  L INT NOT NULL,
  GF INT NOT NULL,
  GA INT NOT NULL,
  GD INT NOT NULL,
  Pts INT NOT NULL,
  PRIMARY KEY (POS)
);
```

Query for fact table:

```
CREATE TABLE Fact
(
  FactID INT IDENTITY (1,1) PRIMARY KEY,
  GF INT,
  GD INT,
  PLD INT,
  GA INT,
  W INT,
  D INT ,
  L INT ,
  Pts INT,
  Substitution INT,
  Goals INT,
  YellowCards FLOAT,
  Penalties INT,
  RedCards FLOAT,
  Appearance INT,
  MatchID INT NOT NULL,
  PlayerID INT NOT NULL,
  POS INT NOT NULL,
  FOREIGN KEY (MatchID) REFERENCES  Matches(MatchID),
  FOREIGN KEY (PlayerID) REFERENCES Players(PlayerID),
  FOREIGN KEY (POS) REFERENCES Points(POS)
);
```

SQL statement to load data

```
BULK INSERT ALL_Match
FROM 'C:\Users\PC\Downloads\archive_2\all_match_results.csv'
WITH (
    FORMAT = 'CSV',
    FIELDTERMINATOR = ',',
    ROWTERMINATOR = '\n',
    FIRSTROW = 2
);
```

```
BULK INSERT ALL_Player
FROM 'C:\Users\PC\Downloads\archive_2\all_players_stats.csv'
WITH (
    FORMAT = 'CSV',
    FIELDTERMINATOR = ',',
    ROWTERMINATOR = '\n',
    FIRSTROW = 2
);
```

```
BULK INSERT Points
FROM 'C:\Users\PC\Downloads\archive_2\points_table.csv'
WITH (
    FORMAT = 'CSV',
    FIELDTERMINATOR = ',',
    ROWTERMINATOR = '\n',
    FIRSTROW = 2
);
```

```
INSERT INTO Matches
SELECT * FROM ALL_Match;
```

```
INSERT INTO Players
SELECT * FROM ALL_Player;
```

```sql
INSERT INTO Fact
(GF,GD,PLD,GA,W,D,L,Pts,Substitution,Goals,YellowCa
rds,Penalties,RedCards,Appearance, MatchID,
PlayerID, POS)
SELECT
    Po.GF,
    Po.GD,
    Po.PLD,
    Po.GA,
    Po.W,
    Po.D,
    Po.L,
    Po.Pts,
    p.Substitution,
    p.Goals,
    p.YellowCards,
    p.Penalties,
    p.RedCards,
    P.Appearance,
    m.MatchID,
    p.PlayerID,
    po.POS
FROM Matches as m
JOIN Players as p ON m.Hometeam = p.Team OR
m.AwayTeam = p.Team
JOIN Points as po ON p.Team = po.Team;
```

Report analysis:
to answer this question:

Discover the weak points of any team.

Suggest players need to be sold, based on performance analysis.

Nominate Player of the season

Best team

Worst team

Query 1: Average team goals per match

SQL query:

```
SELECT Team,AVG(GF * 1.0 / PLD) AS Average_team_Goals_Per_Match
FROM Points
GROUP BY Team
ORDER BY Average_team_Goals_Per_Match DESC
```

Output:

```
SELECT Team,AVG(GF * 1.0 / PLD) AS Average_team_Goals_Per_Match
FROM Points
GROUP BY Team
ORDER BY Average_team_Goals_Per_Match DESC
```

146 %

Results | Messages

	Team	Average_team_Goals_Per_Match
1	Manchester City	2.605263157894
2	Liverpool	2.473684210526
3	Chelsea	2.000000000000
4	Tottenham Hotspur	1.815789473684
5	Leicester City	1.631578947368
6	Arsenal	1.605263157894
7	West Ham United	1.578947368421
8	Manchester United	1.500000000000
9	Aston Villa	1.368421052631
10	Crystal Palace	1.315789473684
11	Brentford	1.263157894736
12	Newcastle United	1.157894736842
13	Everton	1.131578947368
14	Southampton	1.131578947368
15	Leeds United	1.105263157894
16	Brighton and Hove Albion	1.105263157894
17	Wolverhampton Wanderers	1.000000000000
18	Burnley	0.894736842105
19	Watford	0.894736842105
20	Norwich City	0.605263157894

Report:

Team Goal Scoring: Calculated and analyzed the average goals scored per match for each team.

Weak Points of Teams:

Manchester City: Highest average team goals per match (2.61), indicating strong offensive capabilities.

Liverpool: Second highest average goals (2.47), also showcasing a potent attack.

Chelsea: Following with a considerable average of 2.00 goals per match.

Tottenham Hotspur: With an average of 1.82 goals per match, slightly lower than top-performing teams but still above the league average.

Leicester City: Notably good with 1.63 goals per match.

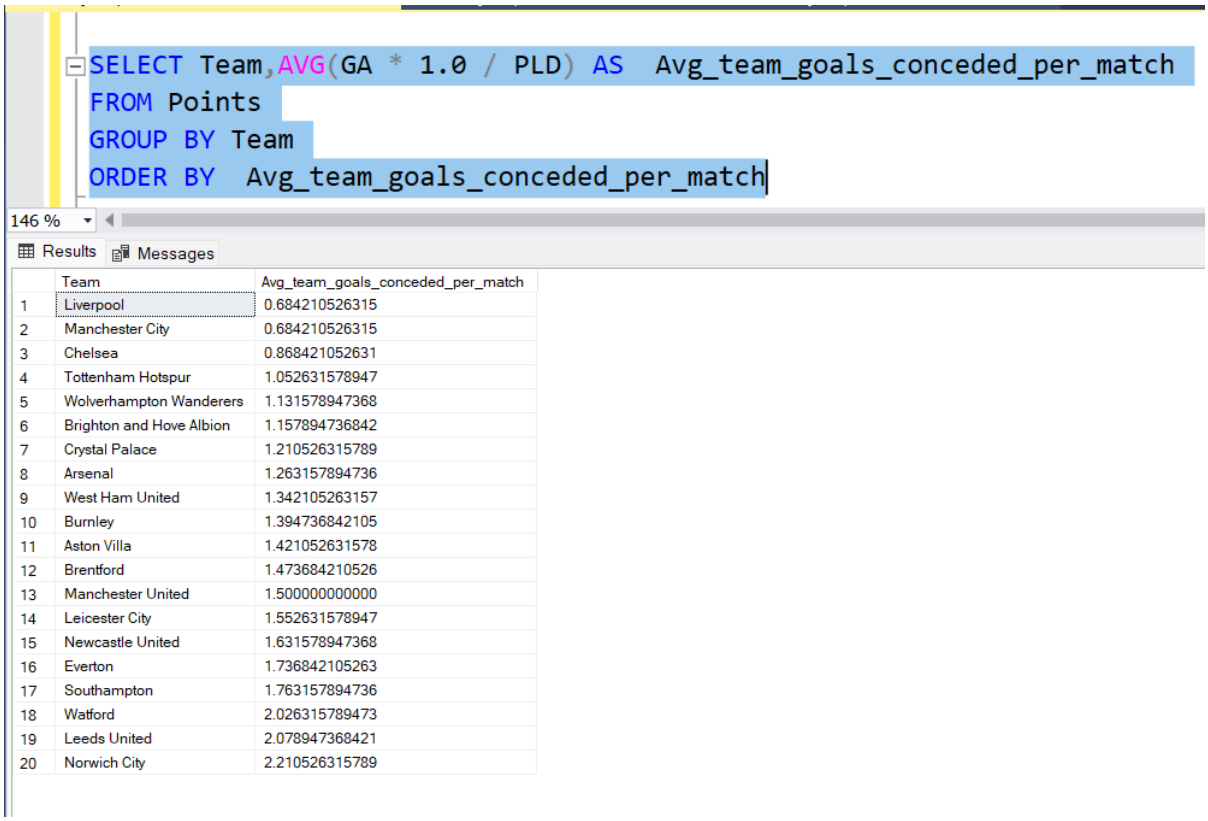
Norwich City, **Watford and Burnely** (0.60 ,0.89 and 0.89 goals per match, respectively) has a low average team goals per match, indicating significant struggles in scoring.

Query 2: Average team goals conceded per match

SQL query:

```
SELECT Team,AVG(GA * 1.0 / PLD) AS  Avg_team_goals_conceded_per_match
FROM Points
GROUP BY Team
ORDER BY  Avg_team_goals_conceded_per_match
```

Output:



```
SELECT Team,AVG(GA * 1.0 / PLD) AS  Avg_team_goals_conceded_per_match
FROM Points
GROUP BY Team
ORDER BY  Avg_team_goals_conceded_per_match
```

146 %

Results | Messages

	Team	Avg_team_goals_conceded_per_match
1	Liverpool	0.684210526315
2	Manchester City	0.684210526315
3	Chelsea	0.868421052631
4	Tottenham Hotspur	1.052631578947
5	Wolverhampton Wanderers	1.131578947368
6	Brighton and Hove Albion	1.157894736842
7	Crystal Palace	1.210526315789
8	Arsenal	1.263157894736
9	West Ham United	1.342105263157
10	Burnley	1.394736842105
11	Aston Villa	1.421052631578
12	Brentford	1.473684210526
13	Manchester United	1.500000000000
14	Leicester City	1.552631578947
15	Newcastle United	1.631578947368
16	Everton	1.736842105263
17	Southampton	1.763157894736
18	Watford	2.026315789473
19	Leeds United	2.078947368421
20	Norwich City	2.210526315789

Report:

Weak Points of Teams based on Average Goals Conceded per Match:

Analysis:

Liverpool and Manchester City:

Both teams exhibit the lowest average goals conceded per match (0.68).

Strong defensive performance, conceding fewer goals compared to other teams.

Southampton, Watford, Leeds United, Norwich City:

Concede higher goals per match, ranging from 1.73 to 2.21.

Potentially significant weak points in defense, indicating the need for defensive reinforcements or strategy adjustments.

Suggestions for Players Based on Defensive Performance:

Liverpool and Manchester City:

Analyze individual defensive players' performances for consistency and effectiveness.

Teams Conceding More Goals (Southampton, Watford, Leeds United, Norwich City):

Consider evaluating players for defensive weaknesses or potential replacements.

Player of the Season Nomination based on Defensive Contributions:

Players from teams conceding fewer goals per match (like Liverpool and Manchester City) might be strong contenders for defensive contributions.

Analyze individual defensive performances within these teams to nominate players who significantly contributed to their team's defensive stability and success.

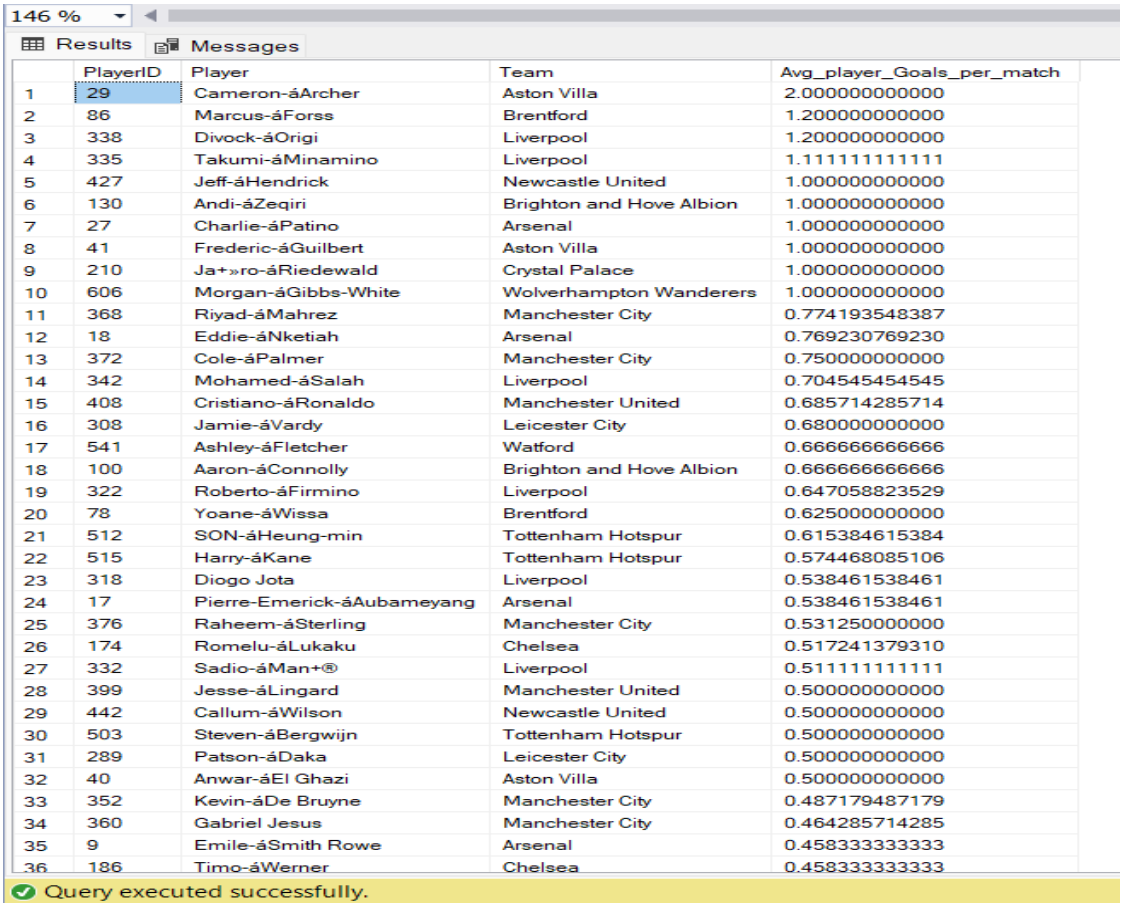
Query 3: Average player goals per match

SQL:

```
SELECT PlayerID,Player,Team,AVG(CASE WHEN Appearance > 0 THEN Goals
* 1.0 / Appearance ELSE 0 END) AS Avg_player_Goals_per_match
```

```
FROM Players
GROUP BY PlayerID,Player,Team
ORDER BY Avg_player_Goals_per_match DESC
```

Output:



146 %

Results | Messages

	PlayerID	Player	Team	Avg_player_Goals_per_match
1	29	Cameron-áArcher	Aston Villa	2.000000000000
2	86	Marcus-áForss	Brentford	1.200000000000
3	338	Divock-áOrigi	Liverpool	1.200000000000
4	335	Takumi-áMinamino	Liverpool	1.111111111111
5	427	Jeff-áHendrick	Newcastle United	1.000000000000
6	130	Andi-áZeqiri	Brighton and Hove Albion	1.000000000000
7	27	Charlie-áPatino	Arsenal	1.000000000000
8	41	Frederic-áGuilbert	Aston Villa	1.000000000000
9	210	Ja+»ro-áRiedewald	Crystal Palace	1.000000000000
10	606	Morgan-áGibbs-White	Wolverhampton Wanderers	1.000000000000
11	368	Riyad-áMahrez	Manchester City	0.774193548387
12	18	Eddie-áNketiah	Arsenal	0.769230769230
13	372	Cole-áPalmer	Manchester City	0.750000000000
14	342	Mohamed-áSalah	Liverpool	0.704545454545
15	408	Cristiano-áRonaldo	Manchester United	0.685714285714
16	308	Jamie-áVardy	Leicester City	0.680000000000
17	541	Ashley-áFletcher	Watford	0.666666666666
18	100	Aaron-áConnolly	Brighton and Hove Albion	0.666666666666
19	322	Roberto-áFirmino	Liverpool	0.647058823529
20	78	Yoane-áWissa	Brentford	0.625000000000
21	512	SON-áHeung-min	Tottenham Hotspur	0.615384615384
22	515	Harry-áKane	Tottenham Hotspur	0.574468085106
23	318	Diogo Jota	Liverpool	0.538461538461
24	17	Pierre-Emerick-áAubameyang	Arsenal	0.538461538461
25	376	Raheem-áSterling	Manchester City	0.531250000000
26	174	Romelu-áLukaku	Chelsea	0.517241379310
27	332	Sadio-áMan+®	Liverpool	0.511111111111
28	399	Jesse-áLingard	Manchester United	0.500000000000
29	442	Callum-áWilson	Newcastle United	0.500000000000
30	503	Steven-áBergwijn	Tottenham Hotspur	0.500000000000
31	289	Patson-áDaka	Leicester City	0.500000000000
32	40	Anwar-áEl Ghazi	Aston Villa	0.500000000000
33	352	Kevin-áDe Bruyne	Manchester City	0.487179487179
34	360	Gabriel Jesus	Manchester City	0.464285714285
35	9	Emile-áSmith Rowe	Arsenal	0.458333333333
36	186	Timo-áWerner	Chelsea	0.458333333333

Query executed successfully.

Report:

Weak Points of Teams based on Average Player Goals per Match:

Analysis:

Aston Villa (Cameron Archer):

Cameron Archer from Aston Villa has the highest average goals per match (2.0).

Other players from Aston Villa have comparatively lower goal averages, suggesting the need for more consistent goal-scoring across the team.

Brentford (Marcus Forss):

Marcus Forss from Brentford follows with an average of 1.2 goals per match.

Similar to Aston Villa, Brentford might need additional goal-scoring options to complement Forss.

Liverpool (Divock Origi, Takumi Minamino):

Divock Origi and Takumi Minamino from Liverpool have averages of 1.2 and 1.11 goals per match, respectively.

Despite having multiple players with high averages, Liverpool could potentially benefit from more consistent goal contributions from other team members.

Suggestions for Players who Might be Considered for Transfer/Sale:

Consider Selling:

Players who have relatively lower average goals per match might be evaluated for potential transfers if their performance does not align with the team's strategy or requirements.

For instance, players(attacking player) with lower averages (below 0.5) across various teams might be reviewed for their contribution and potential replacement.

Nomination for Player of the Season based on Goal Contribution:

Top Performers:

Top 32 players (above 0.5) have notably high average goals per match.

These players could be considered for the Player of the Season nomination based on their goal-scoring contributions. However, other factors like Goals, overall gameplay, and team impact will be taken into account in the following queries determining the Player of the Season.

This analysis emphasizes the need for consistent goal-scoring across teams and suggests potential areas where teams might focus their transfer strategies to strengthen their squad's goal-scoring ability.

Query 4: Average player contribution per team

SQL:

```
SELECT PlayerID,Player,Players.Team,AVG(Goals*1.0/GF) AS
avg_player_contribution_per_team

FROM Players,Points
GROUP BY PlayerID,Player,Players.Team
ORDER BY avg_player_contribution_per_team DESC
```

Output:

	PlayerID	Player	Team	avg_player_contribution_per_team
1	342	Mohamed-áSalah	Liverpool	0.652027011558
2	515	Harry-áKane	Tottenham Hotspur	0.567894493938
3	512	SON-áHeung-min	Tottenham Hotspur	0.504795105722
4	368	Riyad-áMahrez	Manchester City	0.504795105722
5	408	Cristiano-áRonal...	Manchester United	0.504795105722
6	332	Sadio-áMan+®	Liverpool	0.483761976317
7	318	Diogo Jota	Liverpool	0.441695717507
8	352	Kevin-áDe Bruyne	Manchester City	0.399629458697
9	573	Jarrod-áBowen	West Ham United	0.378596329291
10	297	James-áMaddis...	Leicester City	0.378596329291
11	308	Jamie-áVardy	Leicester City	0.357563199886
12	376	Raheem-áSterling	Manchester City	0.357563199886
13	174	Romelu-áLukaku	Chelsea	0.315496941076
14	214	Wilfried-áZaha	Crystal Palace	0.315496941076
15	165	Kai-áHavertz	Chelsea	0.294463811671
16	70	Ivan-áToney	Brentford	0.294463811671
17	359	Phil-áFoden	Manchester City	0.294463811671
18	360	Gabriel Jesus	Manchester City	0.273430682266
19	349	Bernardo Silva	Manchester City	0.273430682266
20	567	Michail-áAntonio	West Ham United	0.273430682266
21	177	Mason-áMount	Chelsea	0.273430682266
22	1	Bukayo-áSaka	Arsenal	0.252397552861
23	9	Emile-áSmith R...	Arsenal	0.231364423456
24	62	Ollie-áWatkins	Aston Villa	0.231364423456
25	186	Timo-áWerner	Chelsea	0.231364423456
26	274	Raphinha	Leeds United	0.231364423456
27	283	Harvey-áBarnes	Leicester City	0.231364423456
28	289	Patson-áDaka	Leicester City	0.231364423456
29	245	Richarlison	Everton	0.231364423456
30	572	Sa+»d-áBenrah...	West Ham United	0.231364423456
31	500	James-áWard-P...	Southampton	0.231364423456
32	464	Teemu-áPukki	Norwich City	0.231364423456
33	322	Roberto-áFirmino	Liverpool	0.231364423456
34	335	Takumi-áMinam...	Liverpool	0.210331294050
35	362	-¦lkay G++ndogan	Manchester City	0.210331294050
36	383	Bruno Fernandes	Manchester United	0.210331294050

Report:

Weak Points of Teams:

Team Weakness Identification:

The weaker points of a team can be inferred by analyzing the contributions of players in comparison to the team's overall performance.

Areas with lower average player contribution might indicate positions or players where the team needs improvement.

Low Contribution Players:

Players with significantly lower average contributions might be considered a weak point in their respective teams.

Suggest Players for Sale:

Based on the performance analysis, players with comparatively lower contributions and possibly those whose style or role doesn't align with the team's strategy could be considered for sale. However, attack players with zero contributions are mostly suggested for sale.

Player of the Season Nomination:

The player of the season can be nominated based on the highest average player contribution per team. In this case, Mohamed Salah from Liverpool has the highest average player contribution per team among the listed players.

Query 5: Average player contribution per team

SQL:

```
SELECT Team, GA, GD, Pts, (W*1.0)/L AS Win_Loss_Ratio
FROM Points
ORDER BY Win_Loss_Ratio ASC, Pts ASC;
```

Output:

```
SELECT Team, GA, GD, Pts, (W*1.0)/L AS Win_Loss_Ratio
FROM Points
ORDER BY Win_Loss_Ratio ASC, Pts ASC;
```

146 %

Results | Messages

	Team	GA	GD	Pts	Win_Loss_Ratio
1	Norwich City	84	-61	22	0.192307692307
2	Watford	77	-43	23	0.222222222222
3	Burnley	53	-19	35	0.411764705882
4	Leeds United	79	-37	38	0.500000000000
5	Everton	66	-23	39	0.523809523809
6	Southampton	67	-24	40	0.562500000000
7	Aston Villa	54	-2	45	0.684210526315
8	Brentford	56	-8	46	0.722222222222
9	Newcastle United	62	-18	49	0.866666666666
10	Wolverhampton Wanderers	43	-5	51	0.882352941176
11	Crystal Palace	46	4	48	0.916666666666
12	Leicester City	59	3	52	1.000000000000
13	Brighton and Hove Albion	44	-2	51	1.090909090909
14	West Ham United	51	9	56	1.142857142857
15	Manchester United	57	0	58	1.333333333333
16	Arsenal	48	13	69	1.692307692307
17	Tottenham Hotspur	40	29	71	2.000000000000
18	Chelsea	33	43	74	3.500000000000
19	Manchester City	26	73	93	9.666666666666
20	Liverpool	26	68	92	14.000000000...

Report:

Weak Points of Teams:

Identifying weak points among teams involves looking at various aspects such as goal difference (GD), goals against (GA), points (Pts), and win-loss ratios. Based on the provided Output:

Norwich City and Watford:

Lowest points (22 and 23, respectively) indicate these teams' struggle in winning matches.

High goals against (GA) and negative goal difference (GD) indicate defensive vulnerabilities.

Burnley:

While they have more points, their goal difference and goals against are also concerning.

Their win-loss ratio suggests a decent performance but with room for improvement.

Leeds United, Everton, and Southampton:

These teams have better points, indicating moderate success, but their goal difference and goals against still need attention for improved performance.

Suggest Players for Sale:

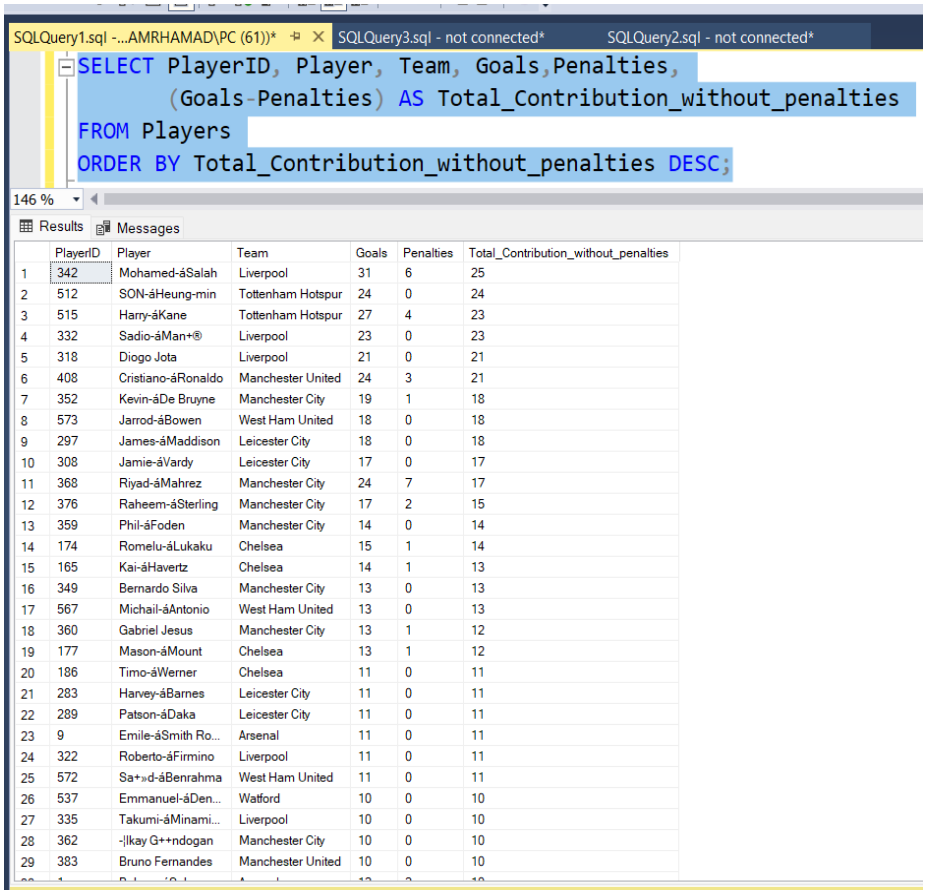
Teams with defensive vulnerabilities might consider reassessing their defensive line-up or tactics, possibly involving defensive players for sale or seeking defensive reinforcements.

Query 6: Average player contribution per team

SQL:

```
SELECT PlayerID, Player, Team, Goals,Penalties,
       (Goals-Penalties) AS Total_Contribution_without_penalties
FROM Players
ORDER BY Total_Contribution_without_penalties DESC;
```

Output:



	PlayerID	Player	Team	Goals	Penalties	Total_Contribution_without_penalties
1	342	Mohamed-áSalah	Liverpool	31	6	25
2	512	SON-áHeung-min	Tottenham Hotspur	24	0	24
3	515	Harry-áKane	Tottenham Hotspur	27	4	23
4	332	Sadio-áMan+®	Liverpool	23	0	23
5	318	Diogo Jota	Liverpool	21	0	21
6	408	Cristiano-áRonaldo	Manchester United	24	3	21
7	352	Kevin-áDe Bruyne	Manchester City	19	1	18
8	573	Jarrod-áBowen	West Ham United	18	0	18
9	297	James-áMaddison	Leicester City	18	0	18
10	308	Jamie-áVardy	Leicester City	17	0	17
11	368	Riyad-áMahrez	Manchester City	24	7	17
12	376	Raheem-áSterling	Manchester City	17	2	15
13	359	Phil-áFoden	Manchester City	14	0	14
14	174	Romelu-áLukaku	Chelsea	15	1	14
15	165	Kai-áHavertz	Chelsea	14	1	13
16	349	Bernardo Silva	Manchester City	13	0	13
17	567	Michail-áAntonio	West Ham United	13	0	13
18	360	Gabriel Jesus	Manchester City	13	1	12
19	177	Mason-áMount	Chelsea	13	1	12
20	186	Timo-áWerner	Chelsea	11	0	11
21	283	Harvey-áBarnes	Leicester City	11	0	11
22	289	Patson-áDaka	Leicester City	11	0	11
23	9	Emile-áSmith Ro...	Arsenal	11	0	11
24	322	Roberto-áFirmino	Liverpool	11	0	11
25	572	Sa+»d-áBenrahma	West Ham United	11	0	11
26	537	Emmanuel-áDen...	Watford	10	0	10
27	335	Takumi-áMinami...	Liverpool	10	0	10
28	362	-|lkay G++ndogan	Manchester City	10	0	10
29	383	Bruno Fernandes	Manchester United	10	0	10

Report:

Weak Points of Teams Based on Players' Performance:

Observing the players' goal contributions after excluding penalties provides insights into the team's weak points and potential areas for improvement:

Liverpool:

Mohamed Salah leads in goal contributions without penalties, followed by **Sadio Mané** and **Diogo Jota**. The team has strong forward contributions but might need better midfield support.

Manchester City:

While having numerous players with significant goal contributions, such as **Kevin De Bruyne, Riyad Mahrez, Raheem Sterling, Phil Foden, and Gabriel Jesus**, the team has an overall strong attacking force.

Chelsea:

Romelu Lukaku, Kai Havertz, Mason Mount, Timo Werner, and Bernardo Silva contribute decently, but the team might aim for more goal-scoring consistency from their forwards.

Manchester United:

Cristiano Ronaldo and Bruno Fernandes contribute significantly, yet the team could use more varied contributions across the squad.

Arsenal:

Bukayo Saka, Eddie Nketiah, Martin Odegaard, Pierre-Emerick Aubameyang, and Gabriel Martinelli show contributions but might need more consistent goal-scoring performances.

Tottenham Hotspur:

Son Heung-min and Harry Kane lead the scoring, indicating a reliance on their contributions.

Other Teams:

Several players from other teams also exhibit notable goal contributions, indicating their importance to their respective teams' offensive strategies.

Suggestions on Players to Consider for Sale:

Deciding on players for sale requires a more comprehensive analysis beyond goal contributions. Factors like overall performance, team tactics, squad depth, and potential replacements should be considered.

Players with limited goal contributions might be candidates for sale if their overall performance doesn't meet the team's requirements.

Player of the Season Nomination:

Based solely on goal contributions without penalties, players like **Mohamed Salah, Son Heung-min, Harry Kane, Kevin De Bruyne, and Cristiano Ronaldo** could be considered for their scoring impact.

This analysis provides a snapshot of player goal contributions but doesn't encompass other crucial aspects of a player's overall performance, which are vital for any decision-making process related to team management or player nominations.

Query 7: Cards per Substitution

SQL:

```
SELECT PlayerID, Player, Team, YellowCards, RedCards, Substitution,
       (YellowCards + RedCards) AS Total_Cards,
       CASE
           WHEN Substitution > 0 THEN ((YellowCards + RedCards) *
1.0) / Substitution
           ELSE 0
       END AS Cards_Per_Substitution
FROM Players
ORDER BY Cards_Per_Substitution DESC;
```

Output:

Results | Messages

	PlayerID	Player	Team	YellowCards	RedCards	Substitution	Total_Cards	Cards_Per_Substitution
1	6	Granit-áXhaka	Arsenal	2	10	1	12	12
2	50	Tyrone-áMings	Aston Villa	0	11	1	11	11
3	411	Luke-áShaw	Manchester United	0	11	1	11	11
4	524	Cristian-áRomero	Tottenham Hotspur	1	10	1	11	11
5	363	Jo+úo Cancelo	Manchester City	0	10	1	10	10
6	492	Mohammed-áSalisu	Southampton	1	8	1	9	9
7	366	Aymeric-áLaporte	Manchester City	1	7	1	8	8
8	373	Rodri	Manchester City	0	8	1	8	8
9	2	Gabriel	Arsenal	1	7	1	8	8
10	213	Joel-áWard	Crystal Palace	0	8	1	8	8
11	154	Ashley R-áWestwood	Burnley	0	7	1	7	7
12	198	Conor-áGallagher	Crystal Palace	0	12	2	12	6
13	286	Ca-ƒlar S+Åy++nc++	Leicester City	0	6	1	6	6
14	46	Ezri-áKonsa	Aston Villa	2	4	1	6	6
15	576	Aaron-áCresswell	West Ham United	2	4	1	6	6
16	591	Declan-áRice	West Ham United	0	11	2	11	5.5
17	618	R+|ben Neves	Wolverhampton Wanderers	0	11	2	11	5.5
18	564	Moussa-áSissoko	Watford	0	5	1	5	5
19	559	Danny-áRose	Watford	0	5	1	5	5
20	477	Jan-áBednarek	Southampton	0	10	2	10	5
21	403	Scott-áMcTominay	Manchester United	0	10	2	10	5
22	97	Yves-áBissouma	Brighton and Hove Albion	0	10	2	10	5
23	251	Luke-áAyling	Leeds United	1	4	1	5	5
24	254	Liam-áCooper	Leeds United	0	5	1	5	5
25	256	Stuart-áDallas	Leeds United	0	5	1	5	5
26	567	Michail-áAntonio	West Ham United	1	8	2	9	4.5
27	549	Hassane-áKamara	Watford	1	3	1	4	4
28	500	James-áWard-Pro...	Southampton	1	3	1	4	4
29	400	Harry-áMaguire	Manchester United	1	7	2	8	4
30	222	Seamus-áColeman	Everton	0	4	1	4	4
31	225	Lucas-áDigne	Everton	0	4	1	4	4
32	233	Mason-áHolgate	Everton	1	7	2	8	4
33	98	Dan-áBurn	Brighton and Hove Albion	0	4	1	4	4
34	103	Lewis-áDunk	Brighton and Hove Albion	1	3	1	4	4
35	134	Nathan-áCollins	Burnley	1	3	1	4	4
36	135	Jack-áCork	Burnley	0	4	1	4	4

Report:

To identify the weak points of any team, suggest players who should be sold based on performance analysis, and nominate a Player of the Season, we'll analyze the provided data.

Weak Points of Any Team:

The weak points can be identified by looking at players who have a higher average of cards (yellow + red) per substitution. A high value in the "Cards_Per_Substitution" column indicates a player who receives more cards per substitution, potentially indicating a disruptive or inconsistent player. In this context, players with higher "Cards_Per_Substitution" could be considered as weak points.

Based on the data provided, some players have notably high values in the "Cards_Per_Substitution" column. These players include:

Granit Xhaka (Arsenal) - 12

Tyrone Mings (Aston Villa) - 11

Luke Shaw (Manchester United) - 11

Cristian Romero (Tottenham Hotspur) - 11

João Cancelo (Manchester City) - 10

These players have a high ratio of cards per substitution and could be considered potential weak points due to their disciplinary issues or inconsistency.

Players to Be Sold Based on Performance Analysis:

Players to be considered for sale could be those who not only have high cards per substitution but also contribute less on the field, especially considering their disruptive behavior. Based on the provided data, some players with higher card counts and potentially lower contributions are:

Granit Xhaka (Arsenal)

Tyrone Mings (Aston Villa)

Luke Shaw (Manchester United)

Cristian Romero (Tottenham Hotspur)

João Cancelo (Manchester City)

And other players with similar disciplinary issues

These players could be considered for sale due to their disciplinary problems affecting their performance.

Nomination for Player of the Season:

Nomination for Player of the Season could be based on several factors such as consistent performance, goals scored, assists made, defensive contributions, disciplinary record, and overall impact on the team. Considering the data provided, identifying the Player of the Season solely based on this information might be challenging as it lacks performance statistics beyond cards received.

The nomination for Player of the Season could be based on the team's specific performances, overall impact on matches, goals scored, assists provided, clean sheets maintained, and other performance metrics that are not solely dependent on disciplinary actions.

Please note that this analysis is based solely on disciplinary actions (yellow and red cards) and does not consider other performance metrics, which are vital in determining the Player of the Season or players to be sold.

Through analysis, it has been discovered that the performance of Liverpool and Manchester are closely similar to each and considered the best 2 teams in this year

Average team goals:

Manchester united 2.6

Liverpool 2.57

Average Goals conceded:

Liverpool 0.68

Manchester united 0.68

Win loss ratio:

Manchester united 9.666

Liverpool 14.00

Also, Mohamed Salah is the best player as his total contribution without penalties is 25 and his average contribution is 0.65.

SQL statement to send email

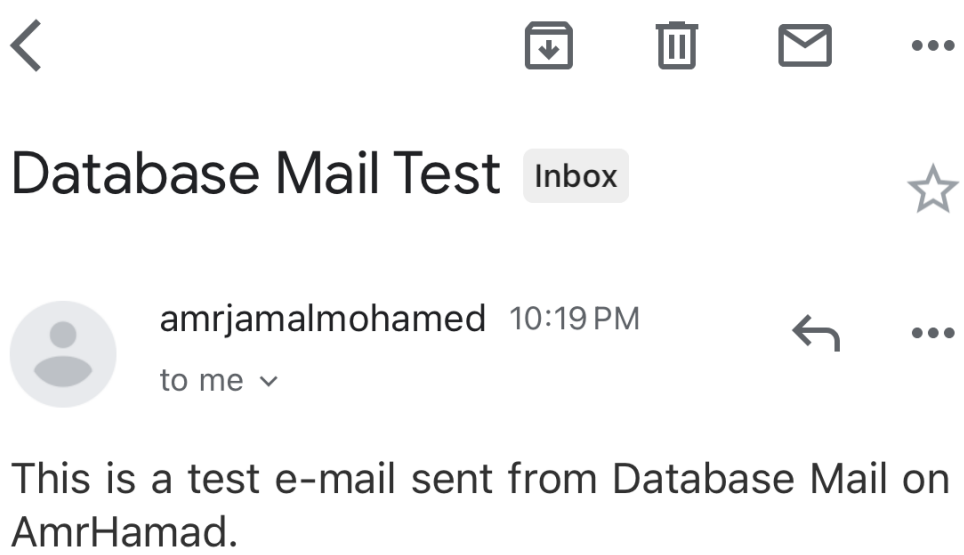
```
DECLARE @profile_name NVARCHAR(255) = 'amr gamal mohamed'
DECLARE @recipients NVARCHAR(255) = 'amrjamalmohamed@gmail.com'
DECLARE @subject NVARCHAR(255)
DECLARE @body NVARCHAR(MAX)

BEGIN TRY
    -- Send Success Notification
    SET @subject = 'Data Loading Process - Success'
    SET @body = 'Data has been successfully loaded from CSV files
into the database.'

    EXEC msdb.dbo.sp_send_dbmail
        @profile_name = @profile_name,
        @recipients = @recipients,
        @subject = @subject,
        @body = @body;
END TRY
BEGIN CATCH
    -- Send Failure Notification
    SET @subject = 'Data Loading Process - Failure'
    SET @body = 'There was an error while loading data from CSV
files into the database.'

    EXEC msdb.dbo.sp_send_dbmail
        @profile_name = @profile_name,
        @recipients = @recipients,
        @subject = @subject,
        @body = @body;
END CATCH;
```

Create database mail:

Click sqlserver logs –> right click on database mail –> configure database mail

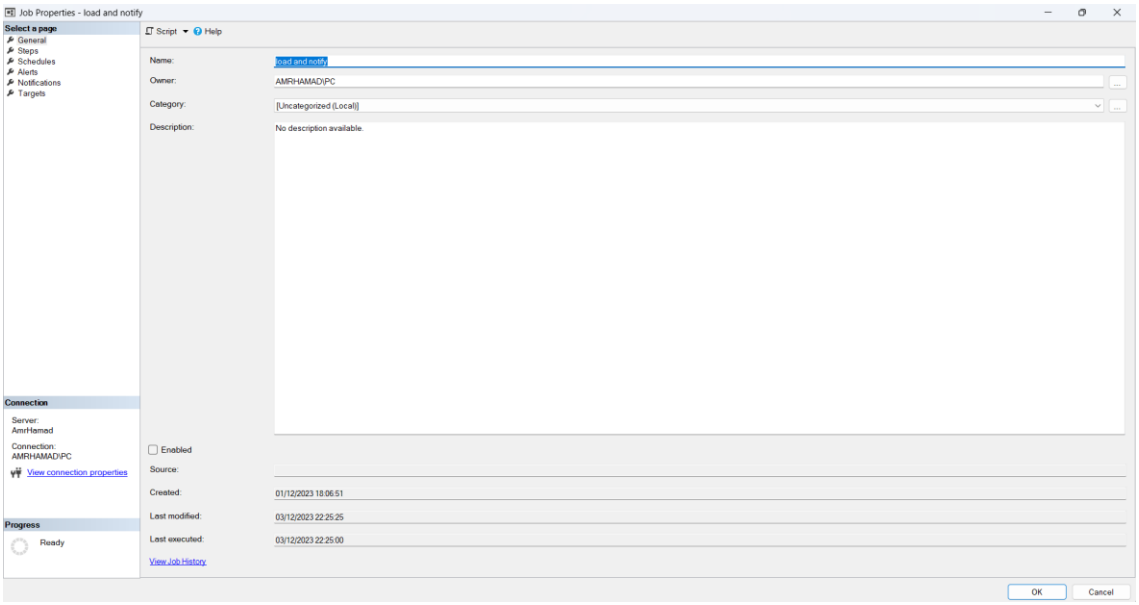
Screenshot for test email

Click sqlserver logs –> right click on database mail –> send test mail

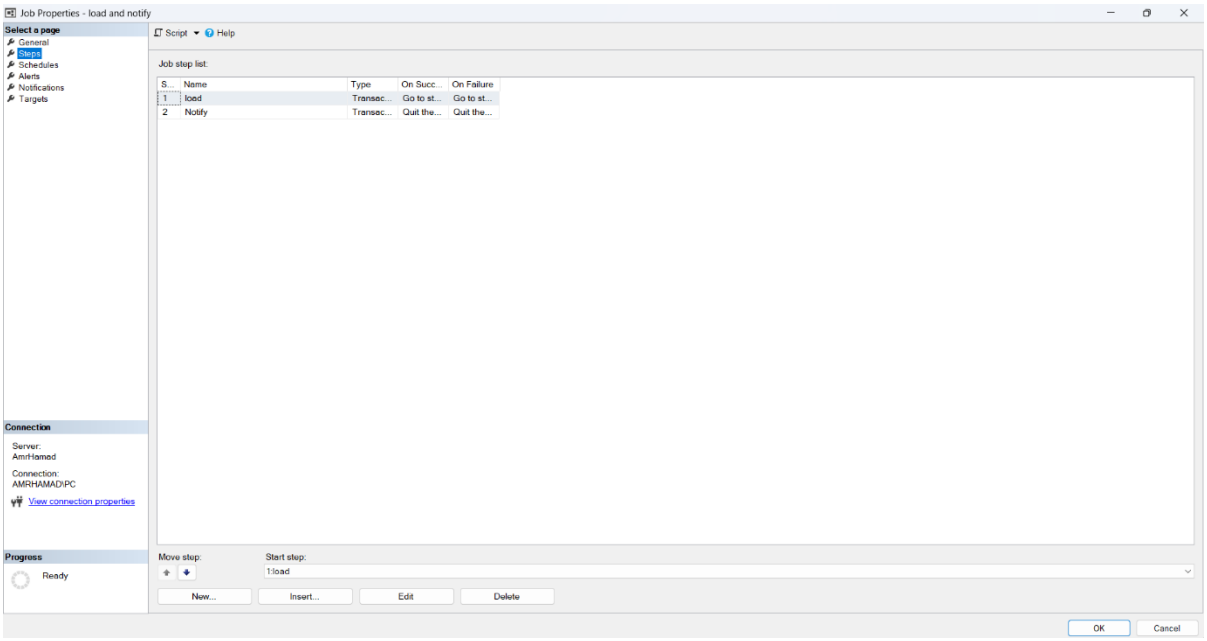


steps for job

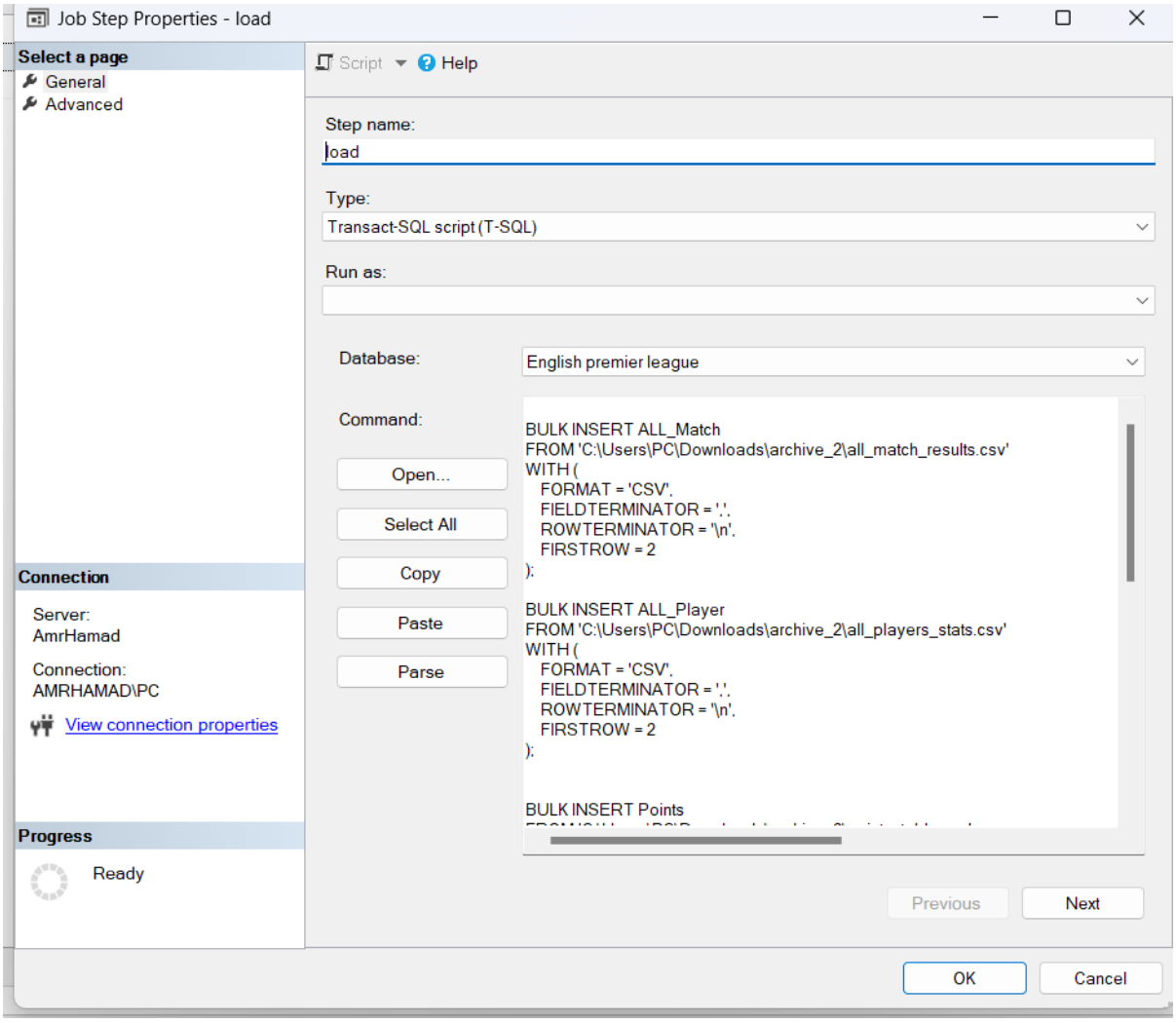
step 1: general → name of job



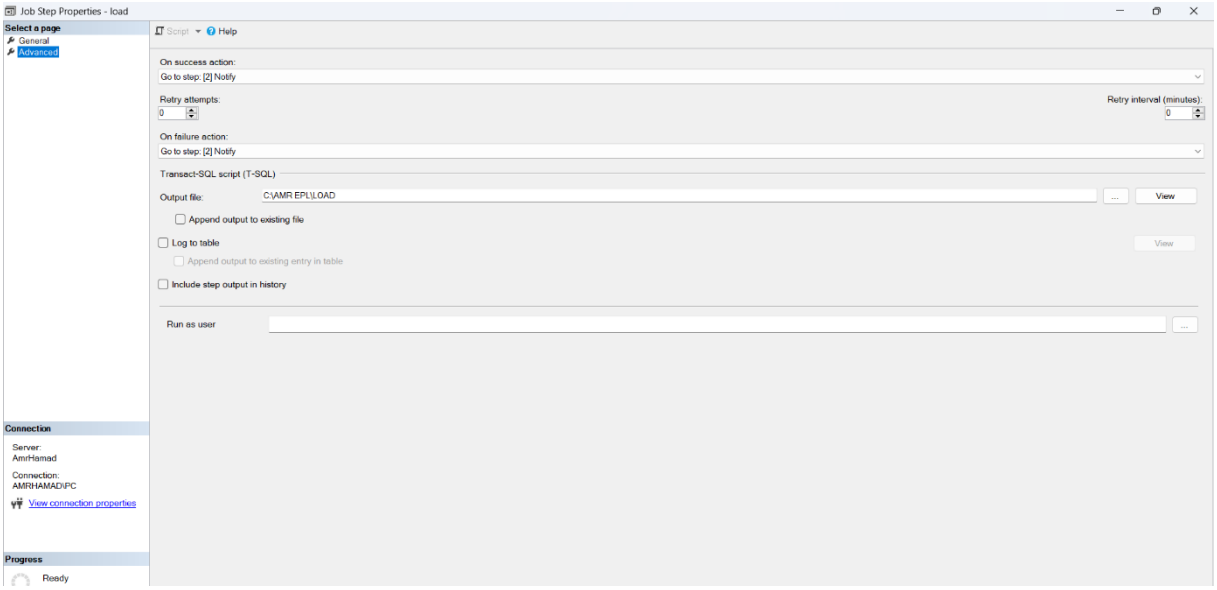
Step2: steps



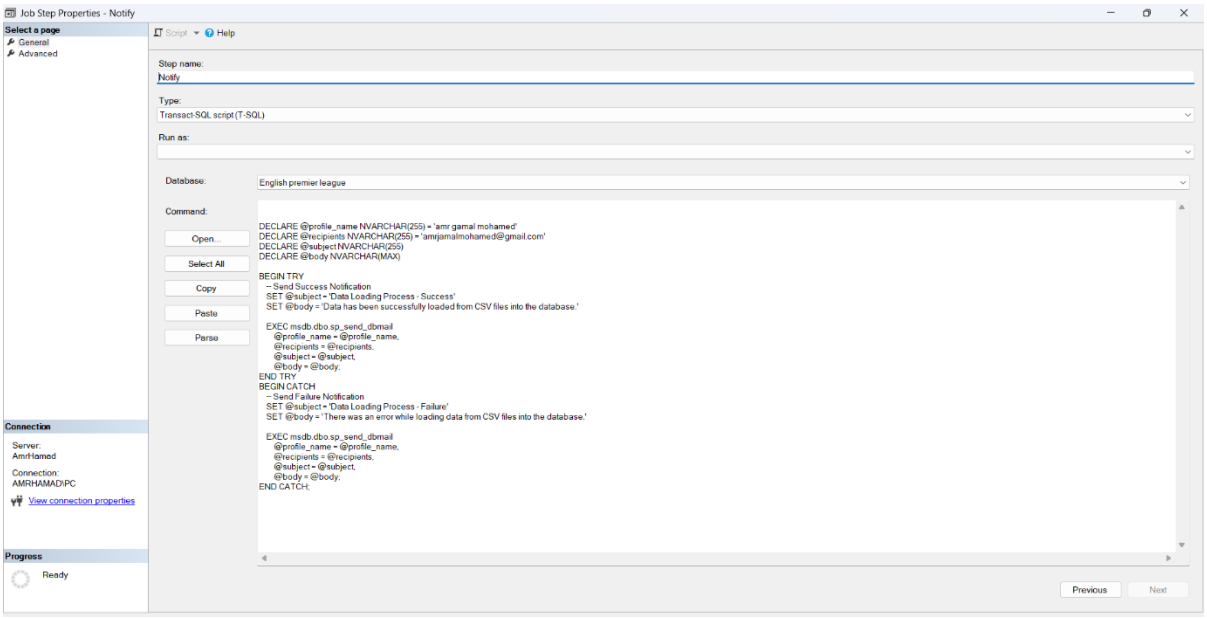
Step3:click on load and show General steps → put sql code of load data in command



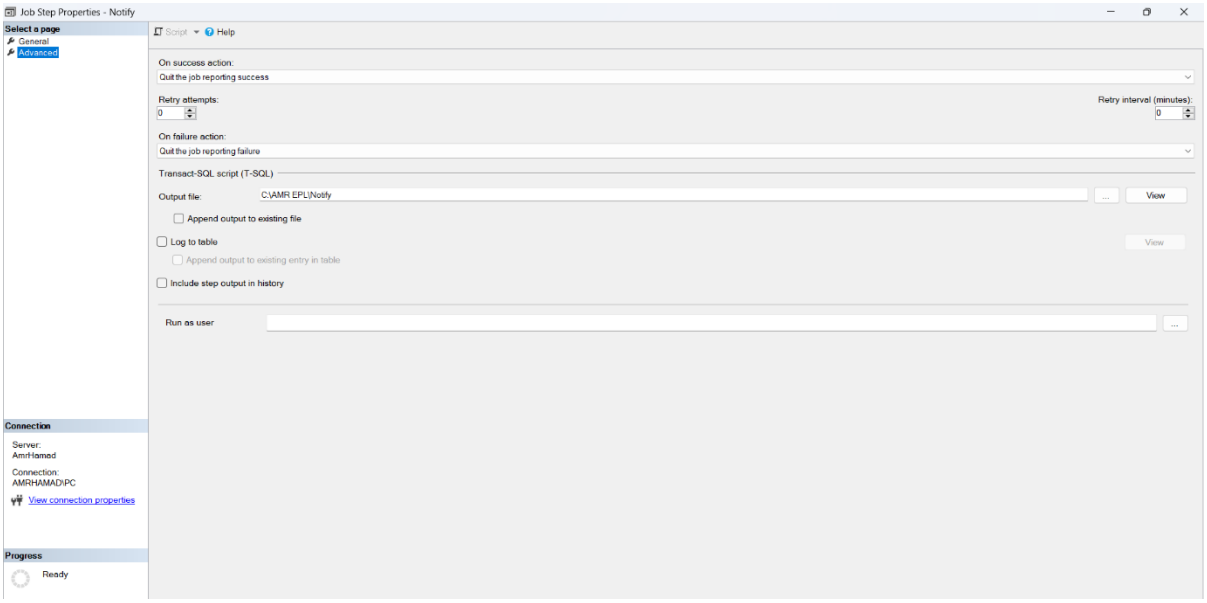
Step 4: click on load and show advanced steps → on successes or failure go to next step



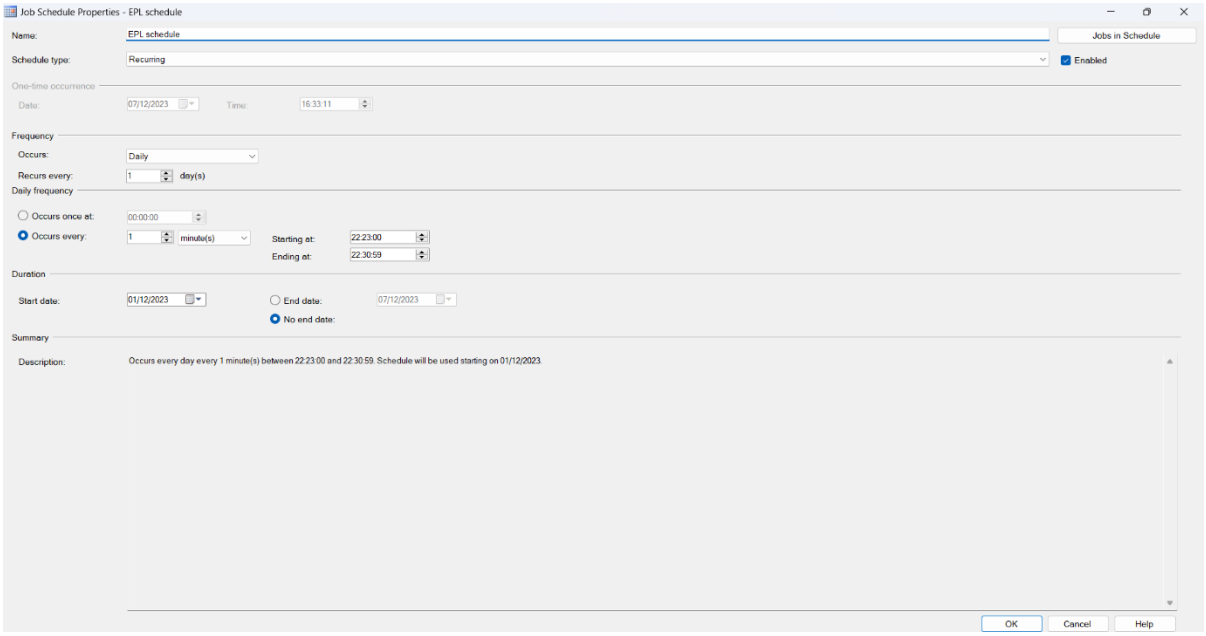
Step 5: :click on notify and show General steps → put sql code of email in command



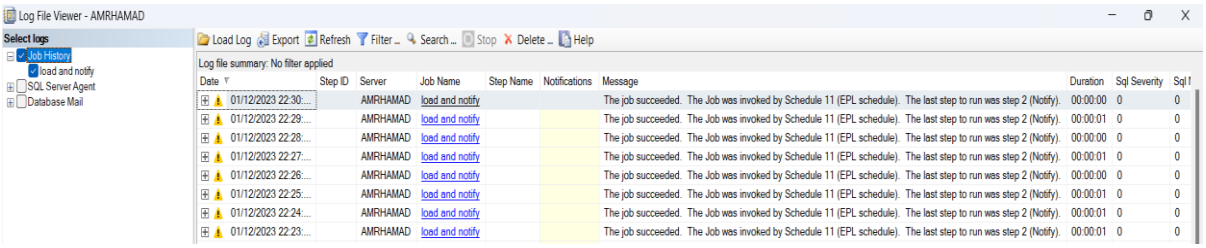
Step 6: click on notify and show advanced steps → on successes or failure quite job reporting successes or failure



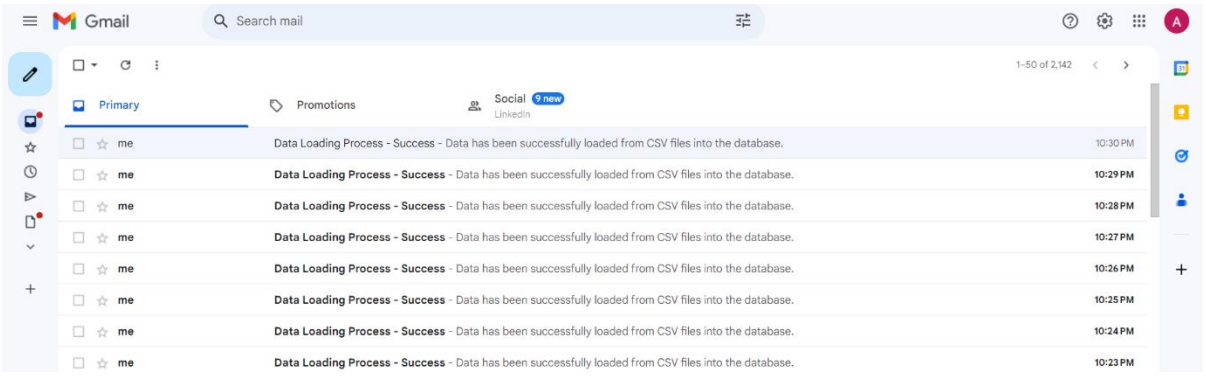
Step 7: job schedule



Execute job



notify mail


Gmail
Search mail
1–50 of 2,142
Primary
Promotions
Social 9 new
LinkedIn
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:30 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:29 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:28 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:27 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:26 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:25 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:24 PM
me Data Loading Process - Success - Data has been successfully loaded from CSV files into the database. 10:23 PM