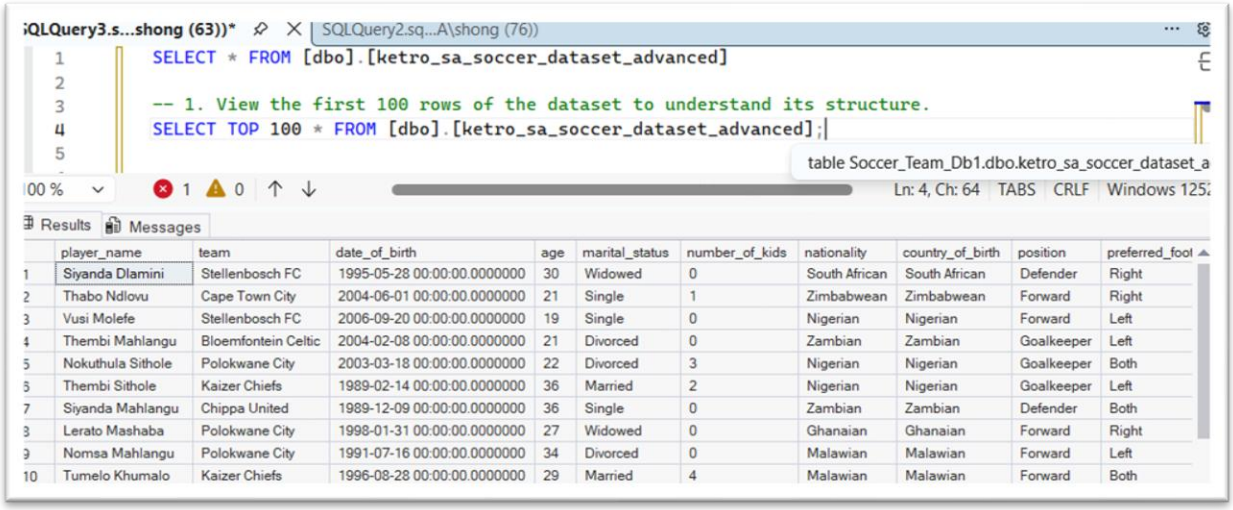
Sindiswa Jachin Shongwe

Practical Exercise: BrightLight Data Analytics SSMS (Microsoft SQL Server)

-- Q1. View the first 100 rows of the dataset to understand its structure.



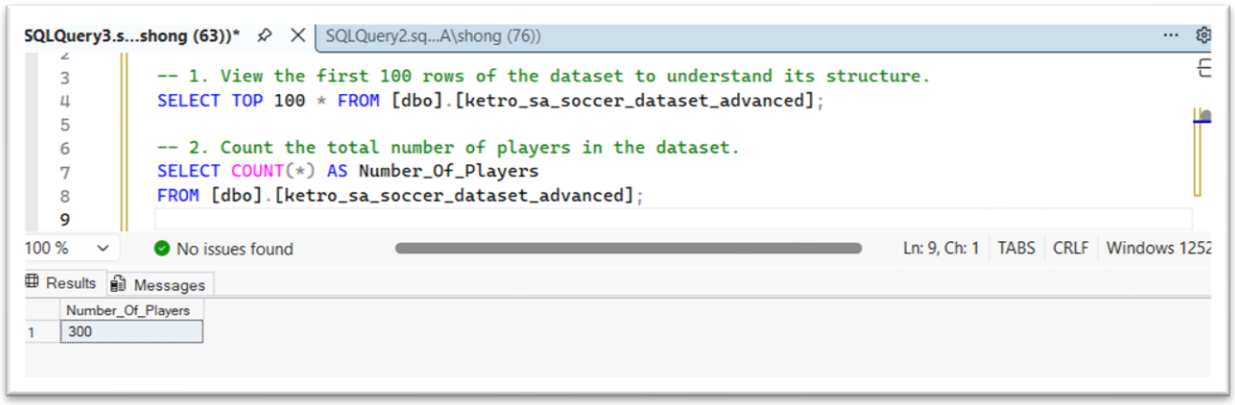
```
SELECT * FROM [dbo].[ketro_sa_soccer_dataset_advanced]

-- 1. View the first 100 rows of the dataset to understand its structure.
SELECT TOP 100 * FROM [dbo].[ketro_sa_soccer_dataset_advanced];
```

	player_name	team	date_of_birth	age	marital_status	number_of_kids	nationality	country_of_birth	position	preferred_foot
1	Siyanda Dlamini	Stellenbosch FC	1995-05-28 00:00:00.0000000	30	Widowed	0	South African	South African	Defender	Right
2	Thabo Ndlovu	Cape Town City	2004-06-01 00:00:00.0000000	21	Single	1	Zimbabwean	Zimbabwean	Forward	Right
3	Vusi Molefe	Stellenbosch FC	2006-09-20 00:00:00.0000000	19	Single	0	Nigerian	Nigerian	Forward	Left
4	Thembi Mahlangu	Bloemfontein Celtic	2004-02-08 00:00:00.0000000	21	Divorced	0	Zambian	Zambian	Goalkeeper	Left
5	Nokuthula Sithole	Polokwane City	2003-03-18 00:00:00.0000000	22	Divorced	3	Nigerian	Nigerian	Goalkeeper	Both
6	Thembi Sithole	Kaizer Chiefs	1989-02-14 00:00:00.0000000	36	Married	2	Nigerian	Nigerian	Goalkeeper	Left
7	Siyanda Mahlangu	Chippa United	1989-12-09 00:00:00.0000000	36	Single	0	Zambian	Zambian	Defender	Both
8	Lerato Mashaba	Polokwane City	1998-01-31 00:00:00.0000000	27	Widowed	0	Ghanaian	Ghanaian	Forward	Right
9	Nomsa Mahlangu	Polokwane City	1991-07-16 00:00:00.0000000	34	Divorced	0	Malawian	Malawian	Forward	Left
10	Tumelo Khumalo	Kaizer Chiefs	1996-08-28 00:00:00.0000000	29	Married	4	Malawian	Malawian	Forward	Both

---

-- Q2. Count the total number of players in the dataset.

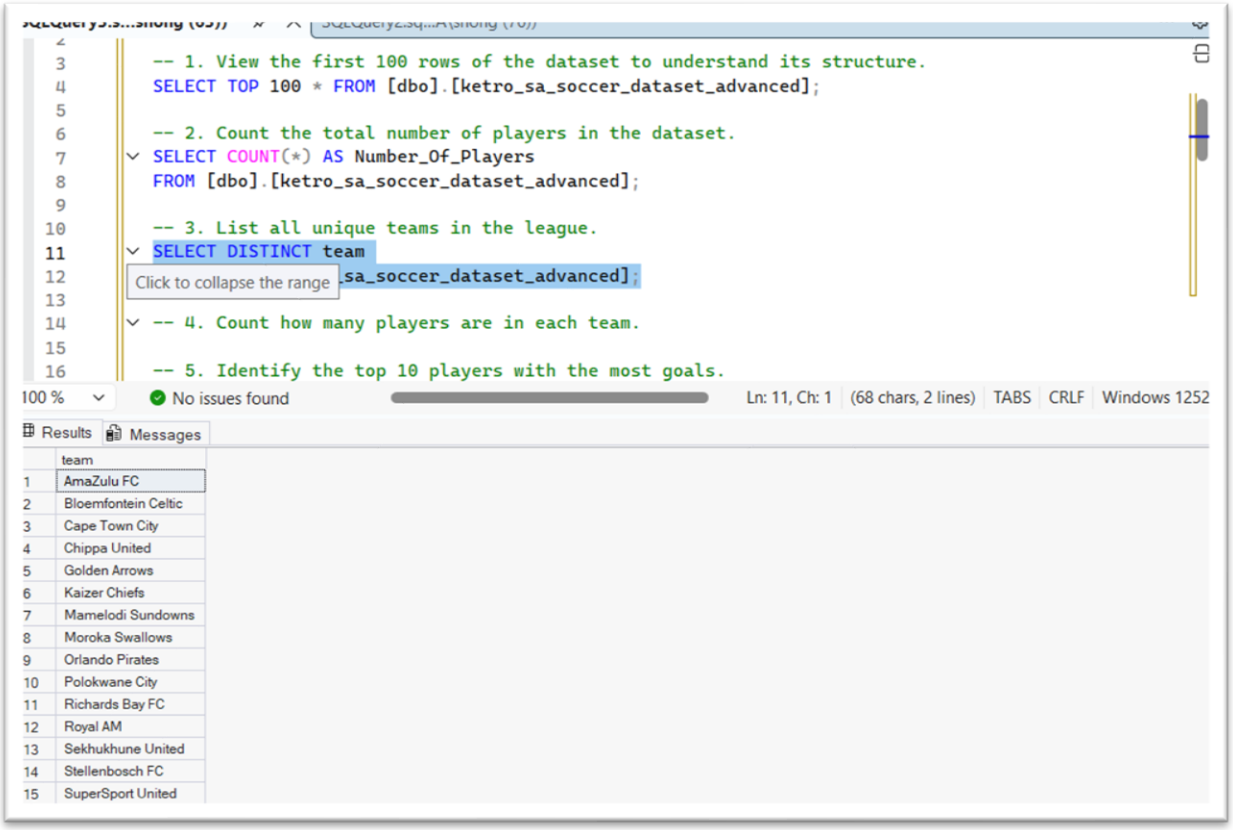


```
-- 1. View the first 100 rows of the dataset to understand its structure.
SELECT TOP 100 * FROM [dbo].[ketro_sa_soccer_dataset_advanced];

-- 2. Count the total number of players in the dataset.
SELECT COUNT(*) AS Number_Of_Players
FROM [dbo].[ketro_sa_soccer_dataset_advanced];
```

	Number_Of_Players
1	300

-- Q3. List all unique teams in the league.



```
-- 1. View the first 100 rows of the dataset to understand its structure.
SELECT TOP 100 * FROM [dbo].[ketro_sa_soccer_dataset_advanced];

-- 2. Count the total number of players in the dataset.
SELECT COUNT(*) AS Number_Of_Players
FROM [dbo].[ketro_sa_soccer_dataset_advanced];

-- 3. List all unique teams in the league.
SELECT DISTINCT team
FROM [dbo].[ketro_sa_soccer_dataset_advanced];

-- 4. Count how many players are in each team.

-- 5. Identify the top 10 players with the most goals.
```

Click to collapse the range

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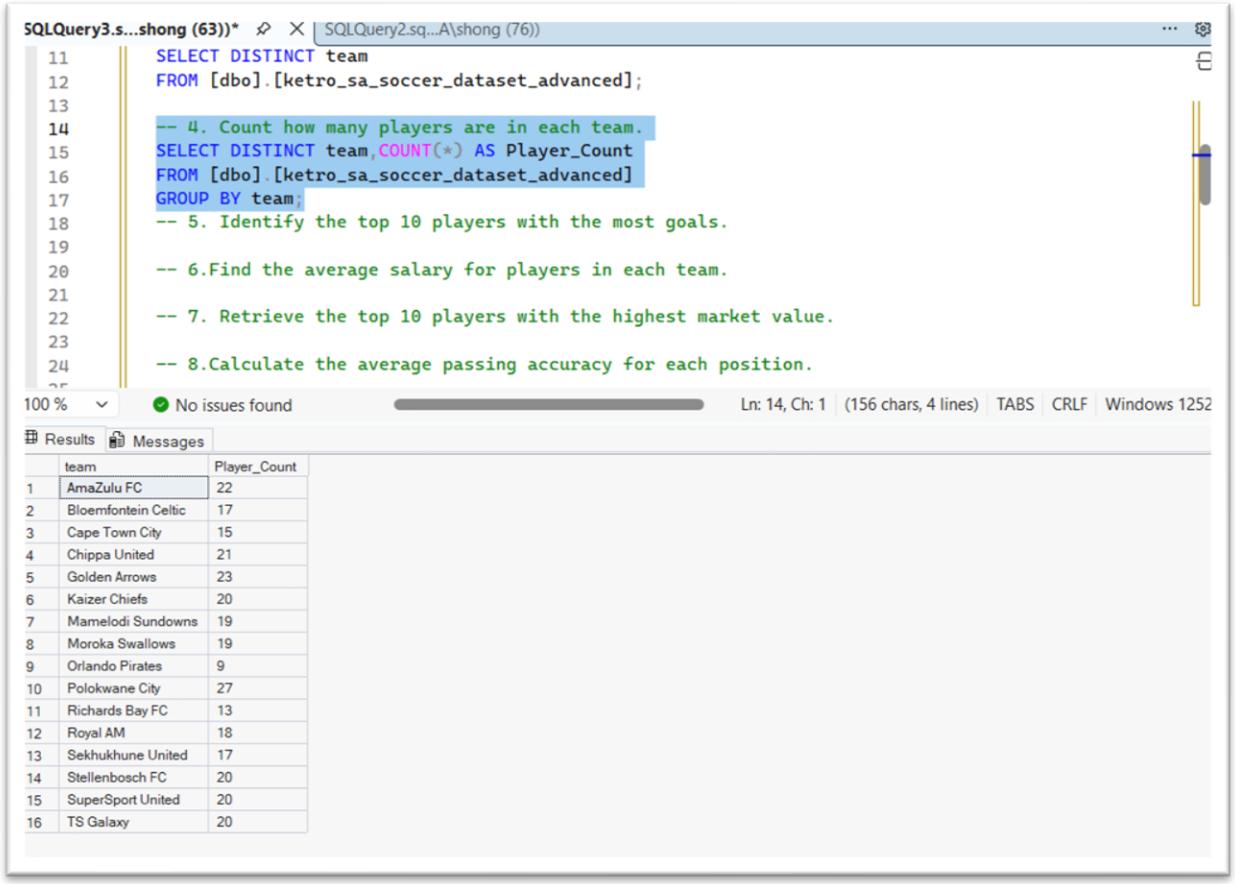
Results | Messages

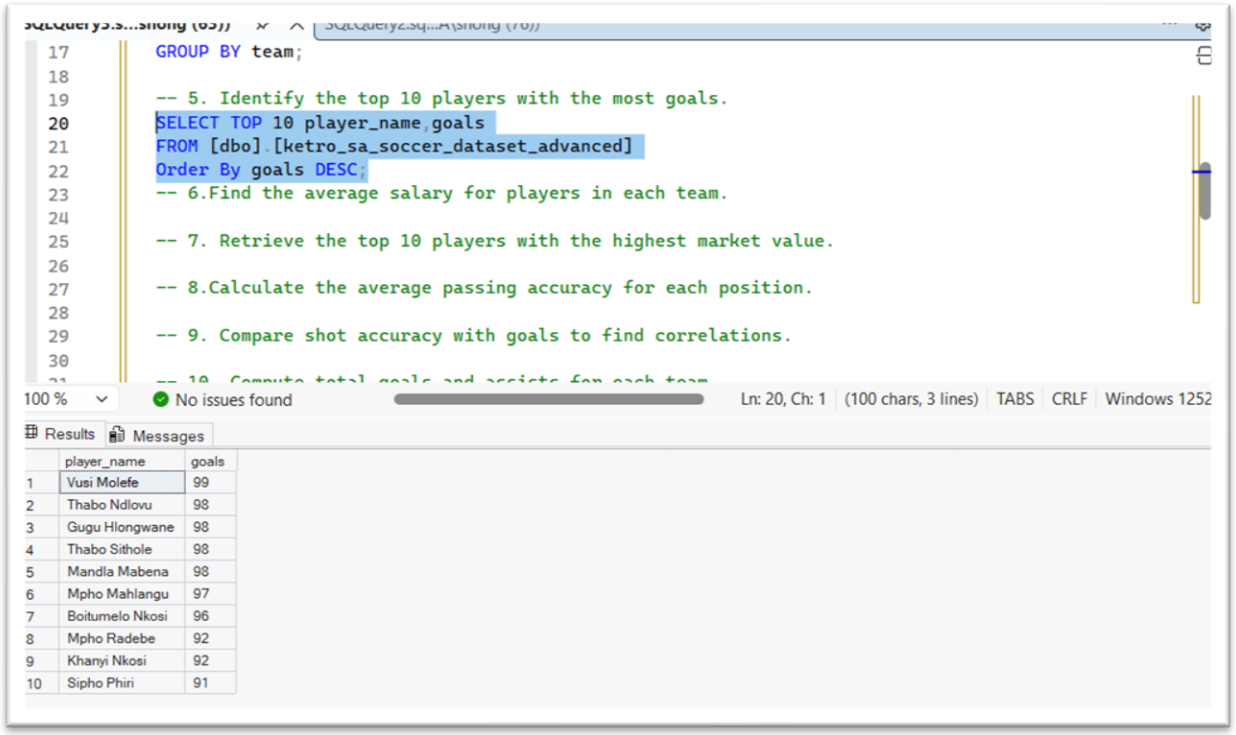
	team
1	AmaZulu FC
2	Bloemfontein Celtic
3	Cape Town City
4	Chippa United
5	Golden Arrows
6	Kaizer Chiefs
7	Mamelodi Sundowns
8	Moroka Swallows
9	Orlando Pirates
10	Polokwane City
11	Richards Bay FC
12	Royal AM
13	Sekhukhune United
14	Stellenbosch FC
15	SuperSport United

- Q4. Count how many players are in each team.



	team	Player_Count
1	AmaZulu FC	22
2	Bloemfontein Celtic	17
3	Cape Town City	15
4	Chippa United	21
5	Golden Arrows	23
6	Kaizer Chiefs	20
7	Mamelodi Sundowns	19
8	Moroka Swallows	19
9	Orlando Pirates	9
10	Polokwane City	27
11	Richards Bay FC	13
12	Royal AM	18
13	Sekhukhune United	17
14	Stellenbosch FC	20
15	SuperSport United	20
16	TS Galaxy	20

-- Q5. Identify the top 10 players with the most goals.



```
GROUP BY team;

-- 5. Identify the top 10 players with the most goals.
SELECT TOP 10 player_name,goals
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
Order By goals DESC;
-- 6.Find the average salary for players in each team.

-- 7. Retrieve the top 10 players with the highest market value.

-- 8.Calculate the average passing accuracy for each position.

-- 9. Compare shot accuracy with goals to find correlations.
```

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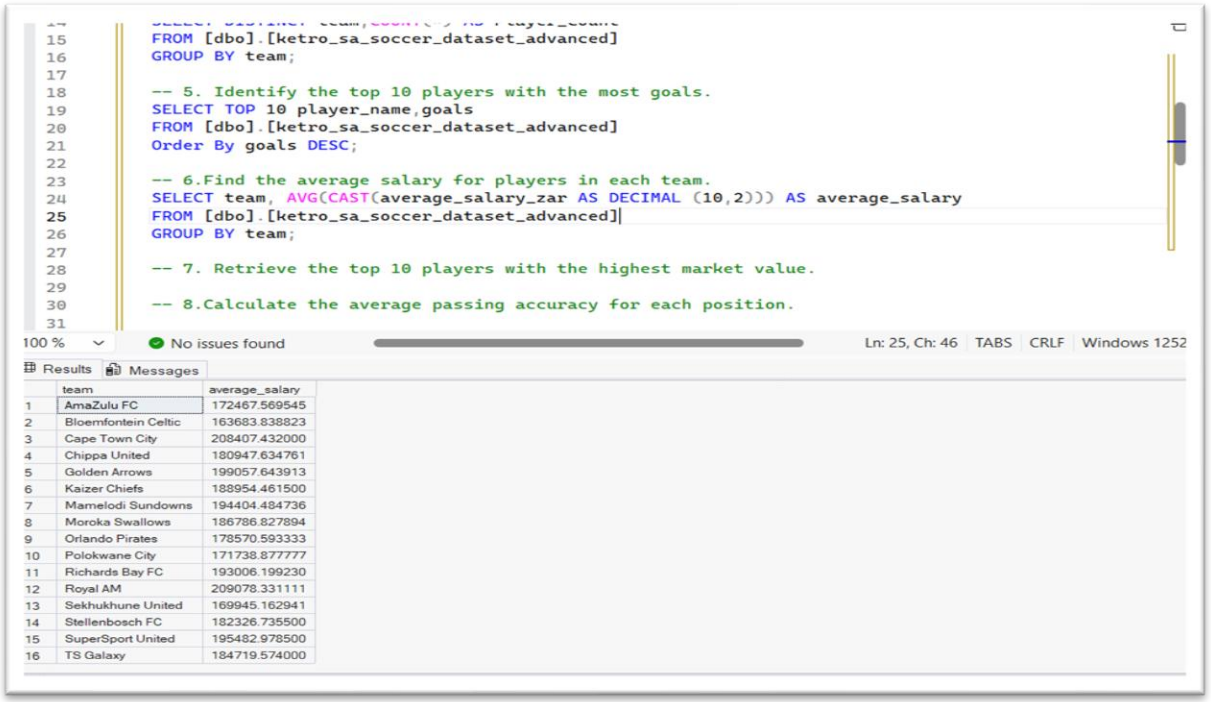
Results | Messages

	player_name	goals
1	Vusi Molefe	99
2	Thabo Ndlovu	98
3	Gugu Hlongwane	98
4	Thabo Sithole	98
5	Mandla Mabena	98
6	Mpho Mahlangu	97
7	Boitumelo Nkosi	96
8	Mpho Radebe	92
9	Khanyi Nkosi	92
10	Sipho Phiri	91

-- Q6. Find the average salary for players in each team.



```
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY team;

-- 5. Identify the top 10 players with the most goals.
SELECT TOP 10 player_name,goals
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
Order By goals DESC;

-- 6.Find the average salary for players in each team.
SELECT team, AVG(CAST(average_salary_zar AS DECIMAL (10,2))) AS average_salary
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY team;

-- 7. Retrieve the top 10 players with the highest market value.

-- 8.Calculate the average passing accuracy for each position.
```

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Results | Messages

	team	average_salary
1	AmaZulu FC	172467.569545
2	Bloemfontein Celtic	163683.838823
3	Cape Town City	208407.432000
4	Chippa United	180947.634761
5	Golden Arrows	199057.643913
6	Kaizer Chiefs	188954.461500
7	Mamelodi Sundowns	194404.484736
8	Moroka Swallows	186786.827894
9	Orlando Pirates	178570.593333
10	Polokwane City	171738.877777
11	Richards Bay FC	193006.199230
12	Royal AM	209078.331111
13	Sekhukhune United	169945.162941
14	Stellenbosch FC	182326.735500
15	SuperSport United	195482.978500
16	TS Galaxy	184719.574000

--Q7. Retrieve the top 10 players with the highest market value.

```sql
-- 6.Find the average salary for players in each team.
SELECT team, AVG(CAST(average_salary_zar AS DECIMAL (10,2))) AS average_salary
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY team;

-- 7. Retrieve the top 10 players with the highest market value.
SELECT TOP 10 market_value_zar,player_name
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
ORDER BY market_value_zar DESC;
-- 8.Calculate the average passing accuracy for each position.

-- 9. Compare shot accuracy with goals to find correlations.

-- 10. Compute total goals and assists for each team.

-- 11. Count players by their marital status.

-- 12. Count players by nationality.
```

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Results | Messages

	market_value_zar	player_name
1	9906925.35	Nokuthula Baloyi
2	9868061.36	Gugu Mokoena
3	9845842.09	Khanyi Mthembu
4	975559.35	Nomsa Hlongwane
5	9606957.95	Kabelo Mahlangu
6	9383118.97	Kagiso Dlamini
7	9352111.61	Lindiwe Phiri
8	9294272.32	Mpho Radebe
9	9277927.61	Lindiwe Molefe
10	9091048.14	Thembi Tshabalala

--Q8. Calculate the average passing accuracy for each position.

```sql
ORDER BY market_value_zar DESC;

-- 8.Calculate the average passing accuracy for each position.
SELECT position,AVG(CAST(passing_accuracy AS DECIMAL (10,2))) AS average_passing_accuracy
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY position;
-- 9. Compare shot accuracy with goals to find correlations.

-- 10. Compute total goals and assists for each team.

-- 11. Count players by their marital status.

-- 12. Count players by nationality.

-- 13. Find average market value grouped by nationality.

-- 14. Determine how many player contracts end in each year.
```

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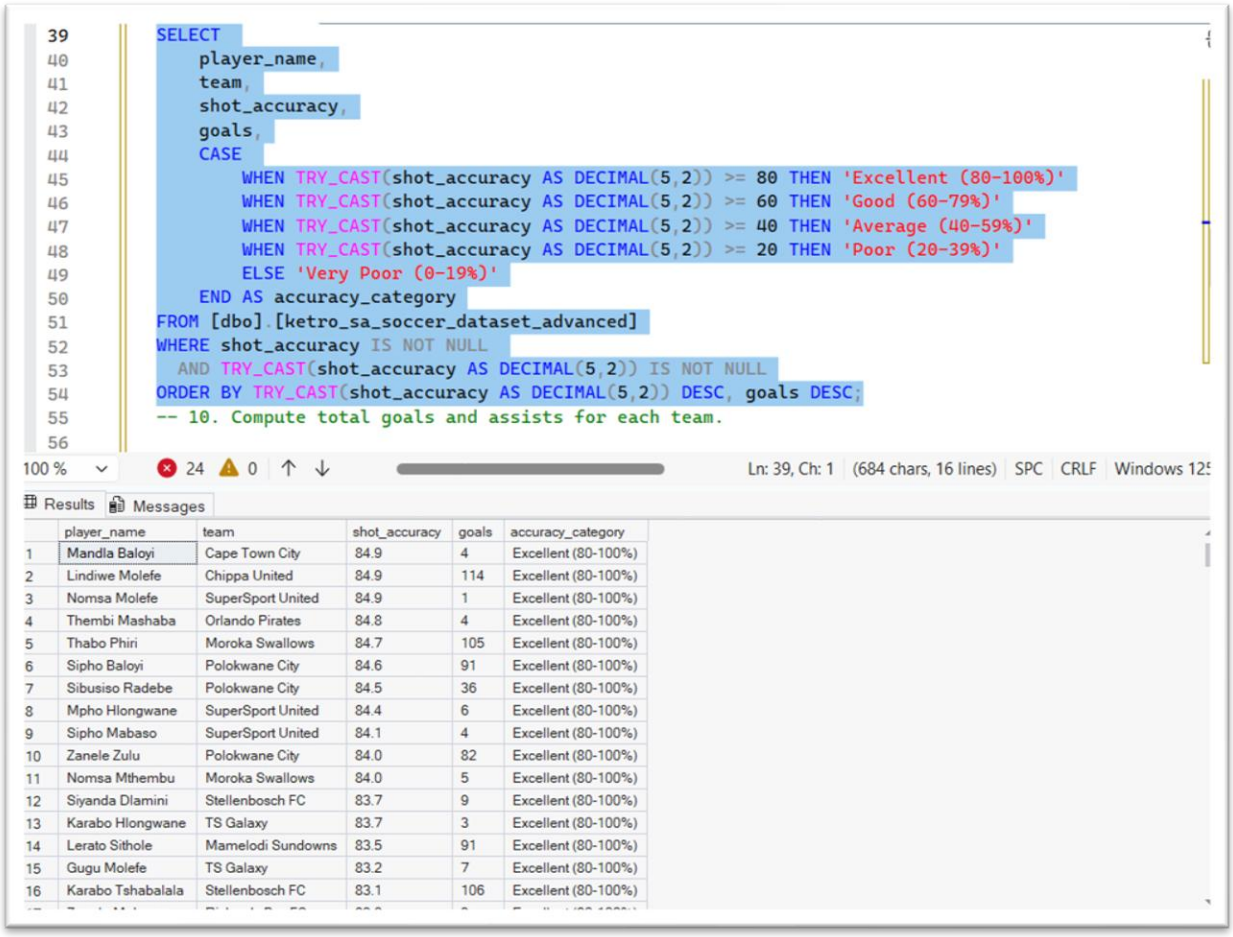
Results | Messages

	position	average_passing_accuracy
1	Defender	82.664285
2	Forward	83.210843
3	Goalkeeper	83.939705
4	Midfielder	82.817721

-- Q9. Compare shot accuracy with goals to find correlations.



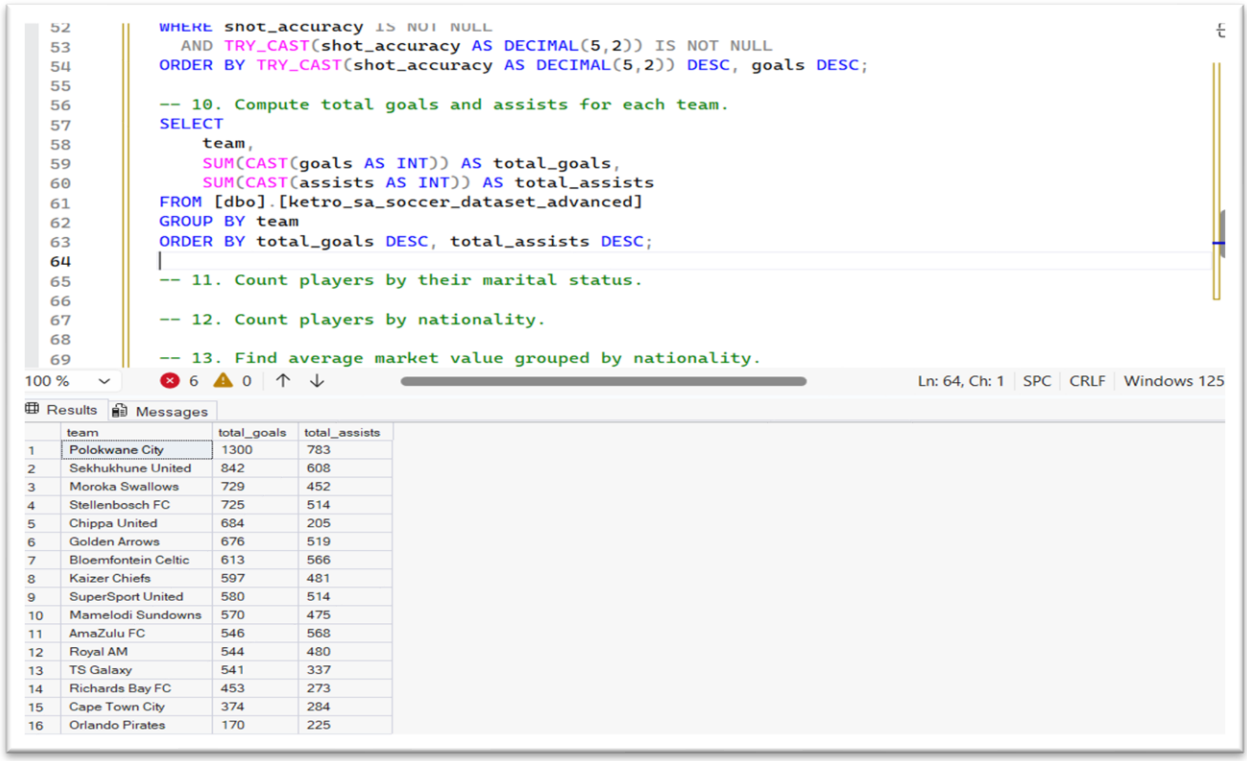
```sql
SELECT
    player_name,
    team,
    shot_accuracy,
    goals,
    CASE
        WHEN TRY_CAST(shot_accuracy AS DECIMAL(5,2)) >= 80 THEN 'Excellent (80-100%)'
        WHEN TRY_CAST(shot_accuracy AS DECIMAL(5,2)) >= 60 THEN 'Good (60-79%)'
        WHEN TRY_CAST(shot_accuracy AS DECIMAL(5,2)) >= 40 THEN 'Average (40-59%)'
        WHEN TRY_CAST(shot_accuracy AS DECIMAL(5,2)) >= 20 THEN 'Poor (20-39%)'
        ELSE 'Very Poor (0-19%)'
    END AS accuracy_category
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
WHERE shot_accuracy IS NOT NULL
  AND TRY_CAST(shot_accuracy AS DECIMAL(5,2)) IS NOT NULL
ORDER BY TRY_CAST(shot_accuracy AS DECIMAL(5,2)) DESC, goals DESC;
-- 10. Compute total goals and assists for each team.
```

100 % 24 0 Ln: 39, Ch: 1 (684 chars, 16 lines) SPC CRLF Windows 12

Results Messages

	player_name	team	shot_accuracy	goals	accuracy_category
1	Mandla Baloyi	Cape Town City	84.9	4	Excellent (80-100%)
2	Lindiwe Molefe	Chippa United	84.9	114	Excellent (80-100%)
3	Nomsa Molefe	SuperSport United	84.9	1	Excellent (80-100%)
4	Thembi Mashaba	Orlando Pirates	84.8	4	Excellent (80-100%)
5	Thabo Phiri	Moroka Swallows	84.7	105	Excellent (80-100%)
6	Sipho Baloyi	Polokwane City	84.6	91	Excellent (80-100%)
7	Sibusiso Radebe	Polokwane City	84.5	36	Excellent (80-100%)
8	Mpho Hlongwane	SuperSport United	84.4	6	Excellent (80-100%)
9	Sipho Mabaso	SuperSport United	84.1	4	Excellent (80-100%)
10	Zanele Zulu	Polokwane City	84.0	82	Excellent (80-100%)
11	Nomsa Mthembu	Moroka Swallows	84.0	5	Excellent (80-100%)
12	Siyanda Dlamini	Stellenbosch FC	83.7	9	Excellent (80-100%)
13	Karabo Hlongwane	TS Galaxy	83.7	3	Excellent (80-100%)
14	Lerato Sithole	Mamelodi Sundowns	83.5	91	Excellent (80-100%)
15	Gugu Molefe	TS Galaxy	83.2	7	Excellent (80-100%)
16	Karabo Tshabalala	Stellenbosch FC	83.1	106	Excellent (80-100%)

-- Q10. Compute total goals and assists for each team.



```
WHERE shot_accuracy IS NOT NULL
  AND TRY_CAST(shot_accuracy AS DECIMAL(5,2)) IS NOT NULL
ORDER BY TRY_CAST(shot_accuracy AS DECIMAL(5,2)) DESC, goals DESC;

-- 10. Compute total goals and assists for each team.
SELECT
    team,
    SUM(CAST(goals AS INT)) AS total_goals,
    SUM(CAST(assists AS INT)) AS total_assists
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY team
ORDER BY total_goals DESC, total_assists DESC;

-- 11. Count players by their marital status.

-- 12. Count players by nationality.

-- 13. Find average market value grouped by nationality.
```

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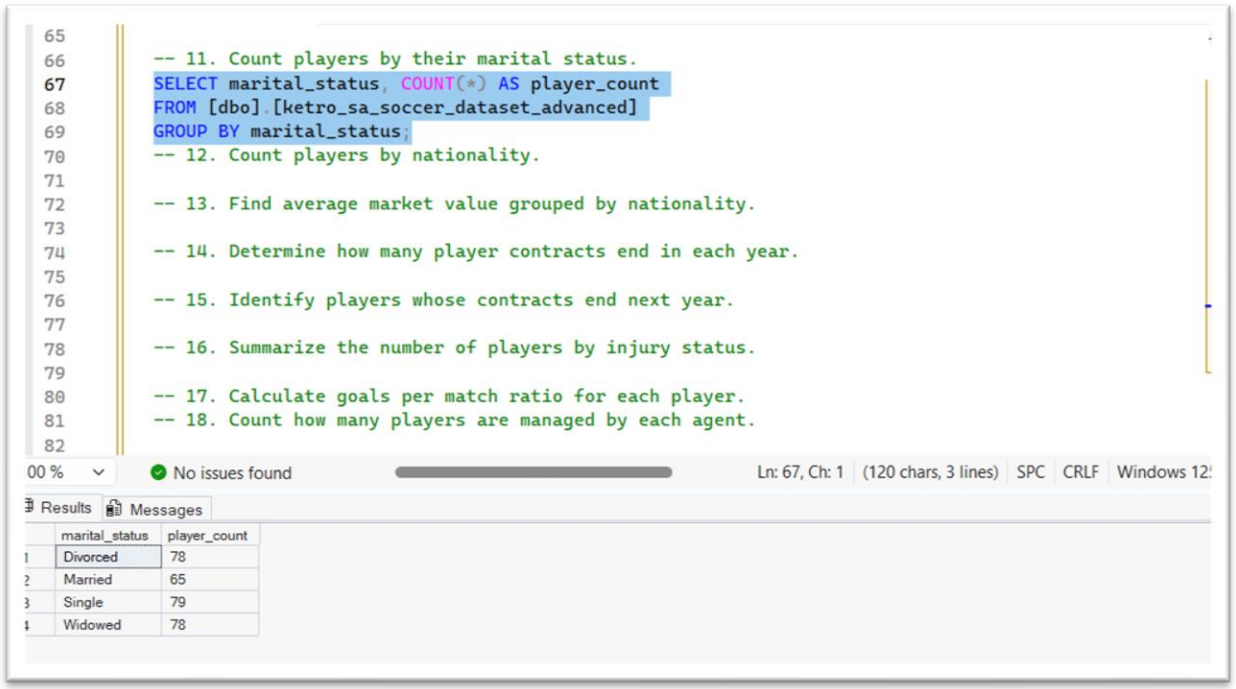
Results | Messages

	team	total_goals	total_assists
1	Polokwane City	1300	783
2	Sekhukhune United	842	608
3	Moroka Swallows	729	452
4	Stellenbosch FC	725	514
5	Chippa United	684	205
6	Golden Arrows	676	519
7	Bloemfontein Celtic	613	566
8	Kaizer Chiefs	597	481
9	SuperSport United	580	514
10	Mamelodi Sundowns	570	475
11	AmaZulu FC	546	568
12	Royal AM	544	480
13	TS Galaxy	541	337
14	Richards Bay FC	453	273
15	Cape Town City	374	284
16	Orlando Pirates	170	225

--- Q11. Count players by their marital status.



```
-- 11. Count players by their marital status.
SELECT marital_status, COUNT(*) AS player_count
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY marital_status;
-- 12. Count players by nationality.

-- 13. Find average market value grouped by nationality.

-- 14. Determine how many player contracts end in each year.

-- 15. Identify players whose contracts end next year.

-- 16. Summarize the number of players by injury status.

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.
```

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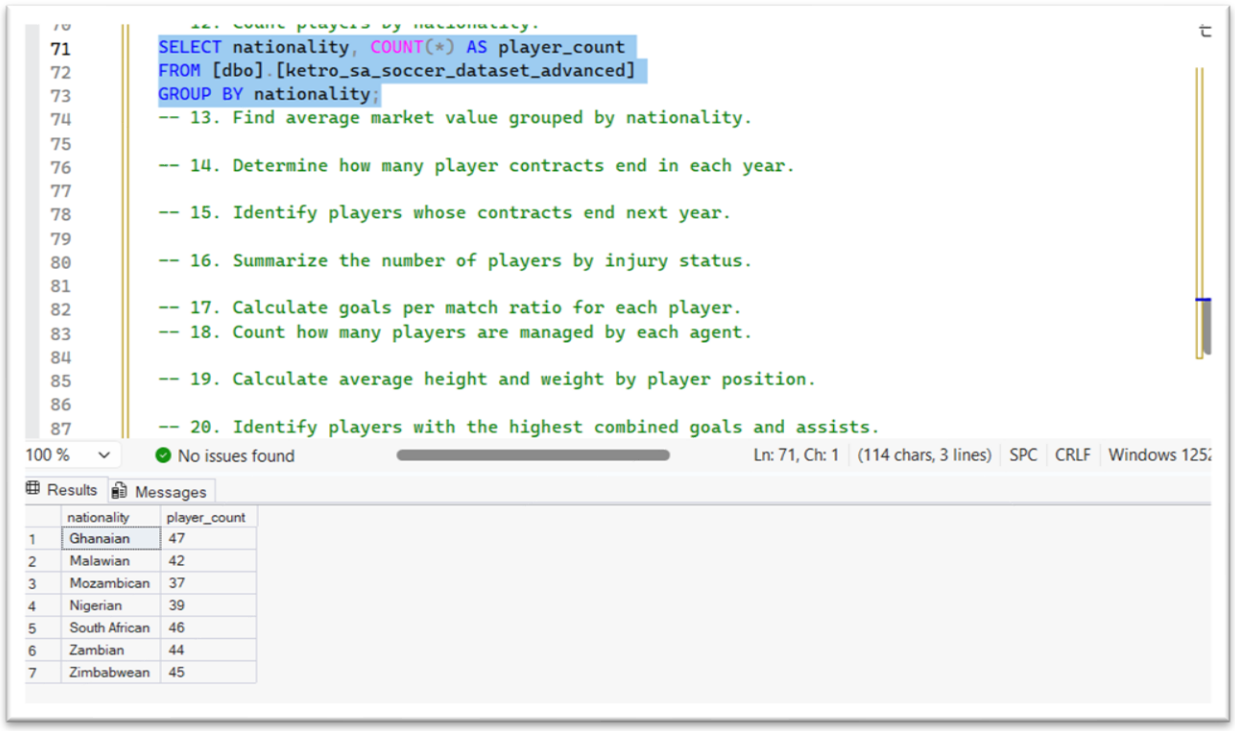
Results | Messages

	marital_status	player_count
1	Divorced	78
2	Married	65
3	Single	79
4	Widowed	78

-- 12. Count players by nationality.



```sql
SELECT nationality, COUNT(*) AS player_count
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY nationality;
-- 13. Find average market value grouped by nationality.

-- 14. Determine how many player contracts end in each year.

-- 15. Identify players whose contracts end next year.

-- 16. Summarize the number of players by injury status.

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.

-- 20. Identify players with the highest combined goals and assists.
```

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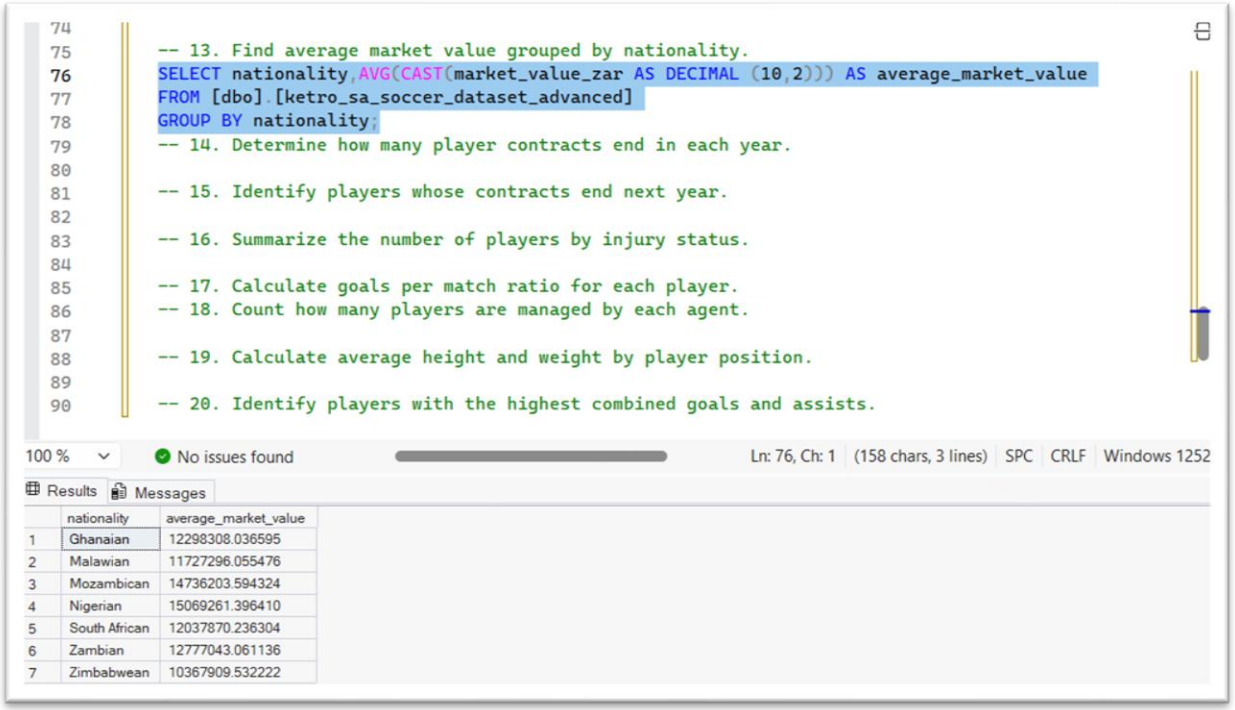
Results | Messages

	nationality	player_count
1	Ghanaian	47
2	Malawian	42
3	Mozambican	37
4	Nigerian	39
5	South African	46
6	Zambian	44
7	Zimbabwean	45

--- Q13. Find average market value grouped by nationality.



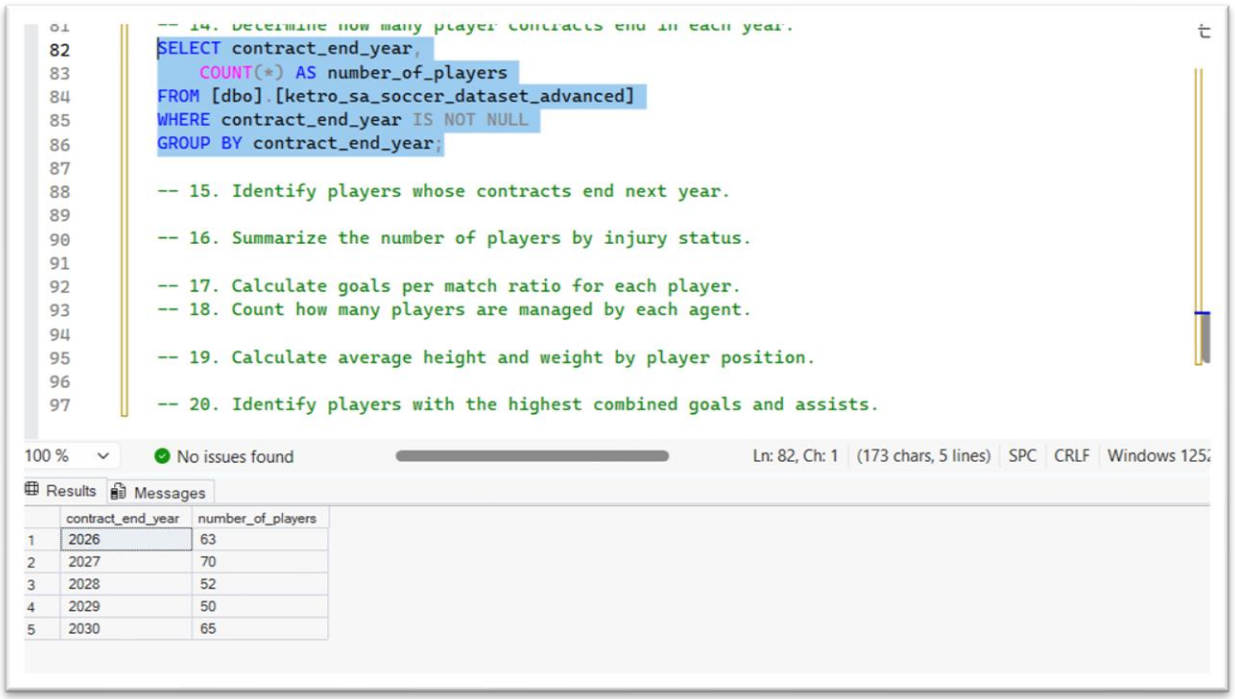
```sql
-- 13. Find average market value grouped by nationality.
SELECT nationality,AVG(CAST(market_value_zar AS DECIMAL (10,2))) AS average_market_value
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY nationality;
-- 14. Determine how many player contracts end in each year.

-- 15. Identify players whose contracts end next year.

-- 16. Summarize the number of players by injury status.

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.

-- 20. Identify players with the highest combined goals and assists.
```

100 % | No issues found | Ln: 76, Ch: 1 | (158 chars, 3 lines) | SPC | CRLF | Windows 1252

Results | Messages

	nationality	average_market_value
1	Ghanaian	12298308.036595
2	Malawian	11727296.055476
3	Mozambican	14736203.594324
4	Nigerian	15069261.396410
5	South African	12037870.236304
6	Zambian	12777043.061136
7	Zimbabwean	10367909.532222

-- Q14. Determine how many player contracts end in each year.



```
-- 14. Determine how many player contracts end in each year.
SELECT contract_end_year,
    COUNT(*) AS number_of_players
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
WHERE contract_end_year IS NOT NULL
GROUP BY contract_end_year;

-- 15. Identify players whose contracts end next year.

-- 16. Summarize the number of players by injury status.

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.

-- 20. Identify players with the highest combined goals and assists.
```

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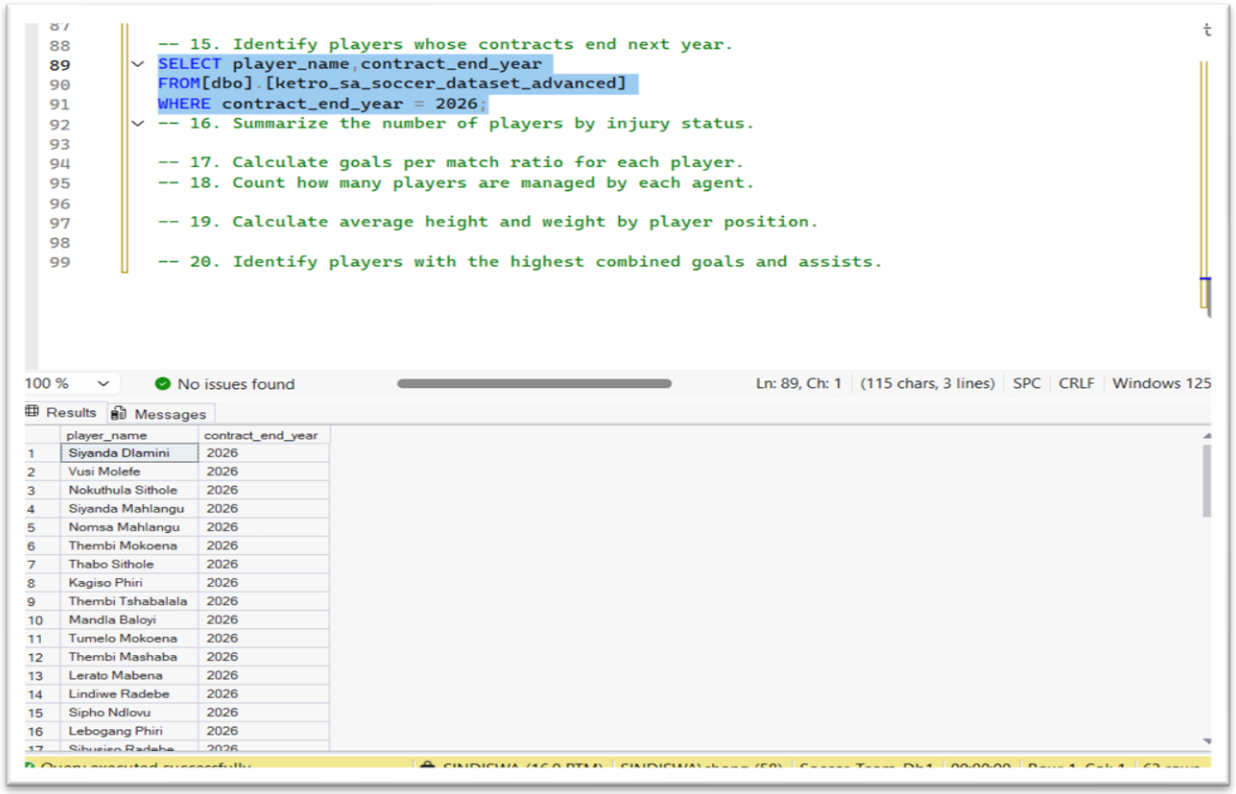
Results | Messages

	contract_end_year	number_of_players
1	2026	63
2	2027	70
3	2028	52
4	2029	50
5	2030	65

-- 15. Identify players whose contracts end next year.



```
-- 15. Identify players whose contracts end next year.
SELECT player_name,contract_end_year
FROM[dbo].[ketro_sa_soccer_dataset_advanced]
WHERE contract_end_year = 2026;
-- 16. Summarize the number of players by injury status.

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.

-- 20. Identify players with the highest combined goals and assists.
```

100 % — No issues found — Ln: 89, Ch: 1 — (115 chars, 3 lines) — SPC — CRLF — Windows 125

Results | Messages

	player_name	contract_end_year
1	Siyanda Dlamini	2026
2	Vusi Molefe	2026
3	Nokuthula Sithole	2026
4	Siyanda Mahlangu	2026
5	Nomsa Mahlangu	2026
6	Thembi Mokoena	2026
7	Thabo Sithole	2026
8	Kagiso Phiri	2026
9	Thembi Tshabalala	2026
10	Mandla Baloyi	2026
11	Tumelo Mokoena	2026
12	Thembi Mashaba	2026
13	Lerato Mabena	2026
14	Lindiwe Radebe	2026
15	Sipho Ndlovu	2026
16	Lebogang Phiri	2026
17	Sibusiso Radebe	2026

--- Q16. Summarize the number of players by injury status.

```sql
-- 16. Summarize the number of players by injury status.
SELECT injury_status,COUNT(*) AS player_count
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY injury_status;

-- 17. Calculate goals per match ratio for each player.
-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.

-- 20. Identify players with the highest combined goals and assists.
```

100 % | No issues found | Ln: 94, Ch: 1 | (117 chars, 3 lines) | SPC | CRLF | Windows 1252

Results | Messages

	injury_status	player_count
1	Healthy	99
2	Injured	97
3	Recovering	104

---- Q17. Calculate goals per match ratio for each player.

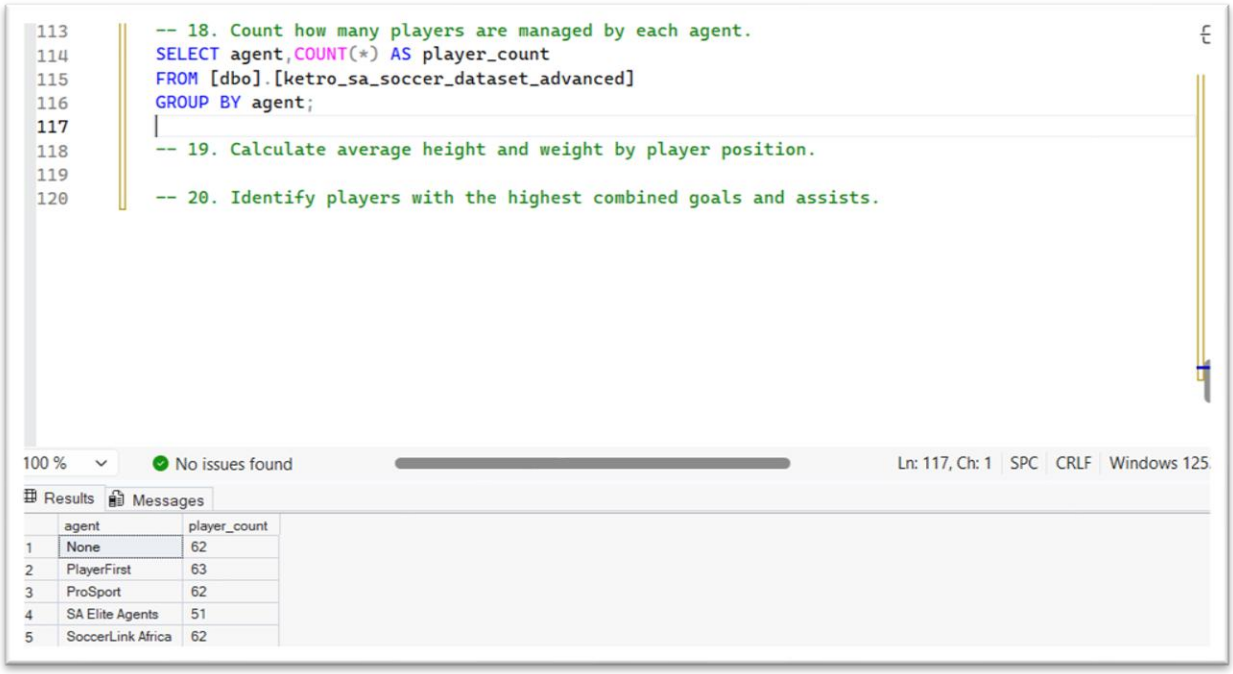
```sql
-- 17. Calculate goals per match ratio for each player.
SELECT
    player_name,
    goals,
    matches_played,
    CASE
        WHEN matches_played > 0
        THEN ROUND(CAST(goals AS FLOAT) / CAST(matches_played AS FLOAT), 3)
        ELSE 0
    END AS goals_per_match_ratio
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
WHERE matches_played > 0
ORDER BY goals_per_match_ratio DESC;

-- 18. Count how many players are managed by each agent.

-- 19. Calculate average height and weight by player position.
```

100 % | 1 | 0 | Ln: 111, Ch: 1 | SPC | CRLF | Windows 125

Results | Messages

	player_name	goals	matches_played	goals_per_match_ratio
1	Thembi Zulu	72	3	24
2	Thabo Mthembu	88	5	17,6
3	Gugu Tshabalala	57	9	6,333
4	Lindiwe Mabaso	67	13	5,154
5	Mpho Zulu	5	1	5
6	Sipho Tshabalala	110	26	4,231
7	Boitumelo Nkosi	96	25	3,84

---- Q18. Count how many players are managed by each agent.



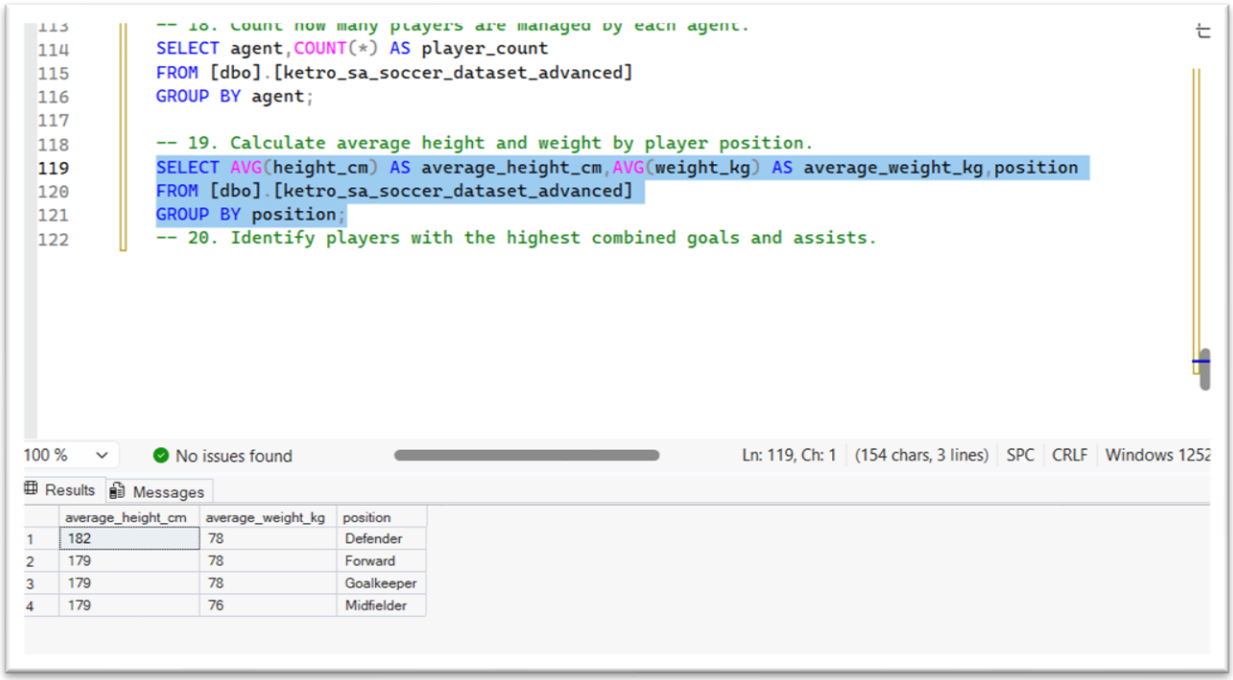
```
113    -- 18. Count how many players are managed by each agent.
114    SELECT agent,COUNT(*) AS player_count
115    FROM [dbo].[ketro_sa_soccer_dataset_advanced]
116    GROUP BY agent;
117
118    -- 19. Calculate average height and weight by player position.
119
120    -- 20. Identify players with the highest combined goals and assists.
```

100 % | No issues found | Ln: 117, Ch: 1 | SPC | CRLF | Windows 125

Results | Messages

	agent	player_count
1	None	62
2	PlayerFirst	63
3	ProSport	62
4	SA Elite Agents	51
5	SoccerLink Africa	62

---- Q19. Calculate average height and weight by player position.



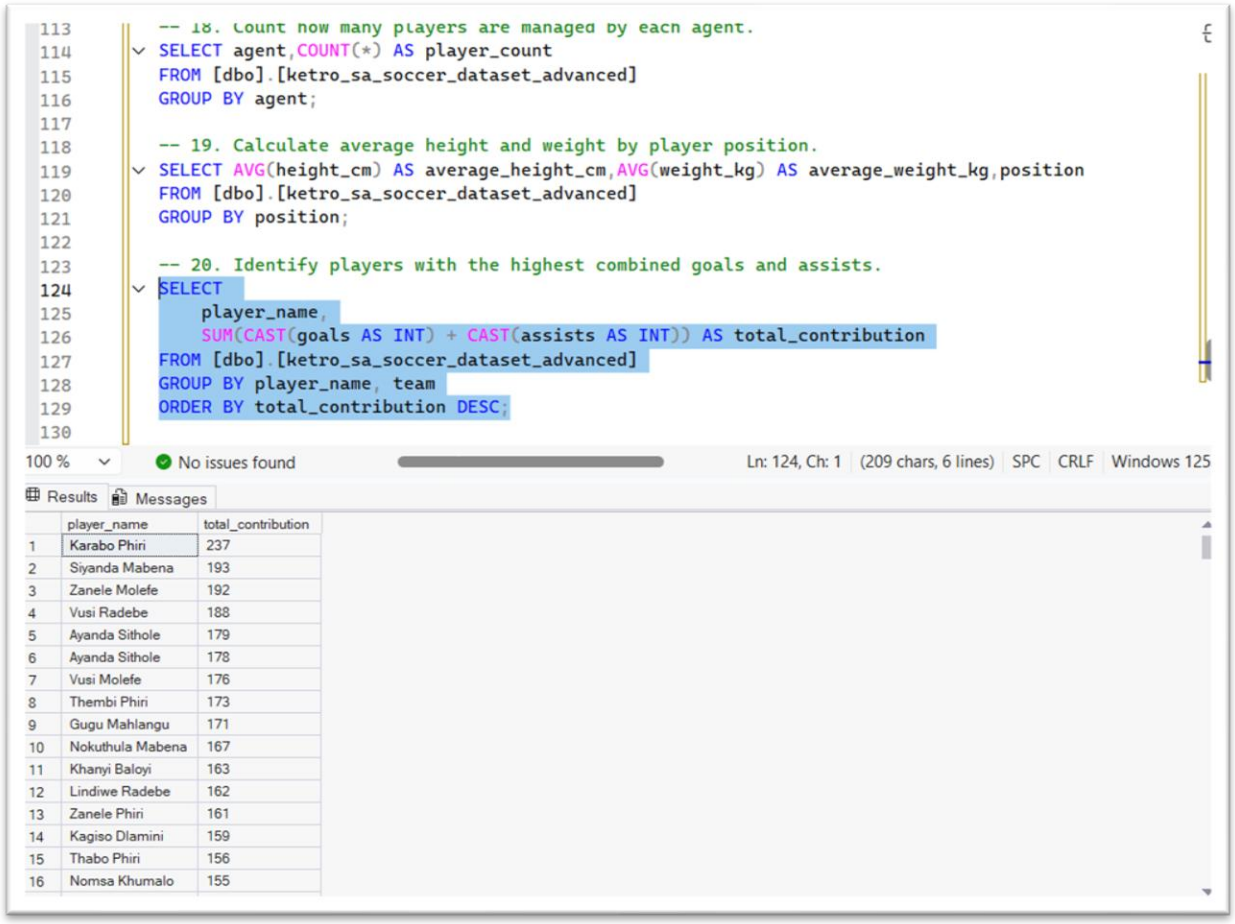
```
113    -- 18. Count how many players are managed by each agent.
114    SELECT agent,COUNT(*) AS player_count
115    FROM [dbo].[ketro_sa_soccer_dataset_advanced]
116    GROUP BY agent;
117
118    -- 19. Calculate average height and weight by player position.
119    SELECT AVG(height_cm) AS average_height_cm,AVG(weight_kg) AS average_weight_kg,position
120    FROM [dbo].[ketro_sa_soccer_dataset_advanced]
121    GROUP BY position;
122    -- 20. Identify players with the highest combined goals and assists.
```

100 % | No issues found | Ln: 119, Ch: 1 | (154 chars, 3 lines) | SPC | CRLF | Windows 1252

Results | Messages

	average_height_cm	average_weight_kg	position
1	182	78	Defender
2	179	78	Forward
3	179	78	Goalkeeper
4	179	76	Midfielder

--- Q20. Identify players with the highest combined goals and assists.



```
-- 18. Count how many players are managed by each agent.
SELECT agent,COUNT(*) AS player_count
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY agent;

-- 19. Calculate average height and weight by player position.
SELECT AVG(height_cm) AS average_height_cm,AVG(weight_kg) AS average_weight_kg,position
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY position;

-- 20. Identify players with the highest combined goals and assists.
SELECT
    player_name,
    SUM(CAST(goals AS INT) + CAST(assists AS INT)) AS total_contribution
FROM [dbo].[ketro_sa_soccer_dataset_advanced]
GROUP BY player_name, team
ORDER BY total_contribution DESC;
```

100 % | No issues found | Ln: 124, Ch: 1 | (209 chars, 6 lines) | SPC | CRLF | Windows 125

Results | Messages

	player_name	total_contribution
1	Karabo Phiri	237
2	Siyanda Mabena	193
3	Zanele Molefe	192
4	Vusi Radebe	188
5	Ayanda Sithole	179
6	Ayanda Sithole	178
7	Vusi Molefe	176
8	Thembi Phiri	173
9	Gugu Mahlangu	171
10	Nokuthula Mabena	167
11	Khanyi Baloyi	163
12	Lindiwe Radebe	162
13	Zanele Phiri	161
14	Kagiso Dlamini	159
15	Thabo Phiri	156
16	Nomsa Khumalo	155