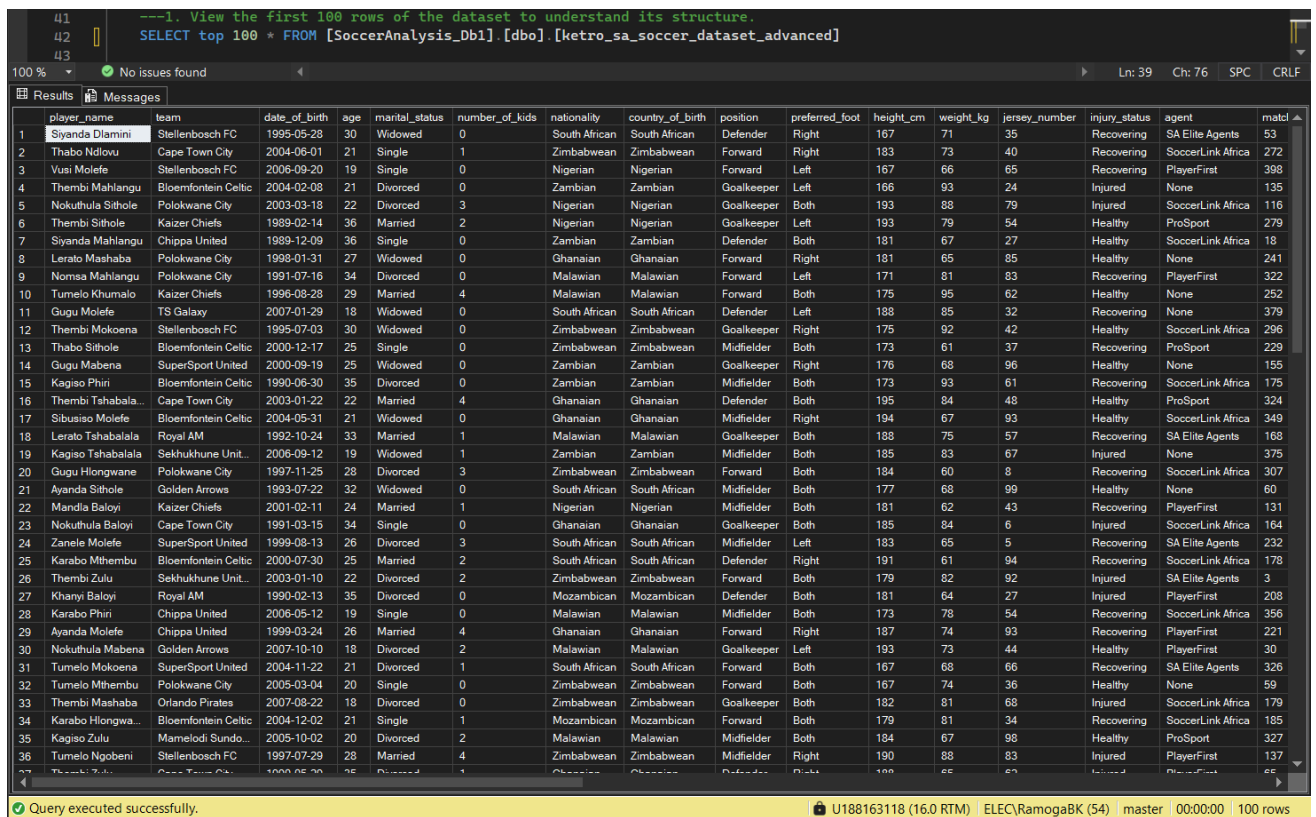


## Practical 3: South African Soccer Dataset – SQL

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



The screenshot shows a SQL query window with the following text:

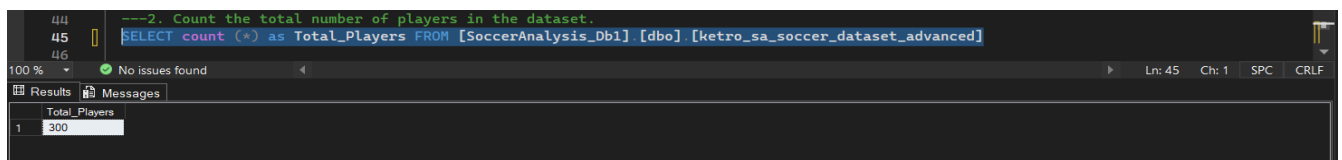
```
--1. View the first 100 rows of the dataset to understand its structure.  
SELECT top 100 * FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
```

The results pane displays a table with 37 columns and 100 rows. The columns are: player\_name, team, date\_of\_birth, age, marital\_status, number\_of\_kids, nationality, country\_of\_birth, position, preferred\_foot, height\_cm, weight\_kg, jersey\_number, injury\_status, agent, and matcd. The first few rows of data are as follows:

player_name	team	date_of_birth	age	marital_status	number_of_kids	nationality	country_of_birth	position	preferred_foot	height_cm	weight_kg	jersey_number	injury_status	agent	matcd
Siyanda Dlamini	Stellenbosch FC	1995-05-28	30	Widowed	0	South African	South African	Defender	Right	167	71	35	Recovering	SA Elite Agents	53
Thabo Ndlovu	Cape Town City	2004-06-01	21	Single	1	Zimbabwean	Zimbabwean	Forward	Right	183	73	40	Recovering	SoccerLink Africa	272
Vusi Molefe	Stellenbosch FC	2006-09-20	19	Single	0	Nigerian	Nigerian	Forward	Left	167	66	65	Recovering	PlayerFirst	398
Thembu Mahlangu	Bloemfontein Celtic	2004-02-08	21	Divorced	0	Zambian	Zambian	Goalkeeper	Left	166	93	24	Injured	None	135

The status bar at the bottom indicates: Query executed successfully. U188163118 (16.0 RTM) ELEC/RamogaBK (54) master 00:00:00 100 rows

2. Count the total number of players in the dataset.



The screenshot shows a SQL query window with the following text:

```
--2. Count the total number of players in the dataset.  
SELECT count (*) as Total_Players FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
```

The results pane displays a single row with the following data:

Total_Players
300

3. List all unique teams in the league.

47 ---3. List all unique teams in the league.  
 48 `SELECT DISTINCT team FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]`

100 % No issues found

	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
16	TS Galaxy

4. Count how many players are in each team.

50 ---4. Count how many players are in each team.  
 51 `SELECT team, COUNT(*) AS PlayerCount`  
 52 `FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]`  
 53 `GROUP BY team`

100 % No issues found

	team	PlayerCount
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

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

55 ---5. Identify the top 10 players with the most goals.  
 56 `SELECT TOP 10 player_name, team, goals`  
 57 `FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]`  
 58 `ORDER BY goals DESC;`

100 % No issues found

	player_name	team	goals
1	Siyanda Mabena	Sekhukhune United	118
2	Kagiso Phiri	Richards Bay FC	117
3	Zanele Phiri	TS Galaxy	117
4	Zanele Molefe	SuperSport United	116
5	Nokuthula Mabena	SuperSport United	114
6	Lindiwe Molefe	Chippa United	114
7	Nokuthula Mthembu	Mamelodi Sundowns	114
8	Karabo Phiri	Chippa United	114
9	Lindiwe Radebe	Chippa United	113
10	Vusi Mabena	Richards Bay FC	113

6. Find the average salary for players in each team.

```
60  ---6. Find the average salary for players in each team.
61  SELECT team, AVG(average_salary_zar) AS AverageSalary
62  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
63  GROUP BY team
```

100 % No issues found

	team	AverageSalary
1	AmaZulu FC	172467.567826705
2	Bloemfontein Celtic	163683.839154412
3	Cape Town City	208407.431770833
4	Chippa United	180947.63374256
5	Golden Arrows	199057.643851902
6	Kaizer Chiefs	188954.461621094
7	Mamelodi Sundowns	194404.484375
8	Moroka Swallows	186786.828330592
9	Orlando Pirates	178570.592881944
10	Polokwane City	171738.877314815
11	Richards Bay FC	193006.200270433
12	Royal AM	209078.330729167
13	Sekhukhune United	169945.162683824
14	Stellenbosch FC	182326.734960937
15	SuperSport United	195482.980664062
16	TS Galaxy	184719.574609375

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

```
65  ---7. Retrieve the top 10 players with the highest market value.
66  SELECT TOP 10 player_name, team, market_value_zar
67  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
68  ORDER BY market_value_zar DESC
```

100 % No issues found

	player_name	team	market_value_zar
1	Ayanda Mabaso	Bloemfontein Celtic	24979190
2	Lebogang Mabena	Mamelodi Sundowns	24887822
3	Gugu Mashaba	Moroka Swallows	24868294
4	Kagiso Mokoena	Golden Arrows	24550182
5	Boitumelo Radebe	Sekhukhune United	24540830
6	Thabo Ndlovu	Mamelodi Sundowns	24380712
7	Sipho Mashaba	Golden Arrows	24342132
8	Lerato Ngobeni	AmaZulu FC	24231618
9	Thabo Tshabalala	Cape Town City	24229792
10	Lerato Tshabalala	Chippa United	24226786

8. Calculate the average passing accuracy for each position.

```
70  ---8. Calculate the average passing accuracy for each position.
71  SELECT position, AVG(passing_accuracy) AS AvgPassingAccuracy
72  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
73  GROUP BY position
```

100 % No issues found

	position	AvgPassingAccuracy
1	Defender	82.6642859322684
2	Forward	83.210843373494
3	Goalkeeper	83.9397055682014
4	Midfielder	82.817721596247

9. Compare shot accuracy with goals to find correlations.

74

75

76

77

78

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

SELECT player\_name, goals, shot\_accuracy

FROM [SoccerAnalysis\_Db1].[dbo].[ketrosoccerdataset\_advanced]

100 %

No issues found

Results

Messages

	player_name	goals	shot_accuracy
1	Siyanda Dlamini	9	83.6999969482422
2	Thabo Ndlovu	98	68.4000015258789
3	Vusi Molefe	99	79
4	Thembi Mahlangu	1	42.9000015258789
5	Nokuthula Sithole	2	74
6	Thembi Sithole	3	70.6999969482422
7	Siyanda Mahlangu	6	54.2000007629395
8	Lerato Mashaba	77	68.5
9	Nomsa Mahlangu	80	56.0999984741211
10	Tumelo Khumalo	48	46
11	Gugu Molefe	7	83.1999969482422
12	Thembi Mokoena	1	56.7000007629395
13	Thabo Sithole	14	80.5999984741211
14	Gugu Mabena	4	80
15	Kagiso Phiri	41	73.1999969482422
16	Thembi Tshabalala	7	76.6999969482422
17	Sibusiso Molefe	48	51.0999984741211
18	Lerato Tshabalala	10	56.7999992370605
19	Kagiso Tshabalala	36	64.4000015258789
20	Gugu Hlongwane	98	81.0999984741211
21	Ayanda Sithole	107	54
22	Mandla Baloyi	89	54.0999984741211
23	Nokuthula Baloyi	7	62.7999992370605
24	Zanele Molefe	116	61.2000007629395
25	Karabo Mthembu	5	41.5
26	Thembi Zulu	72	70
27	Khanyi Baloyi	2	54.7999992370605
28	Karabo Phiri	72	64.5
29	Ayanda Molefe	26	61.0999984741211
30	Nokuthula Mabena	7	53.5999984741211
31	Tumelo Mokoena	11	62.5
32	Tumelo Mthembu	19	76.9000015258789
33	Thembi Mashaba	4	84.8000030517578
34	Karabo Hlongwane	43	60.7000007629395
35	Kagiso Zulu	89	59.5
36	Tumelo Ngobeni	32	63.5999984741211
37	Thembi Zulu	4	77.6999969482422

10. Compute total goals and assists for each team.

```

79  ---10. Compute total goals and assists for each team.
80  SELECT team,
81         SUM(goals) AS TotalGoals,
82         SUM(assists) AS TotalAssists
83  FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
84  GROUP BY team
85
100 %  No issues found

```

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

11. Count players by their marital status.

```

86  ---11. Count players by their marital status.
87  SELECT marital_status, COUNT(*) AS PlayerCount
88  FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
89  GROUP BY marital_status
90
100 %  No issues found

```

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

12. Count players by nationality.

```

91  ---12. Count players by nationality.
92  SELECT nationality, COUNT(*) AS PlayerCount
93  FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
94  GROUP BY nationality
95
100 %  No issues found

```

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

13. Find average market value grouped by nationality.

```
95
96  ---13. Find average market value grouped by nationality.
97  SELECT nationality, AVG(market_value_zar) AS AvgMarketValue
98  FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
99  GROUP BY nationality
100
```

100 % No issues found

	nationality	AvgMarketValue
1	Ghanaian	12298308.0079787
2	Malawian	11727296.014881
3	Mozambican	14736203.4746622
4	Nigerian	15069261.3477564
5	South African	12037870.1983696
6	Zambian	12777043.0852273
7	Zimbabwean	10367909.4708333

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

```
100
101  ---14. Determine how many player contracts end in each year.
102  SELECT contract_end_year,
103  COUNT(*) AS PlayersWithContractsEnding
104  FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
105  GROUP BY contract_end_year
106
```

100 % No issues found

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

15. Identify players whose contracts end next year.

106	
107	---15. Identify players whose contracts end next year.
108	SELECT player_name, team, contract_end_year
109	FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
110	WHERE contract_end_year = YEAR(GETDATE()) + 1
111	
%	No issues found
Results	Messages
player_name	team
Siyanda Dlamini	Stellenbosch FC
Vusi Molefe	Stellenbosch FC
Nokuthula Sithole	Polokwane City
Siyanda Mahlangu	Chippa United
Nomsa Mahlangu	Polokwane City
Thembi Mokoena	Stellenbosch FC
Thabo Sithole	Bloemfontein Celtic
Kagiso Phiri	Bloemfontein Celtic
Thembi Tshabalala	Cape Town City
Mandla Baloyi	Kaizer Chiefs
Tumelo Mokoena	SuperSport United
Thembi Mashaba	Orlando Pirates
Lerato Mabena	Cape Town City
Lindiwe Radebe	Golden Arrows
Sipho Ndlovu	Stellenbosch FC
Lebogang Phiri	SuperSport United
Sibusiso Radebe	Polokwane City
Sipho Khumalo	TS Galaxy
Thabo Sithole	TS Galaxy
Zanele Phiri	TS Galaxy
Ayanda Mabaso	Bloemfontein Celtic
Karabo Mokoena	Royal AM
Lindiwe Mabaso	TS Galaxy
Gugu Tshabalala	TS Galaxy
Mandla Mahlangu	Cape Town City
Gugu Mashaba	Kaizer Chiefs
Thembi Dlamini	Golden Arrows
Vusi Radebe	Moroka Swallows
Lindiwe Zulu	Kaizer Chiefs
Sipho Phiri	Royal AM
Zanele Zulu	Polokwane City
Kagiso Molefe	AmaZulu FC
Sipho Mashaba	Golden Arrows
Sipho Mabaso	Golden Arrows
contract_end_year	2026

16. Summarize the number of players by injury status.

111	
112	---16. Summarize the number of players by injury status.
113	SELECT injury_status, COUNT(*) AS PlayerCount
114	FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
115	GROUP BY injury_status
116	
100 % No issues found	
Results Messages	
	injury_status PlayerCount
1	Healthy 99
2	Injured 97
3	Recovering 104

17. Calculate goals per match ratio for each player.

117	---17. Calculate goals per match ratio for each player.
118	SELECT player_name,
119	team,
120	goals,
121	matches_played,
122	CAST(goals AS FLOAT) / NULLIF(matches_played, 0) AS GoalsPerMatch
123	FROM [SoccerAnalysis_Db1].[dbo].[ketro_sa_soccer_dataset_advanced]
124	
100 % No issues found	
Results Messages	
	player_name team goals matches_played GoalsPerMatch
1	Siyanda Dlamini Stellenbosch FC 9 53 0.169811320754717
2	Thabo Ndlovu Cape Town City 98 272 0.360294117647059
3	Vusi Molefe Stellenbosch FC 99 398 0.248743718592965
4	Thembi Mahlangu Bloemfontein Celtic 1 135 0.00740740740740741
5	Nokuthula Sithole Polokwane City 2 116 0.0172413793103448
6	Thembi Sithole Kaizer Chiefs 3 279 0.010752688172043
7	Siyanda Mahlangu Chippa United 6 18 0.333333333333333
8	Lerato Mashaba Polokwane City 77 241 0.319502074688797
9	Nomsa Mahlangu Polokwane City 80 322 0.248447204968944
10	Tumelo Khumalo Kaizer Chiefs 48 252 0.19047619047619
11	Gugu Molefe TS Galaxy 7 379 0.0184696569920844
12	Thembi Mokoena Stellenbosch FC 1 296 0.00337837837837838
13	Thabo Sithole Bloemfontein Celtic 14 229 0.0611353711790393
14	Gugu Mabena SuperSport United 4 155 0.0258064516129032
15	Kagiso Phiri Bloemfontein Celtic 41 175 0.234285714285714
16	Thembi Tshabalala Cape Town City 7 324 0.0216049382716049
17	Sibusiso Molefe Bloemfontein Celtic 48 349 0.137535816618911
18	Lerato Tshabalala Royal AM 10 168 0.0595238095238095
19	Kagiso Tshabalala Sekhukhune United 36 375 0.096
20	Gugu Hlongwane Polokwane City 98 307 0.319218241042345
21	Ayanda Sithole Golden Arrows 107 60 1.78333333333333
22	Mandla Baloyi Kaizer Chiefs 89 131 0.679389312977099
23	Nokuthula Baloyi Cape Town City 7 164 0.0426829268292683
24	Zanele Molefe SuperSport United 116 232 0.5
25	Karabo Mthembu Bloemfontein Celtic 5 178 0.0280898876404494
26	Thembi Zulu Sekhukhune United 72 3 24
27	Khanyi Baloyi Royal AM 2 208 0.00961538461538462
28	Karabo Phiri Chippa United 72 356 0.202247191011236
29	Ayanda Molefe Chippa United 26 221 0.117647058823529
30	Nokuthula Mabena Golden Arrows 7 30 0.233333333333333
31	Tumelo Mokoena SuperSport United 11 326 0.0337423312883436
32	Tumelo Mthembu Polokwane City 19 59 0.322033898305085
33	Thembi Mashaba Orlando Pirates 4 179 0.0223463687150838



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

```
125  ---18. Count how many players are managed by each agent.
126  SELECT agent, COUNT(*) AS PlayerCount
127  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
128  GROUP BY agent
129  ORDER BY PlayerCount DESC
```

100 % No issues found

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

19. Calculate average height and weight by player position.

```
131  ---19. Calculate average height and weight by player position.
132  SELECT position,
133         AVG(height_cm) AS AvgHeight,
134         AVG(weight_kg) AS AvgWeight
135  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
136  GROUP BY position
```

100 % No issues found

	position	AvgHeight	AvgWeight
1	Defender	182	78
2	Forward	179	78
3	Goalkeeper	179	78
4	Midfielder	179	76

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

```
138  ---20. Identify players with the highest combined goals and assists.
139  SELECT TOP 10 player_name,
140              team,
141              (goals + assists) AS TotalContributions
142  FROM [SoccerAnalysis_Db1].[dbo].[ketrosoccerdataset_advanced]
143  ORDER BY TotalContributions DESC;
```

100 % No issues found

	player_name	team	TotalContributions
1	Siyanda Mabena	Sekhukhune United	193
2	Zanele Molefe	SuperSport United	192
3	Vusi Radebe	Stellenbosch FC	188
4	Ayanda Sithole	Golden Arrows	179
5	Ayanda Sithole	Bloemfontein Celtic	178
6	Vusi Molefe	Stellenbosch FC	176
7	Thembu Phiri	Royal AM	173
8	Gugu Mahlangu	Bloemfontein Celtic	171
9	Nokuthula Mabena	SuperSport United	167
10	Khanyi Baloyi	Bloemfontein Celtic	163