

# Sql Server -Exercise Answers

The screenshot shows the SQL Server Enterprise Edition interface. The Object Explorer on the left displays the database structure for 'FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)'. The Query Editor window shows a query titled '1. View the first 100 rows of the dataset to understand its structure.' The query is:

```
SELECT TOP (100) [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]
```

The results pane shows the first 10 rows of the dataset. The status bar indicates 'Query executed successfully.' and '100 rows'.

player_name	team	date_of_birth	age	marital_status	number_of_kids	nationality	country_of_birth	position	preferred_foot	height	
1	Syanda Dlamini	Stellenbosch FC	1995-05-28 00:00:00.0000000	30	Widowed	0	South African	South African	Defender	Right	167
2	Thabo Ndlovu	Cape Town City	2004-06-01 00:00:00.0000000	21	Single	1	Zimbabwean	Zimbabwean	Forward	Right	183
3	Vusi Molefe	Stellenbosch FC	2006-09-20 00:00:00.0000000	19	Single	0	Nigerian	Nigerian	Forward	Left	167
4	Thembi Mahlangu	Bloemfontein Celtic	2004-02-08 00:00:00.0000000	21	Divorced	0	Zambian	Zambian	Goalkeeper	Left	166
5	Nokuthula Sithole	Polokwane City	2003-03-18 00:00:00.0000000	22	Divorced	3	Nigerian	Nigerian	Goalkeeper	Both	193
6	Thembi Sithole	Kaizer Chiefs	1989-02-14 00:00:00.0000000	36	Married	2	Nigerian	Nigerian	Goalkeeper	Left	193
7	Syanda Mahlangu	Orlando Pirates	1989-12-09 00:00:00.0000000	36	Single	0	Zambian	Zambian	Defender	Both	181
8	Lerato Mashaba	Polokwane City	1998-01-31 00:00:00.0000000	27	Widowed	0	Ghanaian	Ghanaian	Forward	Right	181
9	Nomsa Mahlangu	Polokwane City	1991-07-16 00:00:00.0000000	34	Divorced	0	Malawian	Malawian	Forward	Left	171
10	Tumelo Khumalo	Kaizer Chiefs	1996-08-28 00:00:00.0000000	29	Married	4	Malawian	Malawian	Forward	Both	175

## Question 1

The screenshot shows the SQL Server Enterprise Edition interface. The Query Editor window shows a query titled '2. Count the total number of players in the dataset.' The query is:

```
SELECT COUNT(*) AS TotalPlayers FROM [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
```

The results pane shows the result of the query. The status bar indicates 'Query executed successfully.' and '1 rows'.

TotalPlayers
300

## Question 2

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Object Explorer' with the 'FADZAI21' database selected. The central pane shows a SQL query with the following steps:

- 2. Count the total number of players in the dataset.
- 3. List all unique teams in the league.
- 4. Count how many players are in each team.

The query results are displayed in the bottom pane:

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

## Question 3

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Object Explorer' with the 'FADZAI21' database selected. The central pane shows a SQL query with the following steps:

- 4. Count how many players are in each team.
- 5. Identify the top 10 players with the most goals.

The query results are displayed in the bottom pane:

team	players
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

## Question 4

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the Object Explorer with the 'FADZAI21' database selected. The right pane shows a query window with the following SQL code:

```

54      team
55      COUNT(*) AS
56      FROM [Soccer Analysis DB1] [dbo].[ketrosoccerdataset_advanced]
57      Group By team
58
59      -----5. Identify the top 10 players with the most goals.
60
61      SELECT TOP 10
62      player_name,
63      goals
64      FROM [Soccer Analysis DB1] [dbo].[ketrosoccerdataset_advanced]
65      ORDER BY goals DESC;
66
67      -----6. Find the average salary for players in each team.
68
69

```

The Results pane shows the following data:

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	Botumelo Nkosi	96
8	Mpho Radebe	92
9	Khanyi Nkosi	92
10	Sipho Phiri	91

The status bar at the bottom indicates 'Query executed successfully.' and 'FADZAI21 (16.0 RTM) | FADZAI21:sscoo (61) | master | 00:00:01 | 10 rows'.

## Question 5

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the Object Explorer with the 'FADZAI21' database selected. The right pane shows a query window with the following SQL code:

```

62      player_name,
63      goals
64      FROM [Soccer Analysis DB1] [dbo].[ketrosoccerdataset_advanced]
65      ORDER BY goals DESC;
66
67
68      -----6. Find the average salary for players in each team.
69
70
71      SELECT team,
72      AVG(TRY_CAST(average_salary_zar AS FLOAT)) AS average_salary
73      FROM [Soccer Analysis DB1] [dbo].[ketrosoccerdataset_advanced]
74      GROUP BY team;
75
76
77      SELECT
78      team,
79

```

The Results pane shows the following data:

team	average_salary	
1	Amazulu FC	172467.569545455
2	Bloemfontein Celtic	163683.838823529
3	Cape Town City	208407.432
4	Chippa United	180947.634761905
5	Golden Arrows	199057.643913043
6	Kaizer Chiefs	188954.4615
7	Mamelodi Sundowns	194404.484736942
8	Moroka Swallows	186786.827894737
9	Orlando Pirates	178570.593333333
10	Polokwane City	171738.877777778
11	Richards Bay FC	193006.199230769

The status bar at the bottom indicates 'Query executed successfully.' and 'FADZAI21 (16.0 RTM) | FADZAI21:sscoo (61) | master | 00:00:00 | 16 rows'.

## Question 6

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the Object Explorer with the server 'FADZAI21' selected. The central pane shows a query window with the following SQL code:

```

77 team,
78 AVG(CAST(average_salary_zar AS DECIMAL(18,2))) AS average_salary
79 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
80 GROUP BY team;
81
82 -----7. Retrieve the top 10 players with the highest market value.
83
84
85
86
87 Select Top 10
88 player_name,
89 market_value_zar
90 From [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
91 Order By market_value_zar ASC;
92

```

The bottom pane shows the results of the second query, displaying a table with 10 rows and 2 columns: player\_name and market\_value\_zar.

player_name	market_value_zar
1 Kagiso Mashaba	10143610.76
2 Kabelo Mabena	10165897.84
3 Lindiwe Mabaso	10204385.12
4 Lebogang Tshabalala	10232588.26
5 Kagiso Khumalo	10250362.12
6 Khanyi Baloyi	10481992.09
7 Manda Mabena	10483151.43
8 Lindiwe Tshabalala	10490972.73
9 Ayanda Molefe	10604204.4
10 Npho Zulu	1061705.4

The status bar at the bottom indicates 'Query executed successfully.' and 'FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 10 rows'.

## Question 7

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the Object Explorer with the server 'FADZAI21' selected. The central pane shows a query window with the following SQL code:

```

87 player_name,
88 market_value_zar
89 From [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
90 Order By market_value_zar ASC;
91
92
93 -----8. Calculate the average passing accuracy for each position.
94
95
96
97
98 SELECT
99 position,
100 AVG(CAST(passing_accuracy AS FLOAT)) AS avg_passing_accuracy
101 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
102 GROUP BY position;

```

The bottom pane shows the results of the second query, displaying a table with 4 rows and 2 columns: position and avg\_passing\_accuracy.

position	avg_passing_accuracy
1 Defender	82.6642857142857
2 Forward	83.210843373494
3 Goalkeeper	83.9397058823529
4 Midfielder	82.8177215189873

The status bar at the bottom indicates 'Query executed successfully.' and 'FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 4 rows'.

## Question 8

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

```

98      AVG(CAST(passing_accuracy AS FLOAT)) AS avg_passing_accuracy
99  FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
100  GROUP BY position;
101
102  -----9. Compare shot accuracy with goals to find correlations.
103
104  SELECT
105  player_name,
106  TRY_CAST(shot_accuracy AS DECIMAL(5,2)) AS shot_accuracy,
107  goals
108  FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
109
110
111
112
113

```

Results:

	player_name	shot_accuracy	goals
1	Siyanda Dlamini	83.70	9
2	Thabo Ndlovu	68.40	98
3	Vusi Molefe	79.00	99
4	Thembi Mahlangu	42.90	1
5	Nokuthula Sithole	74.00	2
6	Thembi Sithole	70.70	3
7	Siyanda Mahlangu	54.20	6
8	Lerato Mashaba	68.50	77
9	Nomsa Mahlangu	56.10	80
10	Tumelo Khumalo	46.00	48
11	Gugu Molefe	83.20	7

Query executed successfully.

## Question 9

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

```

110  FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
111
112
113  -----10. Compute total goals and assists for each team.
114
115  SELECT
116  team,
117  SUM(TRY_CAST(goals AS INT)) AS total_goals,
118  SUM(TRY_CAST(assists AS INT)) AS total_assists
119  FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
120  GROUP BY team;
121
122
123  -----11. Count players by their marital status.
124
125

```

Results:

	team	total_goals	total_assists
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	401
7	Mamelodi Sundowns	570	475
8	Moroka Swallows	729	452
9	Orlando Pirates	170	225
10	Potlako City	1300	783
11	Richards Bay FC	453	273

Query executed successfully.

## Question 10

The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure for 'FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)'. The central query editor contains a T-SQL query. The query first calculates total goals and assists for each team, then proceeds to Question 11: counting players by their marital status. The results pane at the bottom shows a table with 4 rows.

```
118      SUM(TRY_CAST(goals AS INT)) AS total_goals,
119      SUM(TRY_CAST(assists AS INT)) AS total_assists
120  FROM [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
121  GROUP BY team;
122
123  -----11. Count players by their marital status.
124
125
126  Select
127      marital_status,
128      Count(player_name) AS players
129  From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
130  Group By marital_status;
```

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

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 4 rows

## Question 11

The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure for 'FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)'. The central query editor contains a T-SQL query. The query first counts players by marital status, then proceeds to Question 12: counting players by nationality. The results pane at the bottom shows a table with 7 rows.

```
126  Select
127      marital_status,
128      Count(player_name) AS players
129  From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
130  Group By marital_status;
131
132
133  -----12. Count players by nationality
134
135
136  Select nationality,
137      COUNT (player_name) AS players
138  From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
139  Group By nationality;
```

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

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 7 rows

## Question 12

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - FadZai21\sscoo)

```

137 COUNT (player_name) AS players
138 From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
139 Group By nationality;
140
141 -----13. Find average market value grouped by nationality-----
142
143
144 Select Nationality,
145 AVG(CAST (market_value_zar AS FLOAT)) AS average_market_value
146 From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
147 Group By nationality;
148
149 -----14. Determine how many player contracts end in each year.
150
151
152

```

Results:

	Nationality	average_market_value
1	Ghanaian	12298308.0365957
2	Malawian	11727296.0554762
3	Mozambican	14736203.5943243
4	Nigerian	15069261.3964103
5	South African	12037870.2363043
6	Zambian	12777043.0611364
7	Zimbabwean	10367909.5322222

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 7 rows

## Question 13

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - FadZai21\sscoo)

```

1445 AVG(CAST (market_value_zar AS FLOAT)) AS average_market_value
1446 From [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
1447 Group By nationality;
1448
1449 -----14. Determine how many player contracts end in each year.
1450
1451
1452
1453
1454 SELECT
1455 contract_end_year,
1456 COUNT(*) AS contracts_ending
1457 FROM [Soccer Analysis DB1].[dbo].[ketros_soccer_dataset_advanced]
1458 GROUP BY contract_end_year
1459 ORDER BY contract_end_year;
1460

```

Results:

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

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 5 rows

## Question 14



Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: x2bj2wqa.sql - not connected

```

158 ORDER BY contract_end_year;
159
160 -----
161 -----15. Identify players whose contracts end next year.
162
163
164 SELECT
165     player_name,
166     team,
167     contract_end_year
168 FROM [Soccer Analysis DB1] [dbo] [ketro_sa_soccer_dataset_advanced]
169 WHERE contract_end_year = YEAR(GETDATE()) + 1;
170
171 -----
172 -----16. Summarize the number of players by injury status.-----
173

```

Results:

	player_name	team	contract_end_year
1	Siyanda Dlamini	Stellenbosch FC	2026
2	Vusi Molefe	Stellenbosch FC	2026
3	Nokuthula Sithole	Polokwane City	2026
4	Siyanda Mahlangu	Chippa United	2026
5	Nomsa Mahlangu	Polokwane City	2026
6	Thembu Mokoena	Stellenbosch FC	2026
7	Thabo Sithole	Bloemfontein Celtic	2026
8	Kagiso Phiri	Bloemfontein Celtic	2026
9	Thembu Tahababala	Cape Town City	2026
10	Manda Baloyi	Kaizer Chiefs	2026
11	Tumelo Mokoena	SuperSport United	2026

Query executed successfully.

## Question 15

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: x2bj2wqa.sql - not connected

```

165     player_name,
166     team,
167     contract_end_year
168 FROM [Soccer Analysis DB1] [dbo] [ketro_sa_soccer_dataset_advanced]
169 WHERE contract_end_year = YEAR(GETDATE()) + 1;
170
171 -----
172 -----16. Summarize the number of players by injury status.-----
173
174 SELECT
175     injury_status,
176     COUNT(*) AS number_of_players
177 FROM [Soccer Analysis DB1] [dbo] [ketro_sa_soccer_dataset_advanced]
178 GROUP BY injury_status
179 ORDER BY injury_status;
180

```

Results:

	injury_status	number_of_players
1	Healthy	99
2	Injured	97
3	Recovering	104

Query executed successfully.

## Question 16



Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: eovntoxm.sql...1\sscoo (61)\*

```

176 COUNT(*) AS number_of_players
177 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
178 GROUP BY injury_status
179 ORDER BY injury_status;
180
181 -----17. Calculate goals per match ratio for each player.-----
182
183
184
185
186 SELECT
187     player_name,
188     TRY_CAST(goals AS FLOAT) / NULLIF(TRY_CAST(matches_played AS FLOAT), 0) AS goals_per_match
189 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
190
191

```

Results:

player_name	goals_per_match
1 Siyanda Dlamini	0.169811320754717
2 Thabo Ndlovu	0.360294117647059
3 Vusi Molefe	0.248743718592965
4 Thembi Mahlangu	0.00740740740740741
5 Nokuthula Sithole	0.0172413793103448
6 Thembi Sithole	0.010752688172043
7 Siyanda Mahlangu	0.333333333333333
8 Lerato Mashaba	0.319502074688797
9 Nomsa Mahlangu	0.249447204968944
10 Tumelo Khumalo	0.19047619047619
11 Gugu Molefe	0.018496569920844

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 300 rows

## Question 17

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: eovntoxm.sql...1\sscoo (61)\*

```

187 TRY_CAST(goals AS FLOAT) / NULLIF(TRY_CAST(matches_played AS FLOAT), 0) AS goals_per_match
188 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
189
190
191 -----18. Count how many players are managed by each agent.-----
192
193
194
195 SELECT
196     agent,
197     COUNT(player_name) AS number_of_players
198 FROM [Soccer Analysis DB1].[dbo].[ketrosoccerdataset_advanced]
199 GROUP BY agent
200 ORDER BY COUNT(player_name) DESC;
201
202

```

Results:

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

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 5 rows

## Question 18

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: eovntoxm.sql...1\sscoo (61)\*

```

ORDER BY COUNT(player_name) DESC;

-----19. Calculate average height and weight by player position.-----
SELECT
    position,
    AVG(TRY_CAST(height_cm AS FLOAT)) AS avg_height,
    AVG(TRY_CAST(weight_kg AS FLOAT)) AS avg_weight
FROM [Soccer Analysis DB1] [dbo] [ketro_sa_soccer_dataset_advanced]
GROUP BY position
ORDER BY position;

```

Results:

	position	avg_height	avg_weight
1	Defender	182.414285714286	78.1285714285714
2	Forward	179.216867469888	78.7590361445783
3	Goalkeeper	179.294117647059	78.9852941176471
4	Midfielder	179.405063291139	76.0379746835443

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 4 rows

## Question 19

Object Explorer: FADZAI21 (SQL Server 16.0.1000.6 - Fadzai21\sscoo)

Query: eovntoxm.sql...1\sscoo (61)\*

```

GROUP BY position
ORDER BY position;

-----20. Identify players with the highest combined goals and assists.-----
SELECT
    player_name,
    team,
    TRY_CAST(goals AS INT) + TRY_CAST(assists AS INT) AS total_contributions
FROM [Soccer Analysis DB1] [dbo] [ketro_sa_soccer_dataset_advanced]
ORDER BY TRY_CAST(goals AS INT) + TRY_CAST(assists AS INT) DESC;

```

Results:

	player_name	team	total_contributions
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
11	Zanele Phiri	TS Galaxy	161

Query executed successfully. FADZAI21 (16.0 RTM) FADZAI21\sscoo (61) master 00:00:00 300 rows

## Question 20