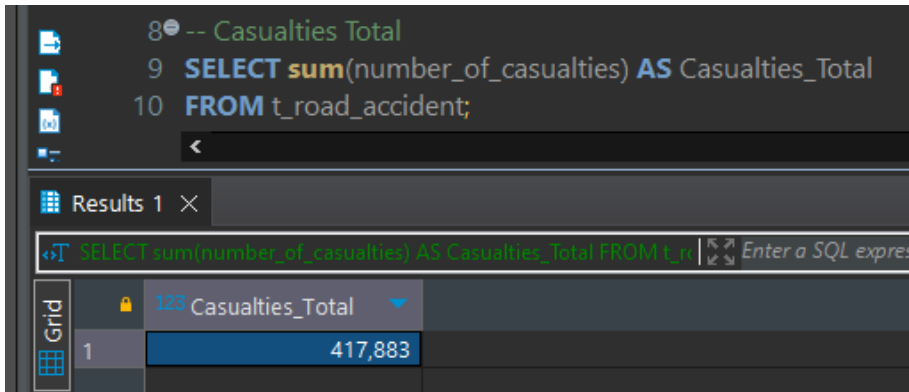


Road Accident Analysis SQL Queries

REPORT

- Primary KPI - Total Casualties taken place after the accident

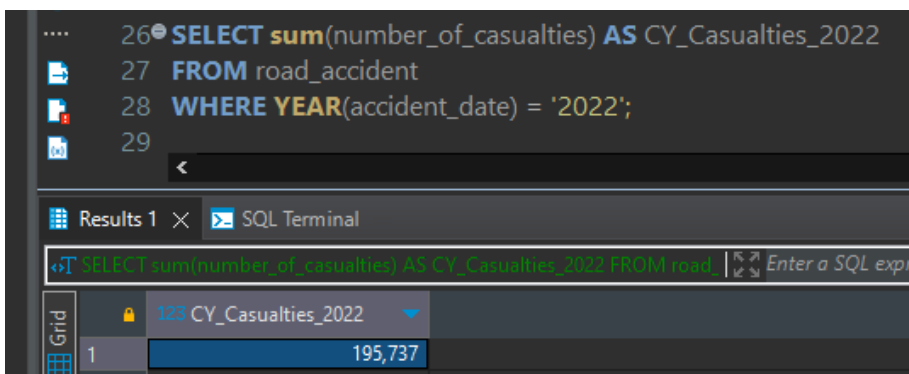
Total Casualties **417 883**



The screenshot shows a SQL query in a dark-themed editor. The query is: `-- Casualties Total`, `SELECT sum(number_of_casualties) AS Casualties_Total`, `FROM t_road_accident;`. Below the query, the 'Results' tab is active, showing a single row with the value 417,883 for the column 'Casualties_Total'.

	Casualties_Total
1	417,883

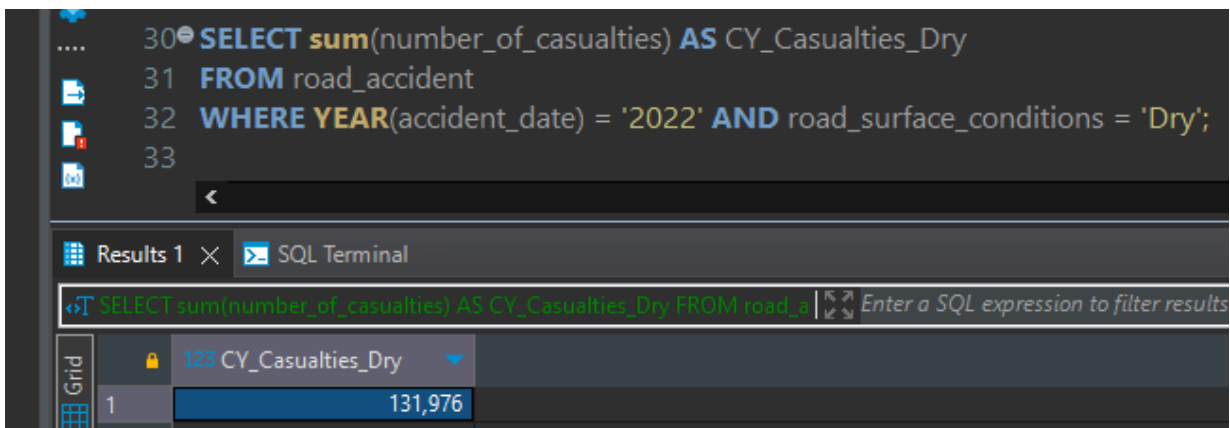
CY Casualties **195 737**



The screenshot shows a SQL query in a dark-themed editor. The query is: `SELECT sum(number_of_casualties) AS CY_Casualties_2022`, `FROM road_accident`, `WHERE YEAR(accident_date) = '2022';`. Below the query, the 'Results' tab is active, showing a single row with the value 195,737 for the column 'CY_Casualties_2022'.

	CY_Casualties_2022
1	195,737

CY Casualties Dry **131 976**



The screenshot shows a SQL query in a dark-themed editor. The query is: `SELECT sum(number_of_casualties) AS CY_Casualties_Dry`, `FROM road_accident`, `WHERE YEAR(accident_date) = '2022' AND road_surface_conditions = 'Dry';`. Below the query, the 'Results' tab is active, showing a single row with the value 131,976 for the column 'CY_Casualties_Dry'.

	CY_Casualties_Dry
1	131,976

- Primary KPI's — Total Casualties & percentage of total with respect to accident severity and maximum casualties by type of vehicle

CY Accidents

144 419

```
32 -- CY Accidents
33 SELECT count(DISTINCT accident_index) AS CY_Accidents
34 FROM t_road_accident
35 WHERE YEAR(accident_date) = '2022'
36
```

Results 1 X

SELECT count(DISTINCT accident_index) AS CY_Accidents FROM t_road_accident WHERE YEAR(accident_date) = '2022'

Grid	123 CY_Accidents
1	144,419

CY Casualties Fatal

2 855

```
22 -- CY Casualties Fatal
23 SELECT sum(number_of_casualties) AS CY_Casualties_Fatal
24 FROM t_road_accident
25 WHERE accident_severity = 'Fatal' AND YEAR (accident_date) = '2022';
```

Results 1 X

SELECT sum(number_of_casualties) AS CY_Casualties_Fatal FROM t_road_accident WHERE accident_severity = 'Fatal' AND YEAR (accident_date) = '2022';

Grid	123 CY_Casualties_Fatal
1	2,855

CY Casualties Serious

27 045

```
27 -- CY Casualties Serious
28 SELECT sum(number_of_casualties) AS CY_Casualties_Serious
29 FROM t_road_accident
30 WHERE accident_severity = 'Serious' AND YEAR (accident_date) = '2022';
31
```

Results 1 X

SELECT sum(number_of_casualties) AS CY_Casualties_Serious FROM t_road_accident WHERE accident_severity = 'Serious' AND YEAR (accident_date) = '2022';

Grid	123 CY_Casualties_Serious
1	27,045

CY Casualties Slight

165 837

```
32 -- CY Casualties Slight
33 SELECT sum(number_of_casualties) AS CY_Casualties_Slight
34 FROM t_road_accident
35 WHERE accident_severity = 'Slight' AND YEAR (accident_date) = '2022';
```

Results 1 X

SELECT sum(number_of_casualties) AS CY_Casualties_Slight FROM t_road_accident WHERE accident_severity = 'Slight' AND YEAR (accident_date) = '2022';

Grid	123 CY_Casualties_Slight
1	165,837

Total Casualties in %

```
51 -- Percentages
52 SELECT round( sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident),2) AS PCT_Slight
53 FROM t_road_accident
54 WHERE accident_severity = 'Slight';
55 -- 84.1 %
56
57 SELECT ROUND((sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident)), 2) AS PCT_Serious
58 FROM t_road_accident
59 WHERE accident_severity = 'Serious';
60 -- 14.19 %
61
62 SELECT ROUND((sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident)), 2) AS PCT_Fatal
63 FROM t_road_accident
64 WHERE accident_severity = 'Fatal';
65 -- 1.71 %
66
```

Results 1

SELECT round(sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident), 2) AS PCT_Slight

	PCT_Slight
1	84.1

CY Casualties in %

```
67 -- CY Percentages
68 SELECT round(sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident
69 WHERE YEAR(accident_date) = '2022'), 2) AS CY_PCT_Slight
70 FROM t_road_accident
71 WHERE accident_severity = 'Slight'
72 AND YEAR(accident_date) = '2022';
73 -- 84.72 %
74
75 SELECT round(sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident
76 WHERE YEAR(accident_date) = '2022'), 2) AS CY_PCT_Serious
77 FROM t_road_accident
78 WHERE accident_severity = 'Serious'
79 AND YEAR(accident_date) = '2022';
80 -- 13.82 %
81
82 SELECT round(sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident
83 WHERE YEAR(accident_date) = '2022'), 2) AS CY_PCT_Fatal
84 FROM t_road_accident
85 WHERE accident_severity = 'Fatal'
86 AND YEAR(accident_date) = '2022';
87 -- 1.46 %
88
```

Results 1

SELECT round(sum(number_of_casualties) * 100 / (SELECT sum(number_of_casualties) FROM t_road_accident WHERE YEAR(accident_date) = '2022'), 2) AS CY_PCT_Slight

	CY_PCT_Slight
1	84.72

- maximum casualties by type of vehicle

Create Groups

```
93 -- Create Groups
94 SELECT
95     CASE
96         WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
97         WHEN vehicle_type IN ('Car', 'Taxi/Private hire car') THEN 'Cars'
98         WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') THEN 'Bus'
99         WHEN vehicle_type IN ('Van / Goods 3.5 tonnes mgw or under', 'Goods over 3.5t. and under 7.5t', 'Goods 7.5 tonnes mgw and over') THEN 'Van'
100        WHEN vehicle_type IN ('Pedal cycle', 'Motorcycle over 500cc', 'Motorcycle over 125cc and up to 500cc', 'Motorcycle 50cc and under', 'Motorcycle 125cc and under') THEN 'Bike'
101        ELSE 'Other'
102    END AS vehicle_group,
103    max (number_of_casualties) AS CY_max_Casualties
104 -- sum (number_of_casualties) AS CY_Casualties
105 FROM t_road_accident tra
106 WHERE YEAR (accident_date) = '2022'
107 GROUP BY
108     CASE
109         WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
110         WHEN vehicle_type IN ('Car', 'Taxi/Private hire car') THEN 'Cars'
111         WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') THEN 'Bus'
112         WHEN vehicle_type IN ('Van / Goods 3.5 tonnes mgw or under', 'Goods over 3.5t. and under 7.5t', 'Goods 7.5 tonnes mgw and over') THEN 'Van'
113         WHEN vehicle_type IN ('Pedal cycle', 'Motorcycle over 500cc', 'Motorcycle over 125cc and up to 500cc', 'Motorcycle 50cc and under', 'Motorcycle 125cc and under') THEN 'Bike'
114         ELSE 'Other'
115     END;
```

results 1 X

Enter a SQL expression to filter results (use Ctrl+Space)

vehicle_group	123 CY_max_Casualties
Agricultural	8
Bike	12
Bus	6
Cars	43
Other	7
Van	16

- Secondary KPI's - Total Casualties with respect to vehicle type

```
101 SELECT
102     CASE
103         WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
104         WHEN vehicle_type IN ('Car', 'Taxi/Private hire car') THEN 'Cars'
105         WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') THEN 'Bus'
106         WHEN vehicle_type IN ('Van / Goods 3.5 tonnes mgw or under', 'Goods over 3.5t. and under 7.5t', 'Goods 7.5 tonnes mgw and over') THEN 'Van'
107         WHEN vehicle_type IN ('Pedal cycle', 'Motorcycle over 500cc', 'Motorcycle over 125cc and up to 500cc', 'Motorcycle 50cc and under', 'Motorcycle 125cc and under') THEN 'Bike'
108         ELSE 'Other'
109     END AS vehicle_group,
110     sum(number_of_casualties) AS CY_Casualties
111 FROM t_road_accident tra
112 WHERE YEAR (accident_date) = '2022'
113 GROUP BY
114     CASE
115         WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
116         WHEN vehicle_type IN ('Car', 'Taxi/Private hire car') THEN 'Cars'
117         WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') THEN 'Bus'
118         WHEN vehicle_type IN ('Van / Goods 3.5 tonnes mgw or under', 'Goods over 3.5t. and under 7.5t', 'Goods 7.5 tonnes mgw and over') THEN 'Van'
119         WHEN vehicle_type IN ('Pedal cycle', 'Motorcycle over 500cc', 'Motorcycle over 125cc and up to 500cc', 'Motorcycle 50cc and under', 'Motorcycle 125cc and under') THEN 'Bike'
120         ELSE 'Other'
121     END;
```

Results 1 X

Enter a SQL expression to filter results (use Ctrl+Space)

vehicle_group	123 CY_Casualties
Agricultural	399
Bike	15,610
Bus	6,573
Cars	155,804
Other	1,446
Van	15,905

➤ Monthly trend showing comparison of casualties for Current Year and Previous Year

```
125 SELECT
126     monthname(accident_date) AS Month_Name,
127     sum(number_of_casualties) AS CY_Casualties
128 FROM t_road_accident tra
129 WHERE YEAR (accident_date) = '2022'
130 GROUP BY monthname(accident_date);
131
```

Month_Name	123 CY_Casualties
April	15,767
August	16,796
December	13,200
February	14,804
January	13,163
July	17,201
June	17,230
March	16,575
May	16,775
November	18,439
October	18,287
September	17,500

```
125 SELECT
126     monthname(accident_date) AS Month_Name,
127     sum(number_of_casualties) AS PY_Casualties
128 FROM t_road_accident tra
129 WHERE YEAR (accident_date) = '2021'
130 GROUP BY monthname(accident_date);
131
```

Month_Name	123 PY_Casualties
April	17,335
August	18,797
December	18,576
February	14,648
January	18,173
July	19,682
June	18,728
March	17,815
May	18,852
November	20,975
October	20,109
September	18,456

```
132 SELECT
133     CY.Month_Name,
134     PY.PY_Casualties,
135     CY.CY_Casualties,
136     CY.CY_Casualties - PY.PY_Casualties AS Difference,
137     round((CY.CY_Casualties - PY.PY_Casualties) / PY.PY_Casualties * 100, 2) AS 'Diff in %'
138 FROM
139     (SELECT
140         monthname(accident_date) AS Month_Name,
141         sum(number_of_casualties) AS CY_Casualties
142     FROM t_road_accident tra
143     WHERE YEAR (accident_date) = '2022'
144     GROUP BY monthname(accident_date)) AS CY
145 JOIN
146     (SELECT
147         monthname(accident_date) AS Month_Name,
148         sum(number_of_casualties) AS PY_Casualties
149     FROM t_road_accident tra
150     WHERE YEAR (accident_date) = '2021'
151     GROUP BY monthname(accident_date)) AS PY
152 ON CY.Month_Name = PY.Month_Name;
153
```

Month_Name	123 PY_Casualties	123 CY_Casualties	123 Difference	123 Diff in %
April	17,335	15,767	-1,568	-9.05
August	18,797	16,796	-2,001	-10.65
December	18,576	13,200	-5,376	-28.94
February	14,648	14,804	156	1.06
January	18,173	13,163	-5,010	-27.57
July	19,682	17,201	-2,481	-12.61
June	18,728	17,230	-1,498	-8
March	17,815	16,575	-1,240	-6.96
May	18,852	16,775	-2,077	-11.02
November	20,975	18,439	-2,536	-12.09
October	20,109	18,287	-1,822	-9.06
September	18,456	17,500	-956	-5.18

➤ Casualties by Road Type for Current Year

```

154 -- Casualties by Road Type for Current Year
155 SELECT
156     road_type,
157     sum(number_of_casualties) AS CY_Casualties
158 FROM t_road_accident
159 WHERE YEAR (accident_date) = '2022'
160 GROUP BY road_type
161 ORDER BY CY_Casualties DESC;

```

	road_type	CY_Casualties
1	Single carriageway	144,653
2	Dual carriageway	31,912
3	Roundabout	12,683
4	One way street	3,499
5	Slip road	2,990

➤ Distribution of total casualties by Road Surface

```

163 -- Distribution of total casualties by Road Surface
164 SELECT
165     road_surface_conditions AS 'Road Surface',
166     sum(number_of_casualties) AS Casualties
167 FROM t_road_accident
168 GROUP BY road_surface_conditions
169 ORDER BY Casualties DESC;
170

```

	Road Surface	Casualties
1	Dry	279,445
2	Wet or damp	115,093
3	Frost or ice	16,306
4	Snow	6,475
5	Flood over 3cm. deep	564

➤ Relation between Casualties by Area/ Location

```

183 SELECT
184     urban_or_rural_area AS 'Urban/Rural',
185     sum(number_of_casualties) AS 'Total Casualties',
186     round(sum(number_of_casualties) * 100 /
187         (SELECT sum(number_of_casualties)
188         FROM t_road_accident
189         ), 2) AS 'Casualties in %'
190 FROM t_road_accident
191 GROUP BY urban_or_rural_area;
192

```

	Urban/Rural	Total Casualties	Casualties in %
1	Rural	162,019	38.77
2	Urban	255,864	61.23

```

172 SELECT
173     urban_or_rural_area AS 'Urban/Rural',
174     round(sum(number_of_casualties) * 100 /
175         (SELECT sum(number_of_casualties)
176         FROM t_road_accident
177         WHERE YEAR (accident_date) = '2022'), 2) AS 'Casualties in %'
178 FROM t_road_accident
179 WHERE YEAR (accident_date) = '2022'
180 GROUP BY urban_or_rural_area;
181

```

	Urban/Rural	Casualties in %
1	Rural	38.05
2	Urban	61.95

➤ Relation between Casualties by Day/ Night

```

192 -- Relation between Casualties by Day / Night
193 SELECT
194 CASE
195     WHEN light_conditions IN ('Daylight') THEN 'Day'
196     ELSE 'Dark'
197 END AS 'Light Condition',
198 sum(number_of_casualties) AS 'Total Casualties',
199 round(sum(number_of_casualties) * 100 /
200     (SELECT sum(number_of_casualties)
201     FROM t_road_accident), 2) AS 'Casualties IN %'
202 FROM t_road_accident
203 GROUP BY
204 CASE
205     WHEN light_conditions IN ('Daylight') THEN 'Day'
206     ELSE 'Dark'
207 END;

```

Results 1

	Light Condition	Total Casualties	Casualties IN %
1	Dark	112,920	27.02
2	Day	304,963	72.98

```

192 -- Relation between Casualties by Day / Night
193 SELECT
194 CASE
195     WHEN light_conditions IN ('Daylight') THEN 'Day'
196     ELSE 'Dark'
197 END AS 'Light Condition',
198 sum(number_of_casualties) AS 'CY Casualties',
199 round(sum(number_of_casualties) * 100 /
200     (SELECT sum(number_of_casualties)
201     FROM t_road_accident
202     WHERE YEAR (accident_date) = '2022'), 2) AS 'CY Casualties in %'
203 FROM t_road_accident
204 WHERE YEAR (accident_date) = '2022'
205 GROUP BY
206 CASE
207     WHEN light_conditions IN ('Daylight') THEN 'Day'
208     ELSE 'Dark'
209 END;

```

Results 1

	Light Condition	CY Casualties	CY Casualties in %
1	Dark	51,198	26.16
2	Day	144,539	73.84

➤ Top 10 locations by number of Casualties

```

211 -- Top 10 locations by number of Casualties
212 SELECT
213     local_authority,
214     sum(number_of_casualties) AS Total_Casualties
215 FROM t_road_accident
216 -- WHERE YEAR (accident_date) = '2022'
217 GROUP BY local_authority
218 ORDER BY Total_Casualties DESC
219 LIMIT 10;
220

```

t_road_accident 1

	local_authority	Total_Casualties
1	Birmingham	8,611
2	Leeds	5,821
3	Bradford	4,431
4	Manchester	4,366
5	Liverpool	4,052
6	Cornwall	3,820
7	Sheffield	3,737
8	Kirklees	3,312
9	County Durham	3,295
10	Westminster	3,169