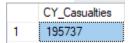# ROAD ACCIDENT REPORT (MS SQL Markdown)

CY Casualties
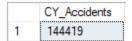
```
SELECT SUM(number_of_casualties) AS CY_Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2022'
```
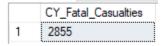
	CY_Casualties
1	195737

CY Accidents

```
SELECT COUNT(DISTINCT accident_index) AS CY_Accidents
FROM road_accident
WHERE YEAR(accident_date) = '2022'
```

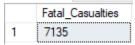|	CY_Accidents
1	144419

CY Fatal Casualties

```
SELECT SUM(number_of_casualties) AS CY_Fatal_Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2022' AND accident_severity = 'Fatal'
```

	CY_Fatal_Casualties
1	2855

Fatal Casualties (total of all years)

```
SELECT SUM(number_of_casualties) AS Fatal_Casualties
FROM road_accident
WHERE accident_severity = 'Fatal'
```

	Fatal_Casualties
1	7135

Serious Casualties

```
SELECT SUM(number_of_casualties) AS Serious_Casualties
FROM road_accident
WHERE accident_severity = 'Serious'
```

	Serious_Casualties
1	59312

/*CY_Slight_Casualties*/

```
SELECT SUM(number_of_casualties) AS CY_Slight_Casualties
```

FROM road_accident
WHERE YEAR(accident_date) = '2022' AND accident_severity = 'Slight'

	CY_Slight_Casualties
1	165837

/*Percentage of total (for slight casualties)*/
SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) *100 /
(SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) FROM road_accident)
AS Percentage_of_Total
FROM road_accident
WHERE accident_severity = 'Slight'

	Percentage_of_Total
1	84.0991377969431

/*Percentage of total (for serious casualties)*/
SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) *100 /
(SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) FROM road_accident)
AS Percentage_of_Total
FROM road_accident
WHERE accident_severity = 'Serious'

	Percentage_of_Total
1	14.1934464910034

/*Percentage of total (for fatal casualties)*/
SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) *100 /
(SELECT CAST(SUM(number_of_casualties) AS decimal(10,2)) FROM road_accident)
AS Percentage_of_Total
FROM road_accident
WHERE accident_severity = 'Fatal'

	Percentage_of_Total
1	1.7074157120533

/*Casualties by Vehicle type (year of 2022)*/
SELECT
        CASE
                WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
                WHEN vehicle_type IN ('Car' , 'Taxi/Private hire car') THEN 'Cars'
                WHEN vehicle_type IN ('Motorcycle 125cc and under', 'Motorcycle 50cc and
under',

```sql
                        'Motorcycle over 125cc and up to 500cc' , 'Motorcycle over 500cc' , 'Pedal cycle')
THEN 'Bike'
                        WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)',
                        'Minibus (8 - 16 passenger seats)') THEN 'Bus'
                        WHEN vehicle_type IN ('Goods 7.5 tonnes mgw and over',
                        'Goods over 3.5t. and under 7.5t', 'Van / Goods 3.5 tonnes mgw or under') THEN
'Van'
                        ELSE 'Other'
                END as vehicle_group,
                SUM(number_of_casualties) as CY_Casualties
                FROM road_accident
                WHERE YEAR(accident_date) = '2022'
                GROUP BY
                        CASE
                                WHEN vehicle_type IN ('Agricultural vehicle') THEN 'Agricultural'
                                WHEN vehicle_type IN ('Car' , 'Taxi/Private hire car') THEN 'Cars'
                                WHEN vehicle_type IN ('Motorcycle 125cc and under', 'Motorcycle 50cc
and under',
                                'Motorcycle over 125cc and up to 500cc' , 'Motorcycle over 500cc' , 'Pedal
cycle') THEN 'Bike'
                                WHEN vehicle_type IN ('Bus or coach (17 or more pass seats)',
                                'Minibus (8 - 16 passenger seats)') THEN 'Bus'
                                WHEN vehicle_type IN ('Goods 7.5 tonnes mgw and over',
                                'Goods over 3.5t. and under 7.5t', 'Van / Goods 3.5 tonnes mgw or under')
THEN 'Van'
                                ELSE 'Other'
                        END
```

	vehicle_group	CY_Casualties
1	Bike	15610
2	Bus	6573
3	Cars	155804
4	Agricultural	399
5	Van	15905
6	Other	1446

```sql
--CY casualties vs PY casualties month by month
SELECT DATENAME(MONTH, accident_date) AS Month_Name , SUM(number_of_casualties) AS
CY_Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY DATENAME(MONTH, accident_date)
```

	Month_Name	CY_Casualties
1	February	14804
2	June	17230
3	August	16796
4	April	15767
5	May	16775
6	December	13200
7	January	13163
8	September	17500
9	October	18287
10	July	17201
11	November	18439
12	March	16575

SELECT DATENAME(MONTH, accident_date) AS Month_Name , SUM(number_of_casualties) AS PY_Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2021'
GROUP BY DATENAME(MONTH, accident_date)

	Month_Name	PY_Casualties
1	February	14648
2	June	18728
3	August	18797
4	April	17335
5	May	18852
6	December	18576
7	January	18173
8	September	18456
9	October	20109
10	July	19682
11	November	20975
12	March	17815

--Casualties by road type
SELECT road_type, SUM(number_of_casualties) AS CY_Casualties FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY road_type

	road_type	CY_Casualties
1	Slip road	2990
2	Dual carriageway	31912
3	Single carriageway	144653
4	One way street	3499
5	Roundabout	12683

--Casualties by Urban/Rural (percentage of total)
SELECT urban_or_rural_area, CAST(SUM(number_of_casualties) AS DECIMAL(10,2)) *100/
(SELECT CAST(SUM(number_of_casualties) AS DECIMAL(10,2)) FROM road_accident WHERE
YEAR(accident_date) = '2022')
AS CY_casualties_Percentage_of_Total
FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY urban_or_rural_area

	urban_or_rural_area	CY_casualties_Percentage_of_Total
1	Urban	61.9458763544960
2	Rural	38.0541236455039

SELECT urban_or_rural_area, SUM(number_of_casualties) AS Casualties_in_this_area,
CAST(SUM(number_of_casualties) AS DECIMAL(10,2)) *100/
(SELECT CAST(SUM(number_of_casualties) AS DECIMAL(10,2)) FROM road_accident)
AS Casualties_in_this_area_Percentage_of_Total
FROM road_accident
GROUP BY urban_or_rural_area

	urban_or_rural_area	Casualties_in_this_area	Casualties_in_this_area_Percentage_of_Total
1	Urban	255864	61.2286214083846
2	Rural	162019	38.7713785916153

--Casualties by light condition
SELECT
        CASE
                WHEN light_conditions IN ('Daylight') THEN 'Day'
                WHEN light_conditions IN ('Darkness - lighting unknown', 'Darkness - lights lit',
                'Darkness - lights unlit', 'Darkness - no lighting') THEN 'Night'
                END AS Light_Condition,
                CAST(
                        CAST(
                                SUM(number_of_casualties) AS DECIMAL(10,2)) *100 /
                                (SELECT CAST(SUM(number_of_casualties) AS DECIMAL(10,2))
FROM road_accident WHERE YEAR(accident_date) = '2022'
)
                        AS DECIMAL(10,2)
)
                AS CY_Casualties_PercentageOfTotal
        FROM road_accident
        WHERE YEAR(accident_date) = '2022'
        GROUP BY
        CASE
                WHEN light_conditions IN ('Daylight') THEN 'Day'

WHEN light_conditions IN ('Darkness - lighting unknown', 'Darkness - lights lit',
'Darkness - lights unlit', 'Darkness - no lighting') THEN 'Night'

END

	Light_Condition	CY_Casualties_PercentageOfTotal
1	Day	73.84
2	Night	26.16

--**Top 10 locations by number of casualties**
SELECT top 10 local_authority, SUM(number_of_casualties) AS
Toal_Casualties_at_this_Location
FROM road_accident
GROUP BY local_authority
ORDER BY Toal_Casualties_at_this_Location DESC

	local_authority	Toal_Casualties_at_this_Location
1	Birmingham	8611
2	Leeds	5821
3	Bradford	4431
4	Manchester	4366
5	Liverpool	4052
6	Cornwall	3820
7	Sheffield	3737
8	Kirklees	3312
9	County Durham	3295
10	Westminster	3169

*Finished the data validation: checked each dashboard made before