SQL Analysis Sheet

Import Data in Table and checking the table

```
SELECT * FROM road_accident
```

Results | Messages

	accident_index	accident_date	day_of_week	junction_control	junction_detail	accident_severity	light_conditions	local_authority	carriageway_hazards	number_of_casu
1	BS0000001	2021-01-01	Thursday	Give way or uncontrolled	T or staggered junction	Serious	Daylight	Kensington and Chelsea	None	1
2	BS0000002	2021-01-05	Monday	Give way or uncontrolled	Crossroads	Serious	Daylight	Kensington and Chelsea	None	11
3	BS0000003	2021-01-04	Sunday	Give way or uncontrolled	T or staggered junction	Slight	Daylight	Kensington and Chelsea	None	1
4	BS0000004	2021-01-05	Monday	Auto traffic signal	T or staggered junction	Serious	Daylight	Kensington and Chelsea	None	1
5	BS0000005	2021-01-06	Tuesday	Auto traffic signal	Crossroads	Serious	Darkness - lights lit	Kensington and Chelsea	None	1
6	BS0000006	2021-01-01	Thursday	Give way or uncontrolled	T or staggered junction	Slight	Daylight	Kensington and Chelsea	None	3
7	BS0000007	2021-01-08	Thursday	Give way or uncontrolled	T or staggered junction	Serious	Daylight	Kensington and Chelsea	None	1
8	BS0000008	2021-01-02	Friday	Auto traffic signal	Crossroads	Slight	Daylight	Kensington and Chelsea	None	1
9	BS0000009	2021-01-07	Wednesday	Give way or uncontrolled	T or staggered junction	Slight	Daylight	Kensington and Chelsea	None	2
10	BS0000010	2021-01-10	Saturday	Auto traffic signal	Crossroads	Slight	Daylight	Kensington and Chelsea	None	1

Query executed successfully. | SATYAJEETDC\SQLEXPRESS (16.... | SATYAJEETDC\Admin (57) | Road Accident DB | 00:00:09 | 3,07,973 rows

Checking the current year total casualties

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

Results | Messages

	CY_Casualties
1	195737

Checking the current year total accidents

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

Results | Messages

	CY_Total_Accidents
1	144419

Checking the current year fatal casualties

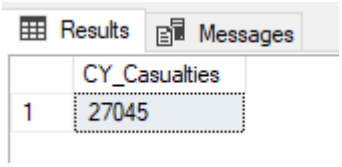
```
SELECT SUM(number_of_casualties) AS CY_Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2022'AND accident_severity = 'Fatal'
```

Results | Messages

	CY_Casualties
1	2855

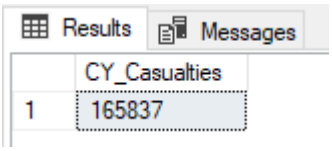
Checking the current year serious casualties

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



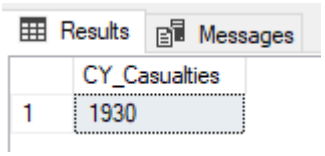
Checking the current year slight casualties

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



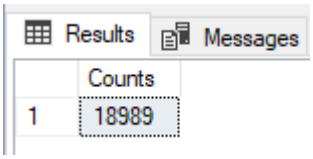
Checking the current year fatal casualties where it was dry road conditions

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



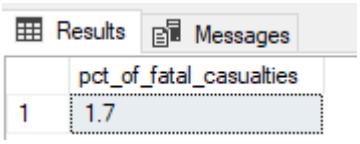
Checking the current year total accidents in rainy weather conditions

```
SELECT COUNT(accident_index) AS Counts
FROM road_accident
WHERE YEAR(accident_date) = '2022'
AND weather_conditions IN ('Raining no high winds',
'Raining + high winds')
```



Checking what percent of total casualties is fatal casualties

```
SELECT CAST(CAST(SUM(number_of_casualties) AS DECIMAL(10,2))*100/
(SELECT CAST(SUM(number_of_casualties) AS DECIMAL(10,2))
FROM road_accident) AS NUMERIC(10,1)) AS pct_of_fatal_casualties
FROM road_accident
WHERE accident_severity = 'Fatal'
```



Results | Messages

	pct_of_fatal_casualties
1	1.7

Checking total casualties by vehicle type

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

```
      END
ORDER BY Total_Casualties DESC
```

Results | Messages

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

Top 10 locations by total casualties

```
SELECT TOP 10 local_authority AS locaton , SUM(number_of_casualties)
AS no_of_casualties FROM road_accident
GROUP BY local_authority
ORDER BY no_of_casualties DESC
```

Results | Messages

	locaton	no_of_casualties
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

CY casualties monthly trend

```
SELECT DATENAME(MONTH, accident_date) AS Month,
SUM(number_of_casualties) AS Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY DATENAME(MONTH, accident_date)
```

Results | Messages

	Month	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

PY casualties monthly trend

```
SELECT DATENAME(MONTH, accident_date) AS Month,
SUM(number_of_casualties) AS Casualties
FROM road_accident
WHERE YEAR(accident_date) = '2021'
GROUP BY DATENAME(MONTH, accident_date)
```

Results | Messages

	Month	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

Total casualties by road type

```
SELECT road_type, SUM(number_of_casualties) AS no_of_casualties FROM
road_accident
GROUP BY road_type
ORDER BY no_of_casualties DESC
```

Results | Messages

	road_type	no_of_casualties
1	Single carriageway	309698
2	Dual carriageway	67368
3	Roundabout	26828
4	One way street	7389
5	Slip road	6600

Total casualties trend by urban/rural area

```
SELECT urban_or_rural_area, CAST(CAST(SUM(number_of_casualties) AS
DECIMAL(10,2))*100/
(SELECT CAST(SUM(number_of_casualties) AS DECIMAL(10,2)) FROM
road_accident) AS NUMERIC(10,1)) AS pct
FROM road_accident
GROUP BY urban_or_rural_area
```

Results | Messages

	urban_or_rural_area	pct
1	Rural	38.8
2	Urban	61.2

Total casualties in CY by urban/rural area

```
SELECT urban_or_rural_area,
ROUND(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 NUMERIC(10,1)),
0) AS pct
FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY urban_or_rural_area
```

Results | Messages

	urban_or_rural_area	pct
1	Rural	38.0
2	Urban	62.0

Casualties trend by light conditions

```
SELECT
      CASE
            WHEN light_conditions IN ('Daylight') THEN 'Day Light'
            WHEN light_conditions IN ('Darkness - no
lighting','Darkness - lights lit','Darkness - lights
unlit','Darkness - lighting unknown') THEN 'Dark'
      END AS lighting_condition,
ROUND(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 NUMERIC(10,1)), 0) AS pct
FROM road_accident
WHERE YEAR(accident_date) = '2022'
GROUP BY
      CASE
            WHEN light_conditions IN ('Daylight') THEN 'Day Light'
            WHEN light_conditions IN ('Darkness - no
lighting','Darkness - lights lit','Darkness - lights
unlit','Darkness - lighting unknown') THEN 'Dark'
      END
```

Results | Messages

	lighting_condition	pct
1	Day Light	74.0
2	Dark	26.0