

ROAD ACCIDENT ANALYSIS USING SQL

-- Q1 How many accidents occurred in urban areas vs Rural areas?

```
select Area, COUNT(AccidentIndex) AS Total_accident
from [dbo].[accident]
group by Area
```

	area	Total_accident
1	Rural	109441
2	Urban	198532

-- Q2 Which day of the week has the highest no of accidents?

```
select dayofweek, COUNT(AccidentIndex) as Total_accidents
from [dbo].[accident]
group by Dayofweek
Order by Total_accidents desc;
```

	dayofweek	Total_accidents
1	Friday	50529
2	Tuesday	46386
3	Wednesday	46381
4	Thursday	45649
5	Monday	43918
6	Saturday	41566
7	Sunday	33544

-- Q3 Which day of the week has the lowest no of accidents?

```
select dayofweek, COUNT(AccidentIndex) as Total_accidents
from [dbo].[accident]
group by Dayofweek
Order by Total_accidents asc;
```

	dayofweek	Total_accidents
1	Sunday	33544
2	Saturday	41566
3	Monday	43918
4	Thursday	45649
5	Wednesday	46381
6	Tuesday	46386
7	Friday	50529

--Q4 Are there any Specific speed limit condition that contribute to severe accidents?

```
SELECT speedlimit,accidentseverity ,COUNT(AccidentIndex) AS total_accidents
FROM [dbo].[accident]
group by speedlimit,accidentseverity
order by total_accidents Desc;
```

	speedlimit	accidentseverity	total_accidents
1	30	Slight	174427
2	60	Slight	36696
3	30	Serious	24076
4	40	Slight	21987
5	70	Slight	19150
6	60	Serious	8817
7	50	Slight	8507
8	40	Serious	3295
9	70	Serious	2711
10	20	Slight	2508
11	30	Fatal	1537
12	50	Serious	1464
13	60	Fatal	1313
14	70	Fatal	501
15	20	Serious	377
16	40	Fatal	368

--Q5 Are there any Specific weather condition that contribute to severe accidents?

```
SELECT WeatherConditions,accidentseverity ,COUNT(AccidentIndex) AS total_accidents
FROM [dbo].[accident]
group by WeatherConditions,accidentseverity
order by total_accidents Desc;
```

	WeatherConditions	accidentseverity	total_accidents
3	Raining no high winds	Slight	33074
4	Other	Slight	7814
5	Snowing no high winds	Slight	4390
6	Raining no high winds	Serious	4363
7	Fog or mist	Slight	4255
8	Fine no high winds	Fatal	3268
9	Raining + high winds	Slight	3036
10	Fine + high winds	Slight	2661
11	Other	Serious	904
12	Snowing + high winds	Slight	476
13	Fog or mist	Serious	469
14	Raining + high winds	Serious	440
15	Fine + high winds	Serious	431
16	Snowing no high winds	Serious	418
17	Raining no high winds	Fatal	404
18	Other	Fatal	84

--Q6 Are there any Specific road surface condition that contribute to severe accidents?

```
SELECT roadsurfaceconditions,accidentseverity ,COUNT(AccidentIndex) AS total_accidents
FROM [dbo].[accident]
group by roadsurfaceconditions,accidentseverity
order by total_accidents Desc;
```

	roadsurfaceconditions	accidentseverity	total_accidents
1	Dry	Slight	177582
2	Wet or damp	Slight	70400
3	Dry	Serious	28692
4	Frost or ice	Slight	10703
5	Wet or damp	Serious	10293
6	Snow	Slight	4287
7	Dry	Fatal	2693
8	Frost or ice	Serious	1259
9	Wet or damp	Fatal	1103
10	Snow	Serious	443
11	Flood over 3cm. deep	Slight	308
12	Frost or ice	Fatal	116
13	Flood over 3cm. deep	Serious	53
14	Snow	Fatal	28
15	Flood over 3cm. deep	Fatal	13

--Q7 Are there any Specific road surface and weather condition that contribute to severe accidents?

```
SELECT roadsurfaceconditions, WeatherConditions ,COUNT(AccidentIndex) AS total_accidents
FROM [dbo].[accident]
group by WeatherConditions,roadsurfaceconditions
order by total_accidents Desc;
```

	roadsurfaceconditions	WeatherConditions	total_accidents
1	Dry	Fine no high winds	200744
2	Wet or damp	Fine no high winds	36090
3	Wet or damp	Raining no high winds	34660
4	Frost or ice	Fine no high winds	6669
5	Wet or damp	Other	4165
6	Wet or damp	Raining + high winds	3361
7	Frost or ice	Other	3126
8	Snow	Snowing no high winds	2922
9	Dry	Fog or mist	2629
10	Dry	Raining no high winds	2510
11	Dry	Fine + high winds	1891
12	Wet or damp	Fog or mist	1661
13	Frost or ice	Snowing no high winds	1224
14	Wet or damp	Fine + high winds	1136
15	Dry	Other	1134
16	Snow	Fine no high winds	939
17	Wet or damp	Snowing + high winds	660

--Q8 Calculate the average age of vehicle involve in accident considering day light.

```
SELECT lightconditions, COUNT(AccidentIndex) AS Total_accident
from [dbo].[accident]
Group by lightconditions
```

	lightconditions	Total_accident
1	Darkness - no lighting	16528
2	Darkness - lights lit	60093
3	Daylight	227286
4	Darkness - lights unlit	1142
5	Darkness - lighting unknown	2924

-- Q9 How many number of vehicles involve in accident?

```
select vehicletype, COUNT(numberofvehicles) AS Total_vehicle, COUNT(AccidentIndex) AS
Total_accident
from [dbo].[accident]
group by vehicletype
order by total_accident Desc;
```

	vehicletype	Total_vehicle	Total_accident
1	Car	239794	239794
2	Van / Goods 3.5 tonnes mgw or under	15695	15695
3	Motorcycle over 500cc	11226	11226
4	Bus or coach (17 or more pass seats)	8686	8686
5	Motorcycle 125cc and under	6852	6852
6	Goods 7.5 tonnes mgw and over	6532	6532
7	Taxi/Private hire car	5543	5543
8	Motorcycle 50cc and under	3703	3703
9	Motorcycle over 125cc and up to 500cc	3285	3285
10	Other vehicle	2516	2516
11	Goods over 3.5t. and under 7.5t	2502	2502
12	Minibus (8 - 16 passenger seats)	821	821
13	Agricultural vehicle	749	749
14	Pedal cycle	66	66
15	Ridden horse	3	3