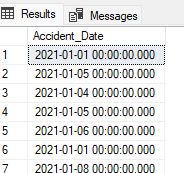
**Road Accident Project Query**

SELECT Accident\_Date

FROM road\_accident;



**-- create Acc\_date column for accident date**

ALTER TABLE road\_accident

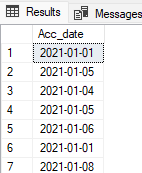
ADD Acc\_date DATE;

**-- Accident\_Date column has date and time. so take only date from Accident\_Date and insert in Acc\_date column**

UPDATE road\_accident

SET Acc\_date = CAST(Accident\_Date AS DATE);

|  |
| --- |
| SELECT Acc\_date  FROM road\_accident; |



-- create column for month, day(number), Time and year separately

ALTER TABLE road\_accident

ADD YEAR int;

ALTER TABLE road\_accident

ADD Month VARCHAR(50);

ALTER TABLE road\_accident

ADD Acc\_Day int; -- in number

ALTER TABLE road\_accident

ADD day\_name VARCHAR(50); -- in char

-- Time

ALTER TABLE road\_accident

ADD acc\_time TIME;

-- drop

ALTER TABLE road\_accident

DROP COLUMN Day;

--

UPDATE road\_accident

SET YEAR = YEAR(Accident\_Date);

UPDATE road\_accident

SET Acc\_Day = DAY(Accident\_Date);

-- Time

UPDATE road\_accident

SET acc\_time = CAST(Time AS TIME);

-- In year, 1 means 'january'

UPDATE road\_accident

SET MONTH = CASE

WHEN MONTH(Accident\_Date) = 1 THEN 'January'

WHEN MONTH(Accident\_Date) = 2 THEN 'February'

WHEN MONTH(Accident\_Date) = 3 THEN 'March'

WHEN MONTH(Accident\_Date) = 4 THEN 'April'

WHEN MONTH(Accident\_Date) = 5 THEN 'May'

WHEN MONTH(Accident\_Date) = 6 THEN 'June'

WHEN MONTH(Accident\_Date) = 7 THEN 'July'

WHEN MONTH(Accident\_Date) = 8 THEN 'August'

WHEN MONTH(Accident\_Date) = 9 THEN 'September'

WHEN MONTH(Accident\_Date) = 10 THEN 'October'

WHEN MONTH(Accident\_Date) = 11 THEN 'November'

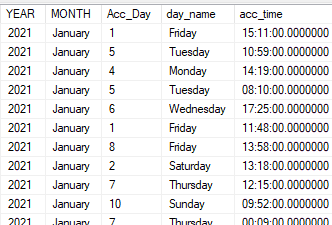
WHEN MONTH(Accident\_Date) = 12 THEN 'December'

END;

-- To update day\_name like 'Sunday'

UPDATE road\_accident

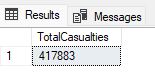
SET day\_name = DATENAME(WEEKDAY, Accident\_Date);



-- To Find Total Casualties

SELECT SUM(Number\_of\_casualties) as TotalCasualties

FROM road\_accident;



-- Group data by Accident\_severity (serious, slight, Fatal)

SELECT Accident\_Severity

FROM road\_accident

WHERE Accident\_Severity = 'Fetal';

UPDATE road\_accident

set Accident\_Severity = 'Fatal'

WHERE Accident\_Severity = 'Fetal';

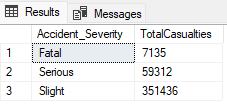
-- Total casualties by Accident\_Severity

SELECT Accident\_Severity, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

GROUP BY Accident\_Severity

ORDER BY TotalCasualties;



-- casualties by vehicle

ALTER TABLE road\_accident

ADD Grouped\_Vehicle VARCHAR(100);

UPDATE road\_accident

SET Grouped\_Vehicle = Vehicle\_Type;

UPDATE road\_accident

SET Grouped\_Vehicle = 'Car'

WHERE Grouped\_Vehicle = 'Taxi/Private hire car';

UPDATE road\_accident

SET Grouped\_Vehicle = 'Bus'

WHERE Grouped\_Vehicle = 'Bus or coach (17 or more pass seats)'

OR Grouped\_Vehicle = 'Minibus (8 - 16 passenger seats)';

UPDATE road\_accident

SET Grouped\_Vehicle = 'Van'

WHERE Grouped\_Vehicle = 'Goods over 3.5t. and under 7.5t'

OR Grouped\_Vehicle = 'Goods 7.5 tonnes mgw and over'

OR Grouped\_Vehicle = 'Van / Goods 3.5 tonnes mgw or under';

UPDATE road\_accident

SET Grouped\_Vehicle = 'Bike'

WHERE Grouped\_Vehicle = 'Motorcycle 50cc and under'

OR Grouped\_Vehicle = 'Motorcycle over 500cc'

OR Grouped\_Vehicle = 'Motorcycle over 125cc and up to 500cc'

OR Grouped\_Vehicle = 'Motorcycle 125cc and under';

UPDATE road\_accident

SET Grouped\_Vehicle = 'Others'

WHERE Grouped\_Vehicle = 'Other vehicle'

OR Grouped\_Vehicle = 'Pedal cycle'

OR Grouped\_Vehicle = 'Ridden horse';

SELECT Vehicle\_Type, SUM(Number\_of\_Casualties)

FROM road\_accident

GROUP BY Vehicle\_Type;

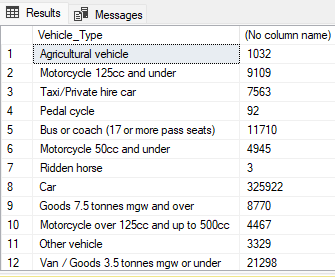
SELECT Grouped\_Vehicle, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

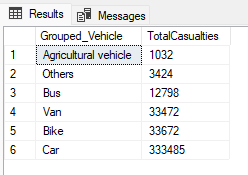
GROUP BY Grouped\_Vehicle

ORDER BY TotalCasualties;

**Original Data**



Output:



-- percentage of fatal, serious, slight severity

SELECT SUM(Number\_of\_Casualties) AS TotalCasualties

FROM road\_accident;

SELECT Accident\_Severity, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

GROUP BY Accident\_Severity

ORDER BY TotalCasualties;

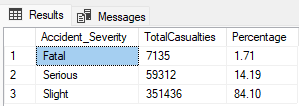
SELECT Accident\_Severity,SUM(Number\_of\_Casualties) TotalCasualties,

CAST(SUM(Number\_of\_Casualties) \* 100 / (SELECT SUM(Number\_of\_Casualties) FROM road\_accident)AS DECIMAL(10,2)) AS Percentage

FROM road\_accident

GROUP BY Accident\_Severity

ORDER BY Percentage;



-- percentage for vehicle type

SELECT Grouped\_Vehicle, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

GROUP BY Grouped\_Vehicle

ORDER BY TotalCasualties;

SELECT Grouped\_Vehicle, SUM(Number\_of\_Casualties) As TotalCasualties,

CAST(SUM(Number\_of\_Casualties) \* 100 / (SELECT SUM(Number\_of\_Casualties) FROM road\_accident)AS DECIMAL(10,1)) AS Percentage

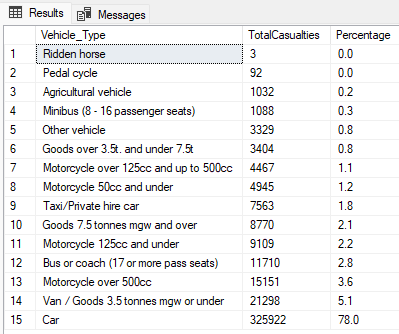
FROM road\_accident

GROUP BY Grouped\_Vehicle

ORDER BY TotalCasualties;

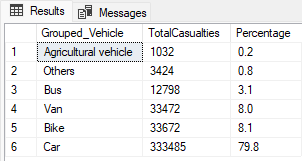
**Original Data:**

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Output:

=========



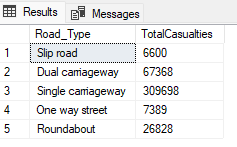
-- casualties by road type

SELECT \* FROM road\_accident;

SELECT Road\_Type, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

GROUP BY Road\_Type;



-- casualties by road surface

ALTER TABLE road\_accident

ADD Grouped\_road\_surface VARCHAR(100);

UPDATE road\_accident

SET Grouped\_road\_surface = Road\_Surface\_Conditions;

UPDATE road\_accident

SET Grouped\_road\_surface = 'Wet'

WHERE Grouped\_road\_surface = 'Wet or damp'

OR Grouped\_road\_surface = 'Flood over 3cm. deep';

UPDATE road\_accident

SET Grouped\_road\_surface = 'Snow/Ice'

WHERE Grouped\_road\_surface = 'Snow'

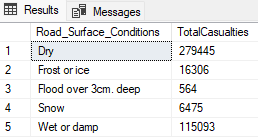
OR Grouped\_road\_surface = 'Frost or ice';

SELECT Grouped\_road\_surface, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

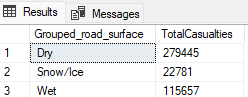
GROUP BY Grouped\_road\_surface;

Original Data:



Output:

=======



-- casualties by day / night

ALTER TABLE road\_accident

ADD Grouped\_light\_conditions VARCHAR(100);

UPDATE road\_accident

SET Grouped\_light\_conditions = Light\_Conditions;

UPDATE road\_accident

SET Grouped\_light\_conditions = 'Night'

WHERE Grouped\_light\_conditions = 'Darkness - lights lit'

OR Grouped\_light\_conditions = 'Darkness - lights unlit'

OR Grouped\_light\_conditions = 'Darkness - lighting unknown'

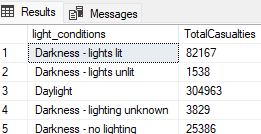
OR Grouped\_light\_conditions = 'Darkness - no lighting';

SELECT Grouped\_light\_conditions, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

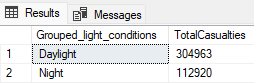
GROUP BY Grouped\_light\_conditions;

**Original Data:**



**Output:**

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-- casualties by area (rural / urban)

SELECT Urban\_or\_Rural\_Area, SUM(Number\_of\_Casualties) As TotalCasualties

FROM road\_accident

GROUP BY Urban\_or\_Rural\_Area;

