SELECT \* FROM roadaccident.rad;

use roadaccident;

UPDATE rad

SET accident\_date = STR\_TO\_DATE(accident\_date, '%d-%m-%Y');

-- Modify the column data type

ALTER TABLE rad

MODIFY COLUMN accident\_date DATE;

KPI 1. Select Number of casualties

select sum(number\_of\_casualties) as CY\_casualties from rad;

**output:**

CY Casualties

417883

## KP2 Select different type of accident severities and their numbers

select distinct(accident\_severity), sum(number\_of\_casualties) from rad group by accident\_severity;

OUTPUT:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Accident\_severity | sum(number\_of\_casualties) | | Fatal | 7135 | | Serious | 39312 | | Slight | 351436 | |
|  |
|  |

## KPI 3 select total number of casualties by road type

select distinct(road\_type),sum(number\_of\_casualties) from rad group by road\_type;

Output:

Road\_type sum(number\_of\_casualties)

|  |  |
| --- | --- |
| Dual carriageway | 67368 |
| One way street | 7389 |
| Roundabout | 26828 |
| Single carriageway | 309698 |
| Slip road | 6600 |

## KPI 4 select total number of casualties by urban and rural area

select distinct(urban\_or\_rural\_area) ,sum(number\_of\_casualties) from rad group by urban\_or\_rural\_area;

Output:

urban\_or\_rural\_area number\_of\_casualties

|  |  |  |  |
| --- | --- | --- | --- |
| Rural |  |  | 162019 |
| Urban |  |  | 255864 |
|  |  |  |  |

KPI5: find total number of casualties where year is 2022 and road\_surface\_condition is dry

Select sum(number\_of\_casualties) as cy\_casualties from rad where year(accident\_date)='2022' and road\_surface\_conditions='Dry';

Output:

Cy\_casualties

131976

KPI 6: Find distinct accident\_index where year is 2022 and unique accident\_index

Select count(distinct accident\_index) as cy\_accidents from rad where year(accident\_date)=’2022’;

Output:

Cy\_accidents

144419

KPI7 : To get total casualties by vechile type

SELECT

CASE

WHEN vehicle\_type IN ('Agricultural vehicle') THEN 'Agriculture'

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'

WHEN vehicle\_type IN ('Motorcycle 125cc and under', 'Motorcycle 50cc and under', 'Motorcycle over 125cc and up to 500cc', 'Motorcycle over 500cc') THEN 'Bike'

WHEN vehicle\_type IN ('Other vehicle', 'Pedal cycle', 'Ridden horse') THEN 'Others'

WHEN vehicle\_type IN ('Car', 'Taxi/Private hire car') THEN 'Car'

ELSE 'Unknown'

END AS vehicle\_group, sum(number\_of\_casualties) as cy\_casualties

FROM

rad group by vehicle\_group;

Output:

Vechile\_group Cy\_casualties

|  |  |
| --- | --- |
| Agriculture | 1032 |
| Bike | 33672 |
| Bus | 12798 |
| Car | 333485 |
| Others | 3424 |
| van | 33472 |

KPI8: No of accidents by light conditions

SELECT

CASE

WHEN light\_conditions IN ('Darkness - lighting unknown', 'Darkness - lights lit', 'Darkness - lights unlit', 'Darkness - no lighting') THEN 'Dark'

WHEN light\_conditions = 'Daylight' THEN 'Daylight'

ELSE 'Unknown'

END AS light\_conditions\_mapped,

COUNT(\*) AS count\_of\_accidents

FROM

rad

GROUP BY

light\_conditions\_mapped;

Output:

light\_conditions\_mapped count\_of\_accidents

|  |  |
| --- | --- |
| Daylight | 227286 |
| Dark | 80687 |

KPI 9: Casualties by Road conditions

SELECT road\_surface\_conditions, SUM(number\_of\_casualties) AS total\_casualties

FROM rad

Output:

Road\_surface\_conditions total\_casualties

|  |  |
| --- | --- |
| Dry | 279445 |
| Wet or damp | 115093 |
| Frost or ice | 16306 |
| Snow | 6475 |
| Flood over 3cm. deep | 564 |

KPI10: To get the top 10 locations with the highest number of accidents occurring

SELECT local\_authority, COUNT(\*) AS num\_accidents

FROM rad

GROUP BY local\_authority

ORDER BY num\_accidents DESC

LIMIT 10;

Output:

Local\_authority num\_accidents

|  |  |
| --- | --- |
| Birmingham | 6165 |
| Leeds | 4140 |
| Manchester | 3132 |
| Bradford | 3006 |
| Westminster | 2811 |
| Sheffield | 2750 |
| Liverpool | 2611 |
| Cornwall | 2606 |
| Barnet | 2302 |
| Bristol, City of | 2270 |