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**FSDA Assignment 2**

**Project: Analyzing Road Safety in the UK**

## Create database

```
create database road_safetyUK;

use road_safetyUK;
```

### -- Creating the Table structures

```
create table IF NOT exists accidents(

accident_index varchar(30),

accident_severity integer

);

create table vehicles(

accident_index varchar(30),

vehicle_code integer);



create table vehicle_types(

 vehicle_code integer,
```

### -- Loading the Values in the tables

```
 LOAD DATA INFILE'D:/datasets/Accidents_2015.csv'

 INTO TABLE accidents

 FIELDS TERMINATED BY ','

 ENCLOSED BY '"'

 LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS

(@col1, @dummy, @dummy, @dummy, @dummy, @dummy, @col2, @dummy, @dummy,
@dummy, @dummy, @dummy, @dummy, @dummy,

 @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy,
@dummy, @dummy, @dummy, @dummy, @dummy,

 @dummy, @dummy, @dummy, @dummy)

SET accident_index = @col1, accident_severity = @col2;




LOAD DATA INFILE 'D:/datasets/Vehicles_2015.csv'

INTO TABLE vehicles

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS

(@col1, @dummy, @col2, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy,
@dummy, @dummy, @dummy, @dummy, @dummy,

 @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy, @dummy)

SET accident_index = @col1, vehicle_code = @col2;



LOAD DATA INFILE 'D:/datasets/vehicle_types.csv'

INTO TABLE vehicle_types

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS;


select count(*) from accidents;

select count(*) from vehicles;

select count(*) from vehicle_types;
```

**-- Q1. Median Severity value of accidents caused by various motorcycles by sql query**

```
SET @row_index := -1;

SELECT AVG(num.severity) as median_value

FROM (

   SELECT @row_index:=@row_index + 1 AS row_index, severity

   FROM (select vt.vehicle_type as veh_type, a.accident_severity as severity

   from accidents a

   inner join vehicles v

   on a.accident_index = v.accident_index

   inner join vehicle_types vt

    on v.vehicle_code = vt.vehicle_code

   where vt.vehicle_type like '%Motorcycle%') as table_severity

   ORDER BY severity

) AS num

WHERE num.row_index

IN (FLOOR(@row_index / 2) , CEIL(@row_index / 2));
```

## -- Q2. Accident Severity and Total Accidents per vehicle type

```
select vt.vehicle_type, avg(a.accident_severity) as Accident_Severity, count(v.accident_index) as Total_Accidents

from accidents a

inner join vehicles v

on a.accident_index = v.accident_index

inner join vehicle_types vt

on v.vehicle_code = vt.vehicle_code

group by vt.vehicle_type;
```

## -- Q3. Average Severity by vehicle type

```
select vt.vehicle_type, avg(a.accident_severity) as Avg_Accident_Severity

from accidents a

inner join vehicles v

on a.accident_index = v.accident_index

inner join vehicle_types vt

on v.vehicle_code = vt.vehicle_code

group by vt.vehicle_type;
```

## -- Q4. Average Severity and Total Accidents by Motorcycles

```
select count(a.accident_index) as Total_Accidents_by_motorcycles,

avg(a.accident_severity) as Average_Accident_Severity_by_motorcycles

from accidents a

inner join vehicles v

on a.accident_index = v.accident_index
```

```
inner join vehicle_types vt

on v.vehicle_code = vt.vehicle_code

where vt.vehicle_type like '%Motorcycle%';

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```