**ANALYZING ROAD SAFETY IN THE UK**

-- FSDA Assignment 2

-- Task 1

-- Creating respected tables

-- Creating the ACCIDENTS table

CREATE TABLE `Accidents` (

`Accident\_Index` VARCHAR(255) NOT NULL,

`Location\_Easting\_OSGR` DECIMAL,

`Location\_Northing\_OSGR` DECIMAL,

`Longitude` DECIMAL,

`Latitude` DECIMAL,

`Police\_Force` DECIMAL NOT NULL,

`Accident\_Severity` DECIMAL NOT NULL,

`Number\_of\_Vehicles` DECIMAL NOT NULL,

`Number\_of\_Casualties` DECIMAL NOT NULL,

`Date` VARCHAR(255) NOT NULL,

`Day\_of\_Week` DECIMAL NOT NULL,

`Time` DATETIME,

`Local\_Authority\_(District)` DECIMAL NOT NULL,

`Local\_Authority\_(Highway)` VARCHAR(255) NOT NULL,

`1st\_Road\_Class` DECIMAL NOT NULL,

`1st\_Road\_Number` DECIMAL NOT NULL,

`Road\_Type` DECIMAL NOT NULL,

`Speed\_limit` DECIMAL NOT NULL,

`Junction\_Detail` DECIMAL NOT NULL,

`Junction\_Control` DECIMAL NOT NULL,

`2nd\_Road\_Class` DECIMAL NOT NULL,

`2nd\_Road\_Number` DECIMAL NOT NULL,

`Pedestrian\_Crossing-Human\_Control` DECIMAL NOT NULL,

`Pedestrian\_Crossing-Physical\_Facilities` DECIMAL NOT NULL,

`Light\_Conditions` DECIMAL NOT NULL,

`Weather\_Conditions` DECIMAL NOT NULL,

`Road\_Surface\_Conditions` DECIMAL NOT NULL,

`Special\_Conditions\_at\_Site` DECIMAL NOT NULL,

`Carriageway\_Hazards` DECIMAL NOT NULL,

`Urban\_or\_Rural\_Area` DECIMAL NOT NULL,

`Did\_Police\_Officer\_Attend\_Scene\_of\_Accident` DECIMAL NOT NULL,

`LSOA\_of\_Accident\_Location` VARCHAR(255)

);

-- Creating the VEHICLE TYPE table

CREATE TABLE vehicle\_types (

code DECIMAL NOT NULL,

label VARCHAR(255) NOT NULL

);

-- Creating the VEHICLES table

CREATE TABLE `Vehicles` (

`Accident\_Index` VARCHAR(255) NOT NULL,

`Vehicle\_Reference` DECIMAL NOT NULL,

`Vehicle\_Type` DECIMAL NOT NULL,

`Towing\_and\_Articulation` DECIMAL NOT NULL,

`Vehicle\_Manoeuvre` DECIMAL NOT NULL,

`Vehicle\_Location-Restricted\_Lane` DECIMAL NOT NULL,

`Junction\_Location` DECIMAL NOT NULL,

`Skidding\_and\_Overturning` DECIMAL NOT NULL,

`Hit\_Object\_in\_Carriageway` DECIMAL NOT NULL,

`Vehicle\_Leaving\_Carriageway` DECIMAL NOT NULL,

`Hit\_Object\_off\_Carriageway` DECIMAL NOT NULL,

`1st\_Point\_of\_Impact` DECIMAL NOT NULL,

`Was\_Vehicle\_Left\_Hand\_Drive?` DECIMAL NOT NULL,

`Journey\_Purpose\_of\_Driver` DECIMAL NOT NULL,

`Sex\_of\_Driver` DECIMAL NOT NULL,

`Age\_of\_Driver` DECIMAL NOT NULL,

`Age\_Band\_of\_Driver` DECIMAL NOT NULL,

`Engine\_Capacity\_(CC)` DECIMAL NOT NULL,

`Propulsion\_Code` DECIMAL NOT NULL,

`Age\_of\_Vehicle` DECIMAL NOT NULL,

`Driver\_IMD\_Decile` DECIMAL NOT NULL,

`Driver\_Home\_Area\_Type` DECIMAL NOT NULL,

`Vehicle\_IMD\_Decile` DECIMAL NOT NULL

);

-- Loading the data into to the respective tables

-- Loading the data into the accidents table

LOAD DATA LOCAL INFILE "/Users/varunmalani/Downloads/FSDA Assignment 2/Accidents\_2015.csv"

INTO TABLE Accidents

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

-- Loading the data into vehicle\_types

LOAD DATA LOCAL INFILE "/Users/varunmalani/Downloads/FSDA Assignment 2/vehicle\_types.csv"

INTO TABLE vehicle\_types

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

-- Loading the data into vehicle\_types

LOAD DATA LOCAL INFILE "/Users/varunmalani/Downloads/FSDA Assignment 2/Vehicles\_2015.csv"

INTO TABLE Vehicles

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

-- Q1

SELECT \* FROM vehicle\_types

WHERE label LIKE "%Motorcycle%";

SELECT \* FROM `Vehicles` v

LEFT JOIN `Accidents` a

ON v.`Accident\_Index` = a.`Accident\_Index`;

SELECT \* FROM vehicle\_types vt

LEFT JOIN `Vehicles` v

ON vt.code = v.Vehicle\_Type

WHERE vt.label LIKE "%Motorcycle%";

-- Final Ans

SELECT vt.label, SUM(a.`Number\_of\_Vehicles`) as Total\_Accidents FROM vehicle\_types vt

LEFT JOIN `Vehicles` v

ON vt.code = v.Vehicle\_Type

LEFT JOIN `Accidents` a

ON v.`Accident\_Index` = a.`Accident\_Index`

GROUP BY vt.label, a.`Accident\_Severity`

HAVING vt.label LIKE "%Motorcycle%" AND a.`Accident\_Severity` = 2

ORDER BY Total\_Accidents DESC;

-- Q2

-- Final ans

SELECT vt.label, a.`Accident\_Severity`, SUM(a.`Number\_of\_Vehicles`) as Total\_Accidents FROM vehicle\_types vt

LEFT JOIN `Vehicles` v

ON vt.code = v.Vehicle\_Type

LEFT JOIN `Accidents` a

ON v.`Accident\_Index` = a.`Accident\_Index`

GROUP BY vt.label, a.`Accident\_Severity`

ORDER BY Total\_Accidents DESC;

-- Q3

-- Final ans

SELECT vt.label, AVG(a.`Accident\_Severity`) as Avg\_Severity FROM vehicle\_types vt

LEFT JOIN `Vehicles` v

ON vt.code = v.Vehicle\_Type

LEFT JOIN `Accidents` a

ON v.`Accident\_Index` = a.`Accident\_Index`

GROUP BY vt.label;

-- Q4

-- Final ans

SELECT vt.label, AVG(a.`Accident\_Severity`) AS Avg\_Severity, SUM(a.`Number\_of\_Vehicles`) AS Total\_Accidents FROM vehicle\_types vt

LEFT JOIN `Vehicles` v

ON vt.code = v.Vehicle\_Type

LEFT JOIN `Accidents` a

ON v.`Accident\_Index` = a.`Accident\_Index`

GROUP BY vt.label

HAVING vt.label LIKE "%Motorcycle%"

ORDER BY 3 DESC;

**ANALYZING THE WORLD POPULATION**

No dataset