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`
```

```sql
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