**Name: - Himanshu Tola**

**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%'; |
|  |