

Name: - Karan Shah

FSDA Assignment 2

Project 1: - Accident Analysis

USE for_practice;

```
/* -----  
----- */
```

```
/* Create Tables */
```

```
CREATE TABLE accident(  
    accident_index VARCHAR(13),  
    accident_severity INT  
);
```

```
CREATE TABLE vehicles(  
    accident_index VARCHAR(13),  
    vehicle_type VARCHAR(50)  
);
```

```
/* First: for vehicle types, create new csv by extracting data from Vehicle Type sheet from  
Road-Accident-Safety-Data-Guide.xls */
```

```
CREATE TABLE vehicle_types(  
    vehicle_code INT,  
    vehicle_type VARCHAR(10)  
);
```

```
/* -----  
----- */
```

```
/* -----  
----- */
```

```
/* Load Data */
```

```
LOAD DATA INFILE
```

```
"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\Accidents_2015.csv"
```

```
INTO TABLE accident
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\\n'
```

```
IGNORE 1 LINES
```

```
(@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
```

```
"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\Vehicles_2015.csv"
```

```
INTO TABLE vehicles
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\\n'
```

```
IGNORE 1 LINES
```

```
(@col1, @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)
```

```
SET accident_index=@col1, vehicle_type=@col2;
```

```
LOAD DATA INFILE
```

```
"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\vehicle_types.csv"
```

```
INTO TABLE vehicle_types
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY ''
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 LINES;
```

```
/* -----  
----- */
```

```
/* -----  
----- */
```

```
/* Create Tables */
```

```
CREATE TABLE accident(  
    accident_index VARCHAR(13),  
    accident_severity INT  
);
```

```
CREATE TABLE vehicles(  
    accident_index VARCHAR(13),  
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);
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```
/* First: for vehicle types, create new csv by extracting data from Vehicle Type sheet from  
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```

```
CREATE TABLE vehicle_types(  
    vehicle_code INT,  
    vehicle_type VARCHAR(10)  
);
```

```
/* -----  
----- */
```

```
/* -----  
----- */
```

```
/* Load Data */
```

```
LOAD DATA INFILE
```

```
"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\Accidents_2015.csv"
```

```
INTO TABLE accident
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 LINES
```

```
(@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
```

```
"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\Vehicles_2015.csv"
```

```
INTO TABLE vehicles
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 LINES
```

```
(@col1, @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)
```

```
SET accident_index=@col1, vehicle_type=@col2;
```

LOAD DATA INFILE

"C:\\Notes\\Statistics\\Assignments\\FSDA_assignments\\Assignment2_SQL\\Dataset\\vehicle_types.csv"

INTO TABLE vehicle_types

FIELDS TERMINATED BY ','

ENCLOSED BY ''

LINES TERMINATED BY '\\n'

IGNORE 1 LINES;

/* -----
----- */

call acc;

call veht;

call veh;

/* -----
----- */

2. Evaluate Accident Severity and total accidents per vehicle type

SELECT t3.vehicle_type, t1.accident_severity, COUNT(t3.vehicle_type) AS "Number of
Accidents"

FROM accident t1

INNER JOIN vehicles t2 ON t1.accident_index = t2.accident_index

Inner JOIN vehicle_types t3 ON t2.vehicle_type = t3.vehicle_code

GROUP BY t3.vehicle_type

ORDER BY 2, 3;

3. Calculate Average Severity By Vehicle Type

SELECT t3.vehicle_type, AVG(t1.accident_severity)

FROM accident t1

INNER JOIN vehicles t2 ON t1.accident_index = t2.accident_index

Inner JOIN vehicle_types t3 ON t2.vehicle_type = t3.vehicle_code

GROUP BY t3.vehicle_type

ORDER BY 2;

4. Average Severity and Total Accidents by Motorcycle

```
SELECT vt.vehicle_type AS 'Vehicle Type', AVG(a.accident_severity) AS 'Average Severity',  
COUNT(vt.vehicle_type) AS 'Number of Accidents'
```

```
FROM accident a
```

```
JOIN vehicles v ON a.accident_index = v.accident_index
```

```
JOIN vehicle_types vt ON v.vehicle_type = vt.vehicle_code
```

```
WHERE vt.vehicle_type LIKE '%otorcycle%'
```

```
GROUP BY 1
```

```
ORDER BY 2,3;
```