

**SUMMER TRAINING ON BIG DATA ANALYTICS**

**FOR THE WEEK COMMENCING : 01ST JUNE , 2018**

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**Program : *B.TECH (COMPUTER SCIENCE & ENGINEERING)***

**Company Name : *INSANALYTICS – ANALYTICS TRAINING KOLKATA***

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**Project Title: *ACCIDENT ANALYSIS PROJECT***



**ACKNOWLEDGEMENT**

It's a great pleasure to present this report of summer training in ***InsAnalytics , Kolkata*** in partial fulfilment of **B.Tech (COMPUTER SCIENCE & ENGINEERING)** Programme under **Amity Schools Of Engineering** Of **Amity University, Kolkata** . At the outset, I would like to express my immense gratitude to my training guide , **Mr. Ankit Shaw Sir,** guiding me right from the inception till the successful completion of the training . Also I would Like to pay thanks to other teaching staff and also to the Senior Mentor , **Mr.Goutam Das Sir** . I am falling short of words for expressing my feelings of gratitude towards him for extending their valuable guidance about Big Data Training and knowledge . I would also like to thank all my group members for their help and cooperation throughout the training.



1. **Data Sets**
2. **Accidents Data (1979-2013)**
3. **Casualties (1979-2013)**
4. **Models (1979 – 2013)**
5. **Prerequisite**
6. **Components used**
7. **Objective**
8. **Conclusion**
9. **Project Flow :**
10. **Phase 1 :**

* **Create the tables of Accidents , Casualties , Models .**
* **Load the data into those tables from the respective .csv files .**

1. **Phase 2 :**

* **Create 11 sub-tables for map joining with the major tables with the names:**

1. **age\_band**
2. **cas\_class**
3. **cas\_sex**
4. **dow**
5. **driver\_sex**
6. **light\_cond**
7. **road\_surface**
8. **road\_type**
9. **severity**
10. **skid\_overturned**
11. **weather\_cond**

* **Load the data into sub-tables from the respective .txt files .**

1. **Phase 3 :**

* **Create permanent tables data loaded into it through temporary tables (temp) in each case and joined from major tables Accidents , Casualties and Models and 11 sub-tables :**

1. **acc\_ageband**
2. **acc\_casclass**
3. **acc\_cassex**
4. **acc\_dow**
5. **acc\_driversex**
6. **acc\_daylight**
7. **acc\_roadsurface**
8. **acc\_roadtype**
9. **acc\_severity**
10. **acc\_skid**
11. **acc\_weather**
12. **Phase 4 :**

* **Import all the saved data through sqoop making another table in MySql :**

1. **cassex**
2. **casclass**
3. **ageband**
4. **dow**
5. **driversex**
6. **daylight**
7. **road surface**
8. **road type**
9. **severity**
10. **skid**
11. **weather**
12. **Phase 5 :**

* **Use MySql to query all the tables and to get the possible data .**

1. **Data Sets :**

* These files provide detailed road safety data about the circumstances of personal injury road accidents from 1979 -2013

* Following data files are present in this dataset:

1. **Accidents Data (1979-2013) :**

This data set consists of around 30 columns and around 78 lac rows . We have picked few columns like:

• Accident index

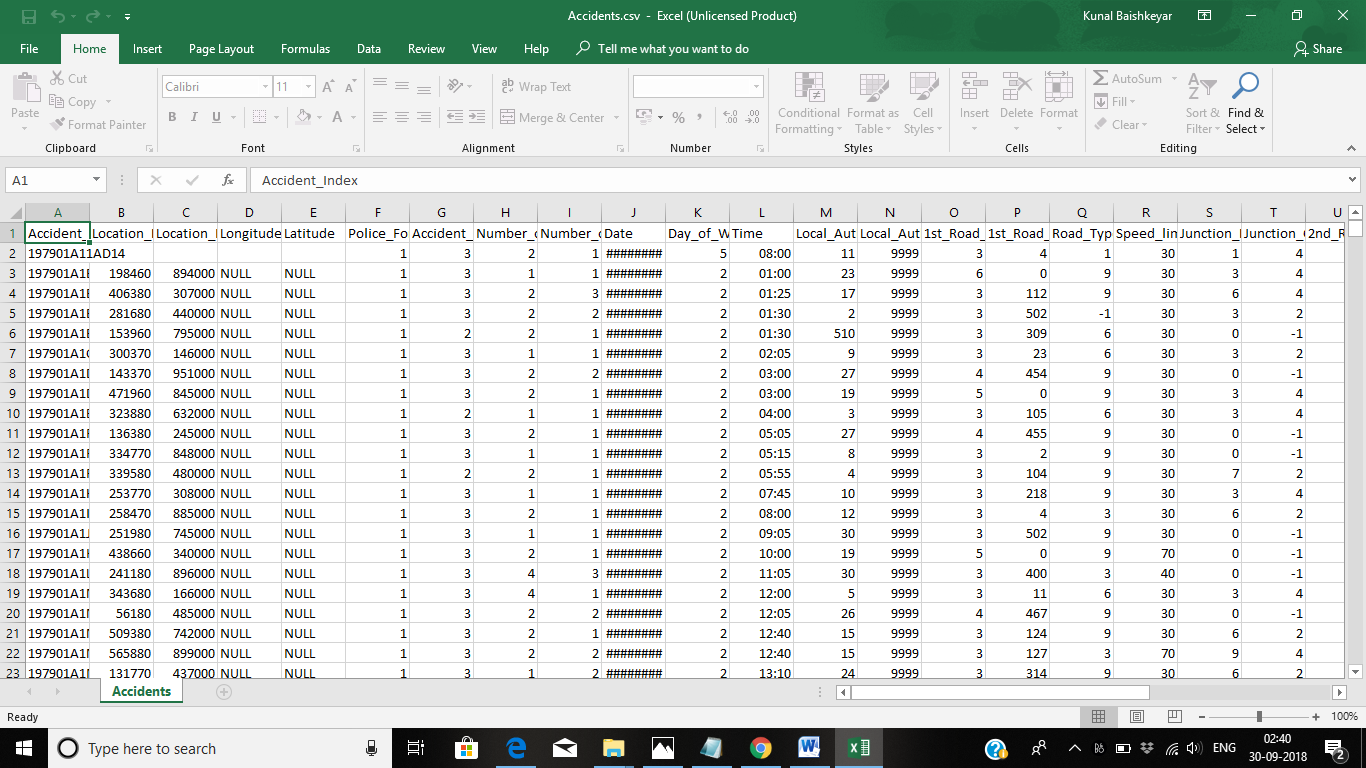
• Road type

• Road surface

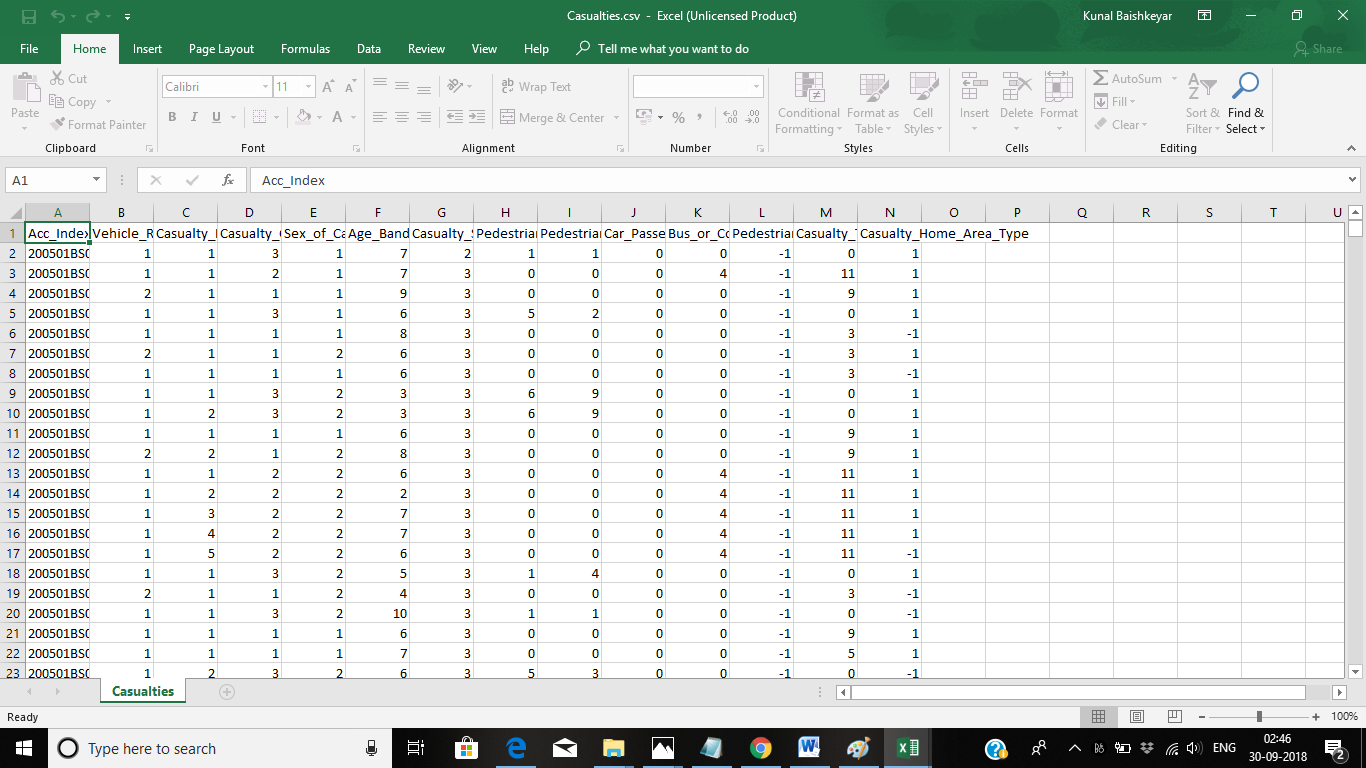
• Severity

• Light conditions

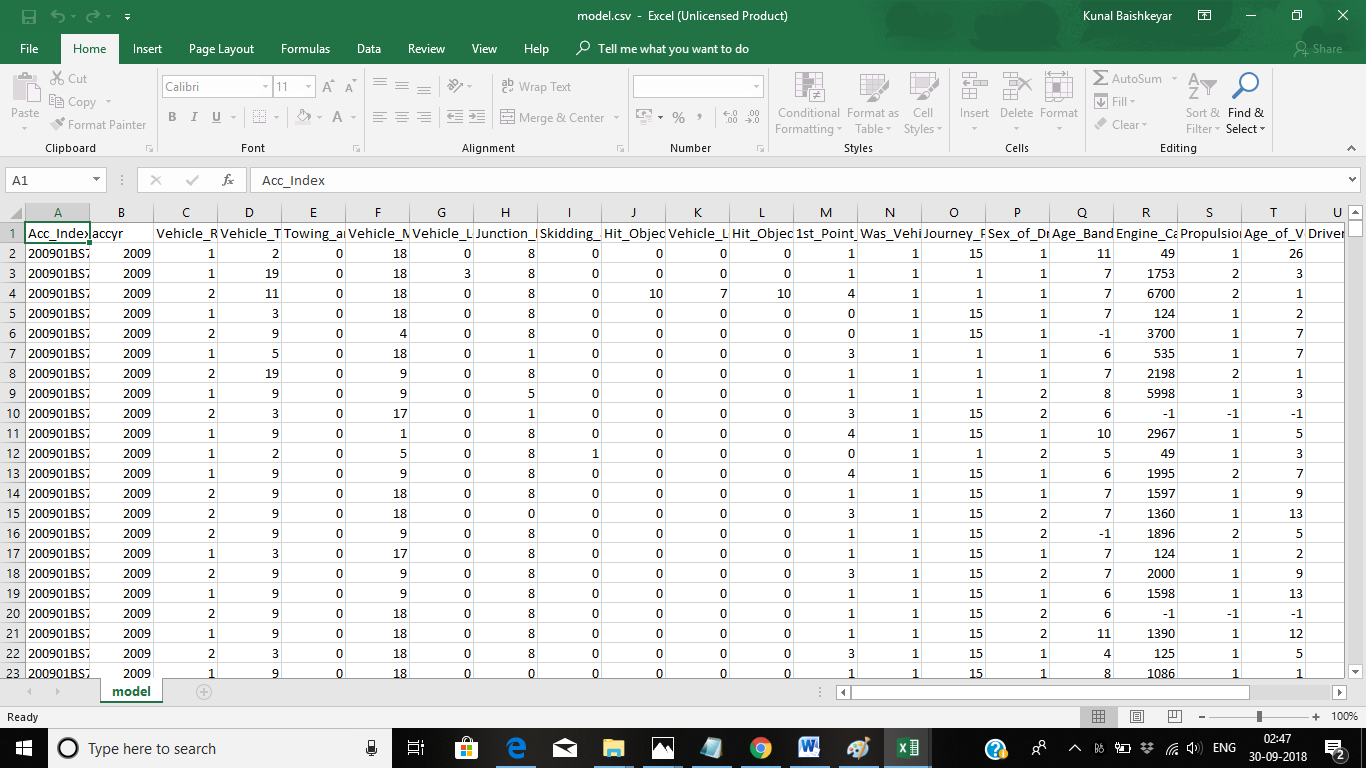
• Days of the week ……. And so on .



1. **Casualties Data (1979-2013) :**



1. **Models Data (1979-2013) :**



1. **Prerequisite :**
2. **Hadoop framework**
3. **Map-reduce**
4. **Pig**
5. **Flume**
6. **Sqoop**
7. **jsp/servlet**
8. **Data warehousing concepts**

1. **Components used :**
2. **Hadoop framework**
3. **HDFS**
4. **Hive**
5. **Map-reduce**
6. **Sqoop**
7. **Mysql**
8. **Objective :**

**To find the number of accidents happened:**

1. **in various weather conditions**
2. **in various light conditions**
3. **in various road surface conditions**
4. **in various road type conditions**
5. **during various days of week**
6. **on various skid and overturning**
7. **on various age band**
8. **due to difference in casualty sex**
9. **various types of Severity**
10. **Number of accidents happening due to difference in driver sex**
11. **Number of accidents happening due to difference in casualty class**
12. **Conclusion :**

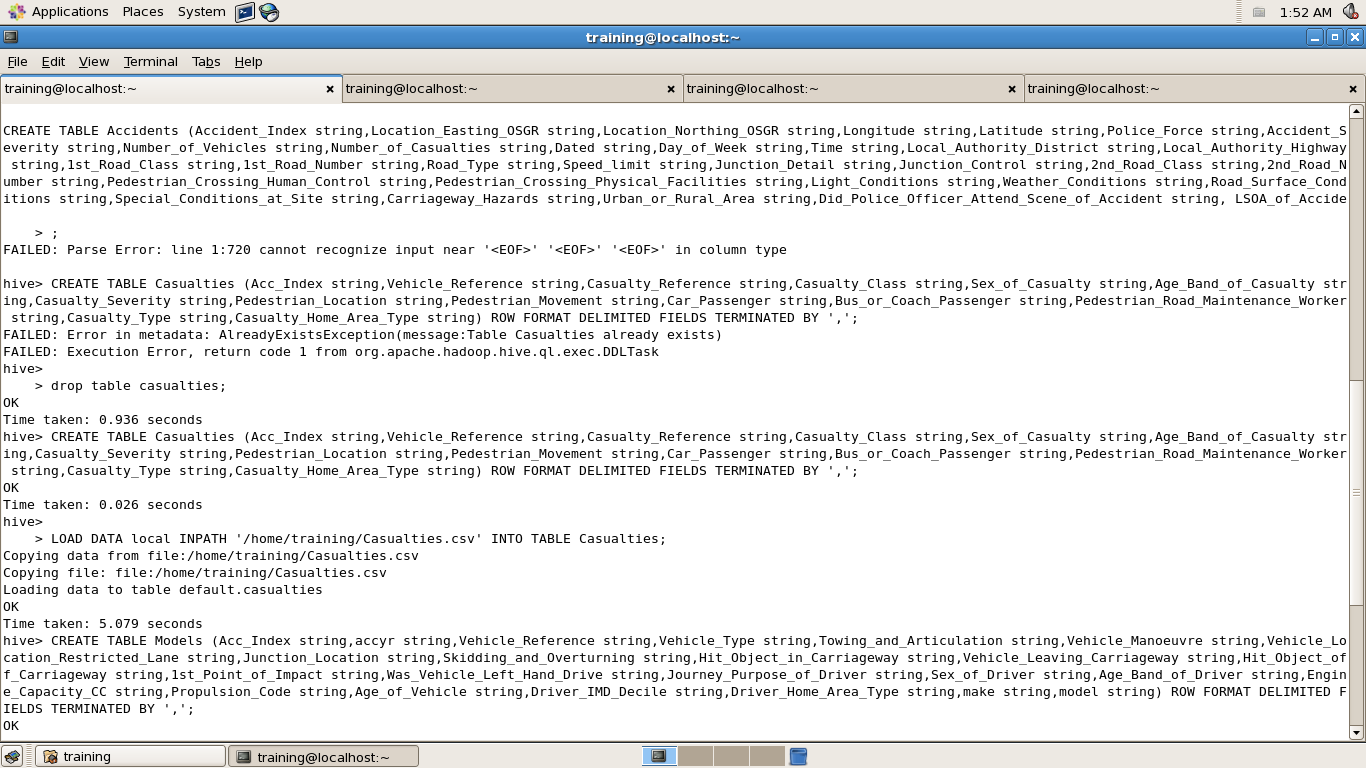
**By using above data we can predict and make some decision to:**

* **Reduce accidents under the circumstances where more no. Of accidents are happening**
* **We can put up some kind of sign boards or make people aware of such circumstances so that they may be alert in such conditions**

1. **Project Flow :**
2. **Phase 1 :**

* **Create the tables of Accidents , Casualties , Models :**

**CREATE TABLE Accidents (Accident\_Index string,Location\_Easting\_OSGR string,Location\_Northing\_OSGR string,Longitude string,Latitude string,Police\_Force string,Accident\_Severity string,Number\_of\_Vehicles string,Number\_of\_Casualties string,Dated string,Day\_of\_Week string,Time string,Local\_Authority\_District string,Local\_Authority\_Highway string,1st\_Road\_Class string,1st\_Road\_Number string,Road\_Type string,Speed\_limit string,Junction\_Detail string,Junction\_Control string,2nd\_Road\_Class string,2nd\_Road\_Number string,Pedestrian\_Crossing\_Human\_Control string,Pedestrian\_Crossing\_Physical\_Facilities string,Light\_Conditions string,Weather\_Conditions string,Road\_Surface\_Conditions string,Special\_Conditions\_at\_Site string,Carriageway\_Hazards string,Urban\_or\_Rural\_Area string,Did\_Police\_Officer\_Attend\_Scene\_of\_Accident string, LSOA\_of\_Accident\_Location string) ROW FORMAT DELIMITED FIELDS TERMINATED BY ',';**

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**CREATE TABLE Casualties (Acc\_Index string,Vehicle\_Reference string,Casualty\_Reference string,Casualty\_Class string,Sex\_of\_Casualty string,Age\_Band\_of\_Casualty string,Casualty\_Severity string,Pedestrian\_Location string,Pedestrian\_Movement string,Car\_Passenger string,Bus\_or\_Coach\_Passenger string,Pedestrian\_Road\_Maintenance\_Worker string,Casualty\_Type string,Casualty\_Home\_Area\_Type string) ROW FORMAT DELIMITED FIELDS TERMINATED BY ',';**

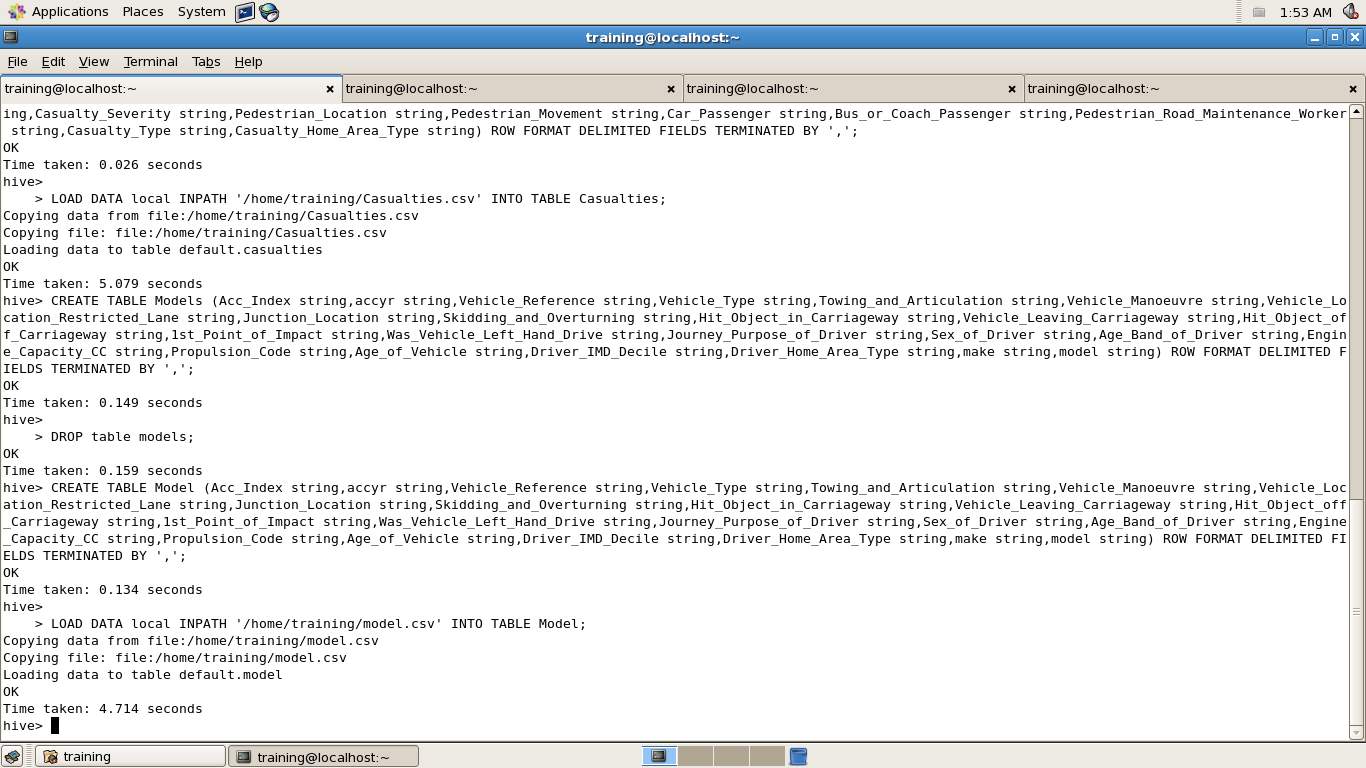
**CREATE TABLE Model (Acc\_Index string,accyr string,Vehicle\_Reference string,Vehicle\_Type string,Towing\_and\_Articulation string,Vehicle\_Manoeuvre string,Vehicle\_Location\_Restricted\_Lane string,Junction\_Location string,Skidding\_and\_Overturning string,Hit\_Object\_in\_Carriageway string,Vehicle\_Leaving\_Carriageway string,Hit\_Object\_off\_Carriageway string,1st\_Point\_of\_Impact string,Was\_Vehicle\_Left\_Hand\_Drive string,Journey\_Purpose\_of\_Driver string,Sex\_of\_Driver string,Age\_Band\_of\_Driver string,Engine\_Capacity\_CC string,Propulsion\_Code string,Age\_of\_Vehicle string,Driver\_IMD\_Decile string,Driver\_Home\_Area\_Type string,make string,model string) ROW FORMAT DELIMITED FIELDS TERMINATED BY ',';**

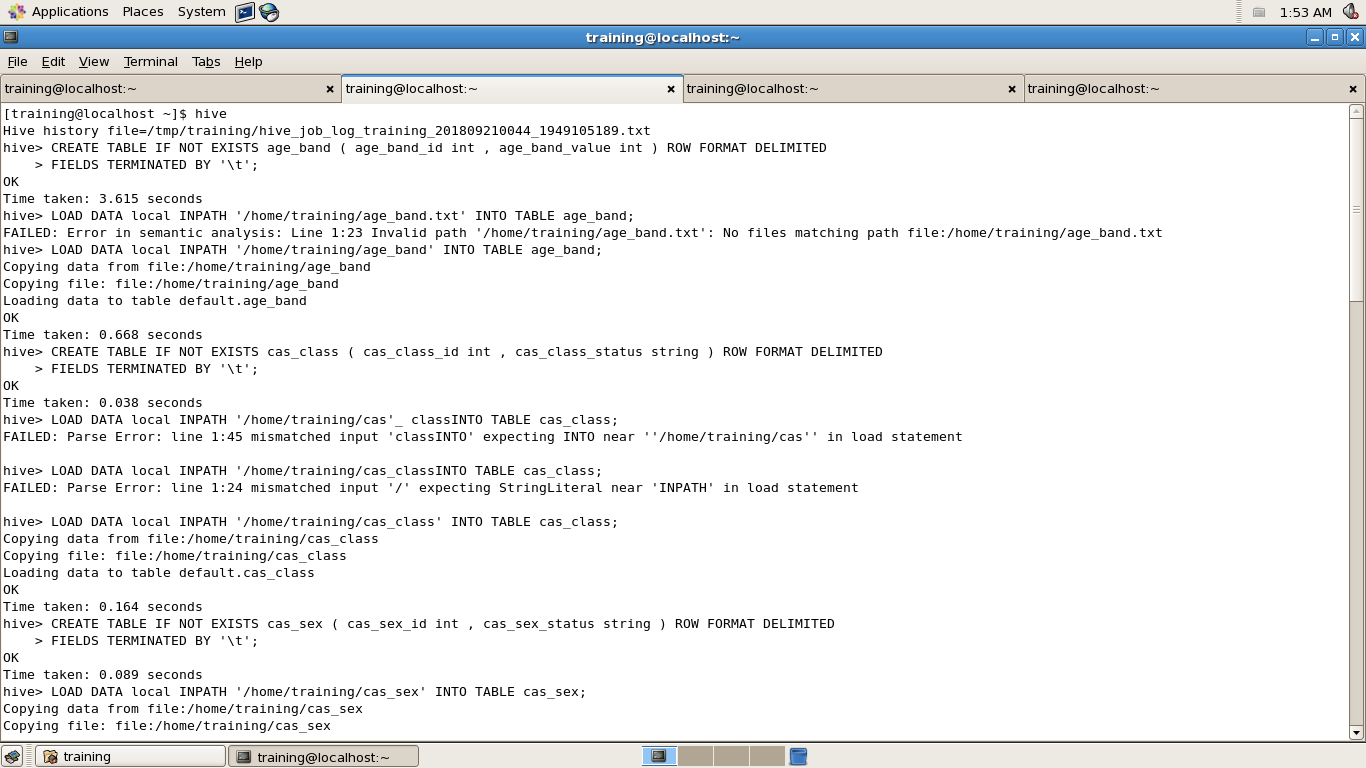
* **Load the data into that tables from the respective .csv files :**

**LOAD DATA local INPATH '/home/training/Accidents.csv' INTO TABLE Accidents**

**LOAD DATA local INPATH '/home/training/Casualties.csv' INTO TABLE Casualties**

**LOAD DATA local INPATH '/home/training/Model.csv' INTO TABLE Model**

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1. **Phase 2 :**

**Create 11 sub-tables for map joining with the major tables with the names:**

**Load the data into sub-tables from the respective .txt files .**

* **age\_band :**

**CREATE TABLE IF NOT EXISTS age\_band ( age\_band\_id int , age\_band\_value int ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/age\_band/'**

**LOAD DATA local INPATH '/home/training/age\_band.txt' INTO TABLE age\_band;**

* **cas\_class**

**CREATE TABLE IF NOT EXISTS cas\_class ( cas\_class\_id int , cas\_class\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/cas\_class/'**

**LOAD DATA local INPATH '/home/training/cas\_class' INTO TABLE cas\_class;**

* **cas\_sex**

**CREATE TABLE IF NOT EXISTS cas\_sex ( cas\_sex\_id int , cas\_sex\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/cas\_sex/'**

**LOAD DATA local INPATH '/home/training/cas\_sex' INTO TABLE cas\_sex;**

* **dow**

**CREATE TABLE IF NOT EXISTS dow ( dow\_id int , dow\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/dow/'**

**LOAD DATA local INPATH '/home/training/dow' INTO TABLE dow;**

* **driver\_sex**

**CREATE TABLE IF NOT EXISTS driver\_sex ( driver\_sex\_id int , driver\_sex\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/driver\_sex/'**

**LOAD DATA local INPATH '/home/training/driver\_sex' INTO TABLE driver\_sex;**

* **light\_cond**

**CREATE TABLE IF NOT EXISTS light\_cond ( light\_cond\_id int , light\_cond\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/light\_cond/'**

**LOAD DATA local INPATH '/home/training/light\_cond' INTO TABLE light\_cond;**

* **road\_surface**

**CREATE TABLE IF NOT EXISTS road\_surface ( road\_surface\_id int , road\_surface\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/road\_surface/'**

**LOAD DATA local INPATH '/home/training/road\_surface' INTO TABLE road\_surface;**

* **road\_type**

**CREATE TABLE IF NOT EXISTS road\_type ( road\_type\_id int , road\_type\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/road\_type/'**

**LOAD DATA local INPATH '/home/training/road\_type' INTO TABLE road\_type;**

* **severity**

**CREATE TABLE IF NOT EXISTS severity ( severity\_id int , severity\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/severity/'**

**LOAD DATA local INPATH '/home/training/severity' INTO TABLE severity;**

* **skid\_overturned**

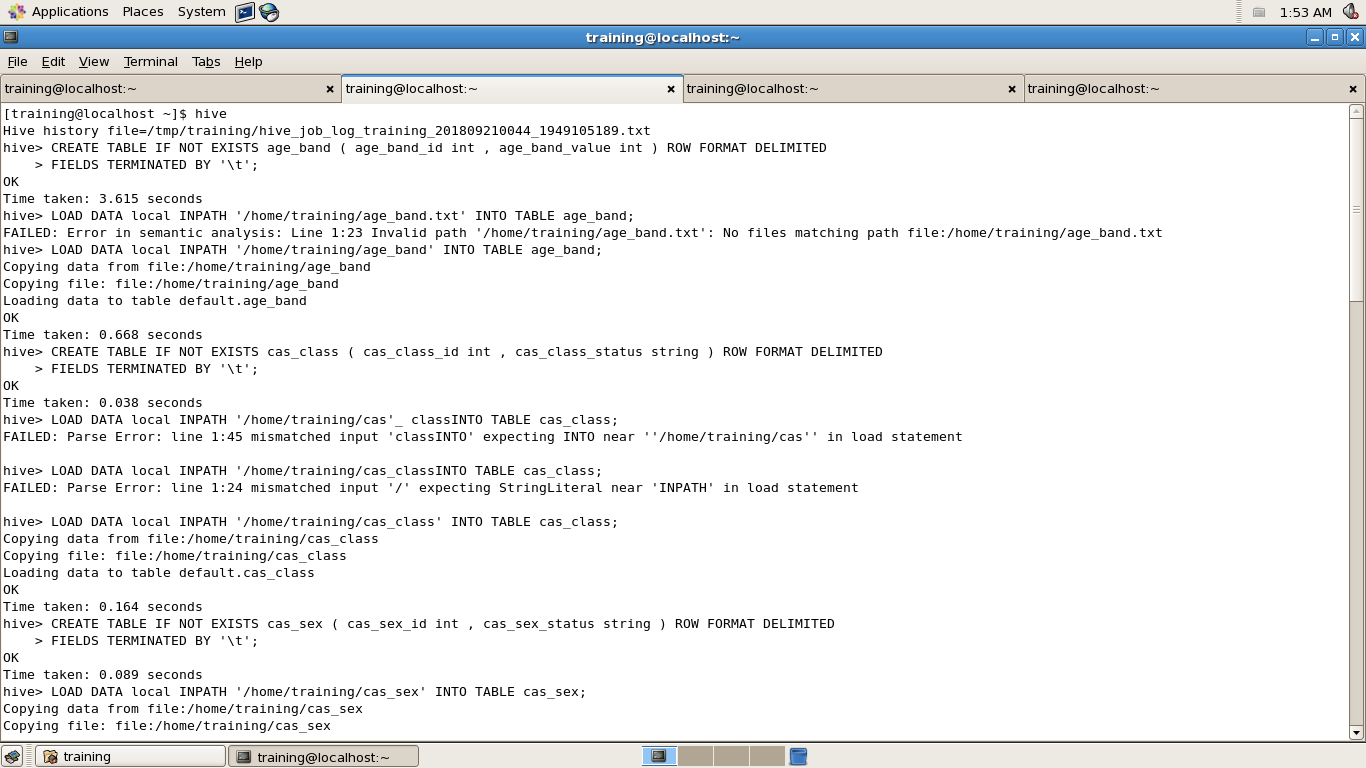
**CREATE TABLE IF NOT EXISTS skid\_overturned ( skid\_overturned\_id int , skid\_overturned\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/skid\_overturned/'**

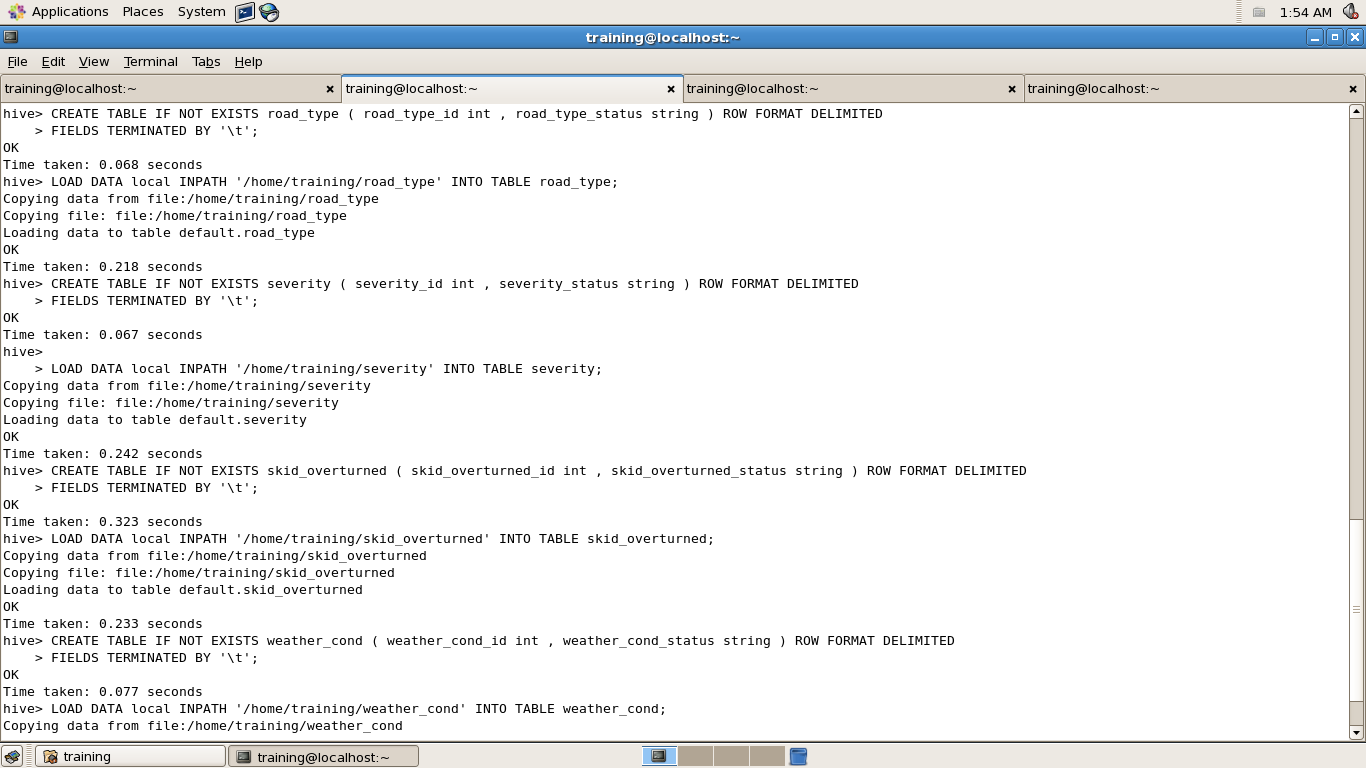
**LOAD DATA local INPATH '/home/training/skid\_overturned' INTO TABLE skid\_overturned;**

* **weather\_cond**

**CREATE TABLE IF NOT EXISTS weather\_cond ( weather\_cond\_id int , weather\_cond\_status string ) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' location '/user/training/weather\_cond/'**

**LOAD DATA local INPATH '/home/training/weather\_cond' INTO TABLE weather\_cond;**





1. **Phase 3 :**

**Create permanent tables data loaded into it through temporary tables (temp) in each case and joined from major tables Accidents, Casualties and Models and 11 sub-tables :**

* **acc\_ageband**

**select Age\_Band\_of\_Casualty,count(acc\_index) from casualties group by Age\_Band\_of\_Casualty ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Age\_Band\_of\_Casualty,count(acc\_index) from casualties group by Age\_Band\_of\_Casualty ;**

**select \* from temp;**

**SELECT b.age\_band\_value,a.cnt from temp a JOIN age\_band b ON (a.id = b.age\_band\_id);**

**create table acc\_ageband (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_ageband SELECT b.age\_band\_value,a.cnt from temp a JOIN age\_band b ON (a.id = b.age\_band\_id);**

**drop table temp;**

* **acc\_casclass**

**select Casualty\_Class,count(acc\_index) from Casualties group by Casualty\_Class ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Casualty\_Class,count(acc\_index) from Casualties group by Casualty\_Class ;**

**select \* from temp;**

**SELECT b.cas\_class\_status,a.cnt from temp a JOIN cas\_class b ON (a.id = b.cas\_class\_id);**

**create table acc\_casclass (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_casclass SELECT b.cas\_class\_status,a.cnt from temp a JOIN cas\_class b ON (a.id = b.cas\_class\_id);**

**drop table temp;**

* **acc\_cassex**

**select Sex\_of\_Casualty,count(acc\_index) from Casualties group by Sex\_of\_Casualty ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Sex\_of\_Casualty,count(acc\_index) from Casualties group by Sex\_of\_Casualty ;**

**select \* from temp;**

**SELECT b.cas\_sex\_status,a.cnt from temp a JOIN cas\_sex b ON (a.id = b.cas\_sex\_id);**

**create table acc\_cassex (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_cassex SELECT b.cas\_sex\_status,a.cnt from temp a JOIN cas\_sex b ON (a.id = b.cas\_sex\_id);**

**drop table temp;**

* **acc\_dow**

**select Day\_of\_Week,count(accident\_index) from Accidents group by Day\_of\_Week ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Day\_of\_Week,count(accident\_index) from Accidents group by Day\_of\_Week ;**

**select \* from temp;**

**SELECT b.dow\_status,a.cnt from temp a JOIN dow b ON (a.id = b.dow\_id);**

**create table acc\_dow (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_dow SELECT b.dow\_status,a.cnt from temp a JOIN dow b ON (a.id = b.dow\_id);**

**drop table temp;**

* **acc\_driversex**

**select Sex\_of\_Driver,count(acc\_index) from Model group by Sex\_of\_Driver ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Sex\_of\_Driver,count(acc\_index) from Model group by Sex\_of\_Driver ;**

**select \* from temp;**

**SELECT b.driver\_sex\_status,a.cnt from temp a JOIN driver\_sex b ON (a.id = b.driver\_sex\_id);**

**create table acc\_driversex (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_driversex SELECT b.driver\_sex\_status,a.cnt from temp a JOIN driver\_sex b ON (a.id = b.driver\_sex\_id);**

**drop table temp;**

* **acc\_daylight**

**select Light\_Conditions,count(accident\_index) from Accidents group by Light\_Conditions;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Light\_Conditions,count(accident\_index) from Accidents group by Light\_Conditions;**

**select \* from temp;**

**SELECT b.light\_cond\_status,a.cnt from temp a JOIN light\_cond b ON (a.id = b.light\_cond\_id);**

**create table acc\_daylight (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table acc\_daylight SELECT b.light\_cond\_status,a.cnt from temp a JOIN light\_cond b ON (a.id = b.light\_cond\_id);**

**drop table temp;**

* **acc\_roadsurface**

**select Road\_Surface\_Conditions,count(accident\_index) from Accidents group by Road\_Surface\_Conditions;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Road\_Surface\_Conditions,count(accident\_index) from Accidents group by Road\_Surface\_Conditions;**

**select \* from temp;**

**SELECT b.road\_surface\_status,a.cnt from temp a JOIN road\_surface b ON (a.id = b.road\_surface\_id);**

**create table acc\_roadsurface (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table acc\_roadsurface SELECT b.road\_surface\_status,a.cnt from temp a JOIN road\_surface b ON (a.id = b.road\_surface\_id);**

**drop table temp;**

* **acc\_roadtype**

**select Road\_Type,count(accident\_index) from Accidents group by Road\_Type ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Road\_Type,count(accident\_index) from Accidents group by Road\_Type;**

**select \* from temp;**

**SELECT b.road\_type\_status,a.cnt from temp a JOIN road\_type b ON (a.id = b.road\_type\_id);**

**create table acc\_roadtype (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table acc\_roadtype SELECT b.road\_type\_status,a.cnt from temp a JOIN road\_type b ON (a.id = b.road\_type\_id);**

**drop table temp;**

* **acc\_severity**

**select Casualty\_Severity,count(acc\_index) from Casualties group by Casualty\_Severity ;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Casualty\_Severity,count(acc\_index) from Casualties group by Casualty\_Severity ;**

**select \* from temp;**

**SELECT b.severity\_status,a.cnt from temp a JOIN severity b ON (a.id = b.severity\_id);**

**create table acc\_severity (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_severity SELECT b.severity\_status,a.cnt from temp a JOIN severity b ON (a.id = b.severity\_id);**

**drop table temp;**

* **acc\_skid**

**select Skidding\_and\_Overturning,count(acc\_index) from Model group by Skidding\_and\_Overturning;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Skidding\_and\_Overturning,count(acc\_index) from Model group by Skidding\_and\_Overturning ;**

**select \* from temp;**

**SELECT b.skid\_overturned\_status,a.cnt from temp a JOIN skid\_overturned b ON (a.id = b.skid\_overturned\_id);**

**create table acc\_skid (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',' ;**

**insert overwrite table acc\_skid SELECT b.skid\_overturned\_status,a.cnt from temp a JOIN skid\_overturned b ON (a.id = b.skid\_overturned\_id);**

**drop table temp;**

* **acc\_weather**

**select Weather\_Conditions,count(accident\_index) from Accidents group by Weather\_Conditions;**

**create table temp(id int, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table temp select Weather\_Conditions,count(accident\_index) from Accidents group by Weather\_Conditions;**

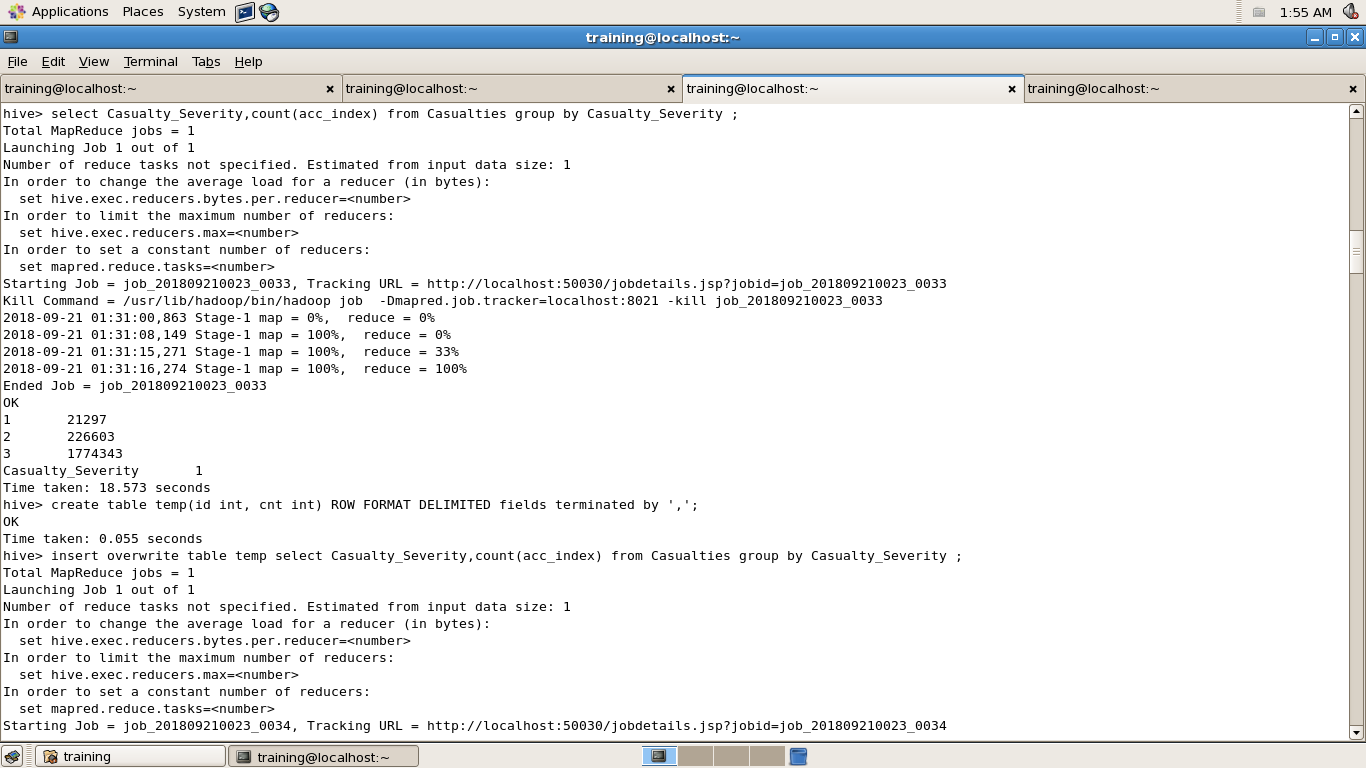
**select \* from temp;**

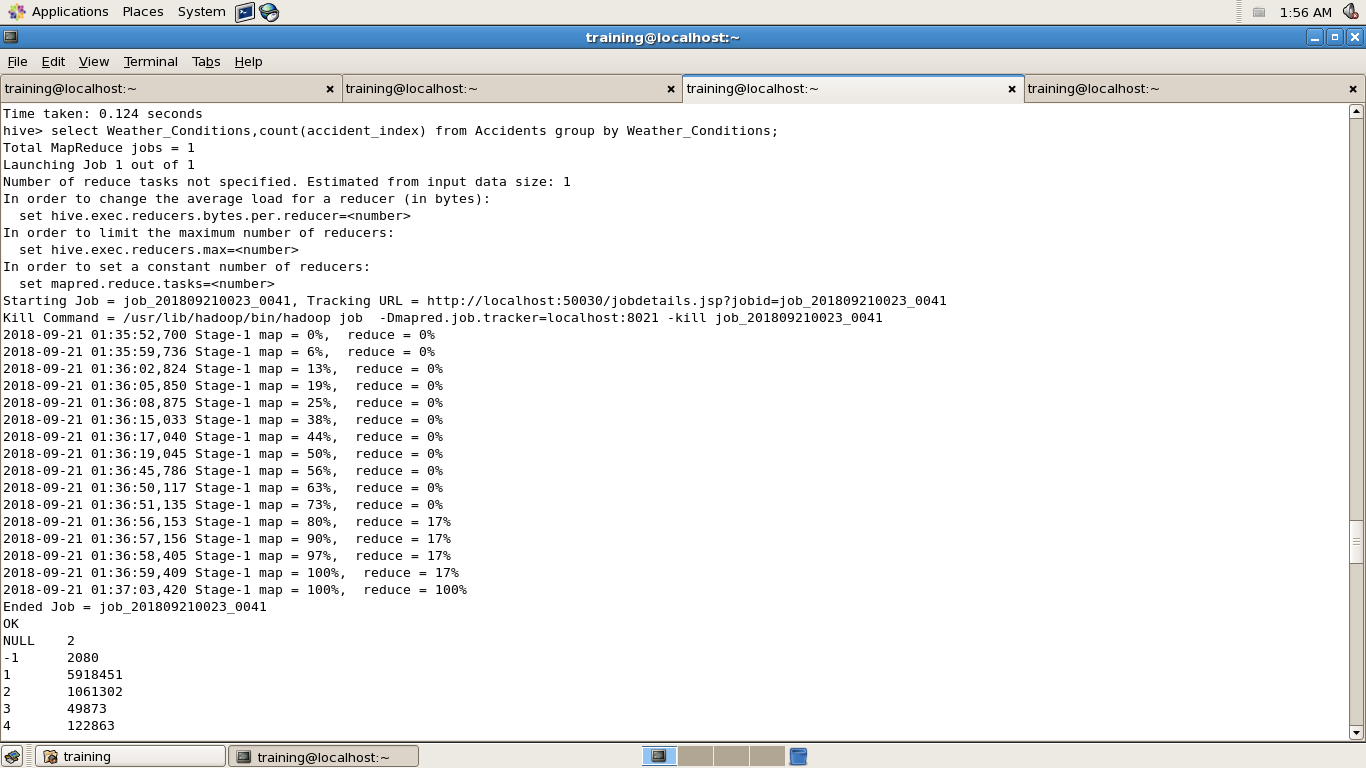
**SELECT b.weather\_cond\_status,a.cnt from temp a JOIN weather\_cond b ON (a.id = b.weather\_cond\_id);**

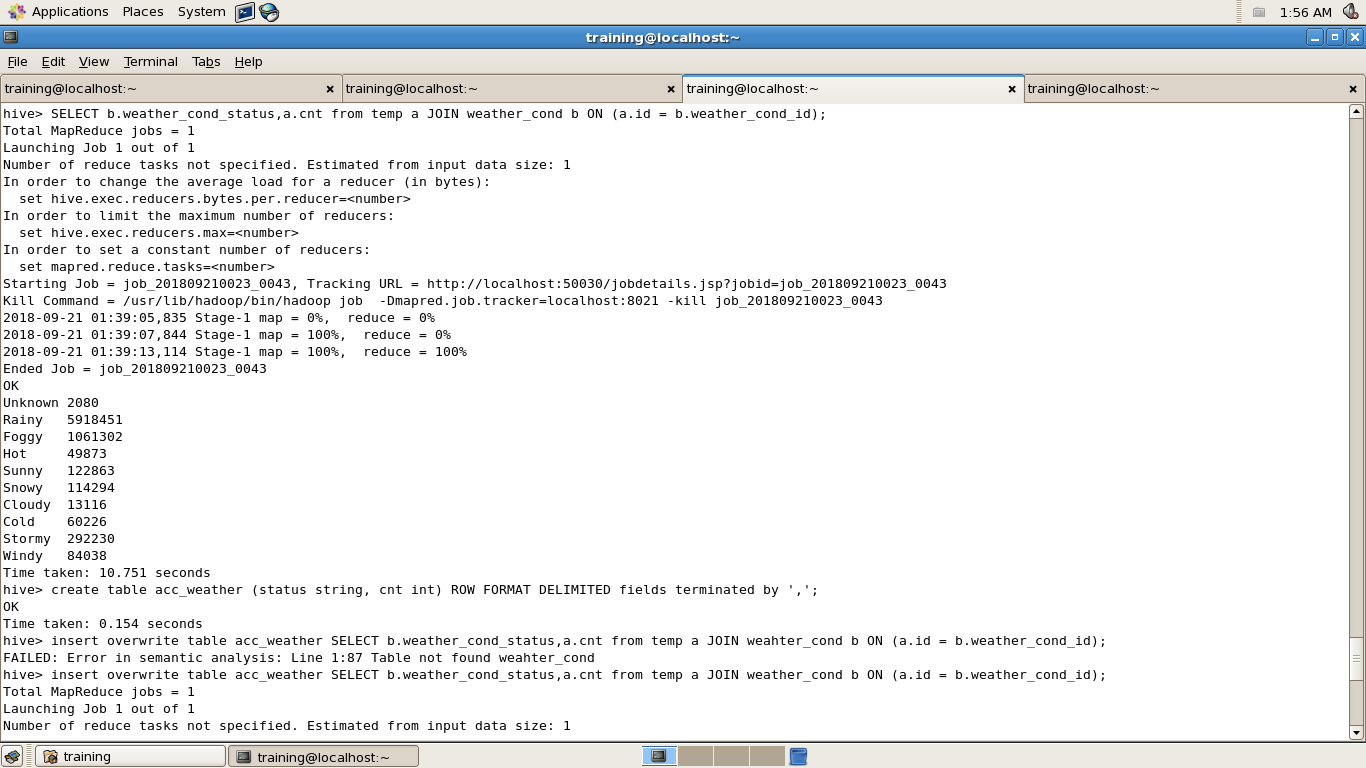
**create table acc\_weather (status string, cnt int) ROW FORMAT DELIMITED fields terminated by ',';**

**insert overwrite table acc\_weather SELECT b.weather\_cond\_status,a.cnt from temp a JOIN weather\_cond b ON (a.id = b.weather\_cond\_id);**

**drop table temp;**







1. **Phase 4 :**

* **Import all the saved data through sqoop making another table in MySql :**
* **cassex :**

**CREATE TABLE cassex (cassex\_type varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table cassex --export-dir /user/hive/warehouse/acc\_cassex/**

* **casclass :**

**CREATE TABLE casclass (casclass\_type varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table casclass --export-dir /user/hive/warehouse/acc\_casclass/**

* **ageband :**

**CREATE TABLE ageband (ageband\_status varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table ageband --export-dir /user/hive/warehouse/acc\_ageband/**

* **dow :**

**CREATE TABLE dow (dowstatus varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table dow --export-dir /user/hive/warehouse/acc\_dow/**

* **driversex :**

**CREATE TABLE driversex (driversex\_status varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table driversex --export-dir /user/hive/warehouse/acc\_driversex/**

* **daylight :**

**CREATE TABLE daylight (daylight\_condition varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table daylight --export-dir /user/hive/warehouse/acc\_daylight/**

* **roadsurface :**

**CREATE TABLE roadsurface (roadsurface\_condition varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table roadsurface --export-dir /user/hive/warehouse/acc\_roadsurface/**

* **roadtype :**

**CREATE TABLE roadtype (roadtype\_status varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table roadtype --export-dir /user/hive/warehouse/acc\_roadtype/**

* **severity :**

**CREATE TABLE severity (severitytype varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table severity --export-dir /user/hive/warehouse/acc\_severity/**

* **skid :**

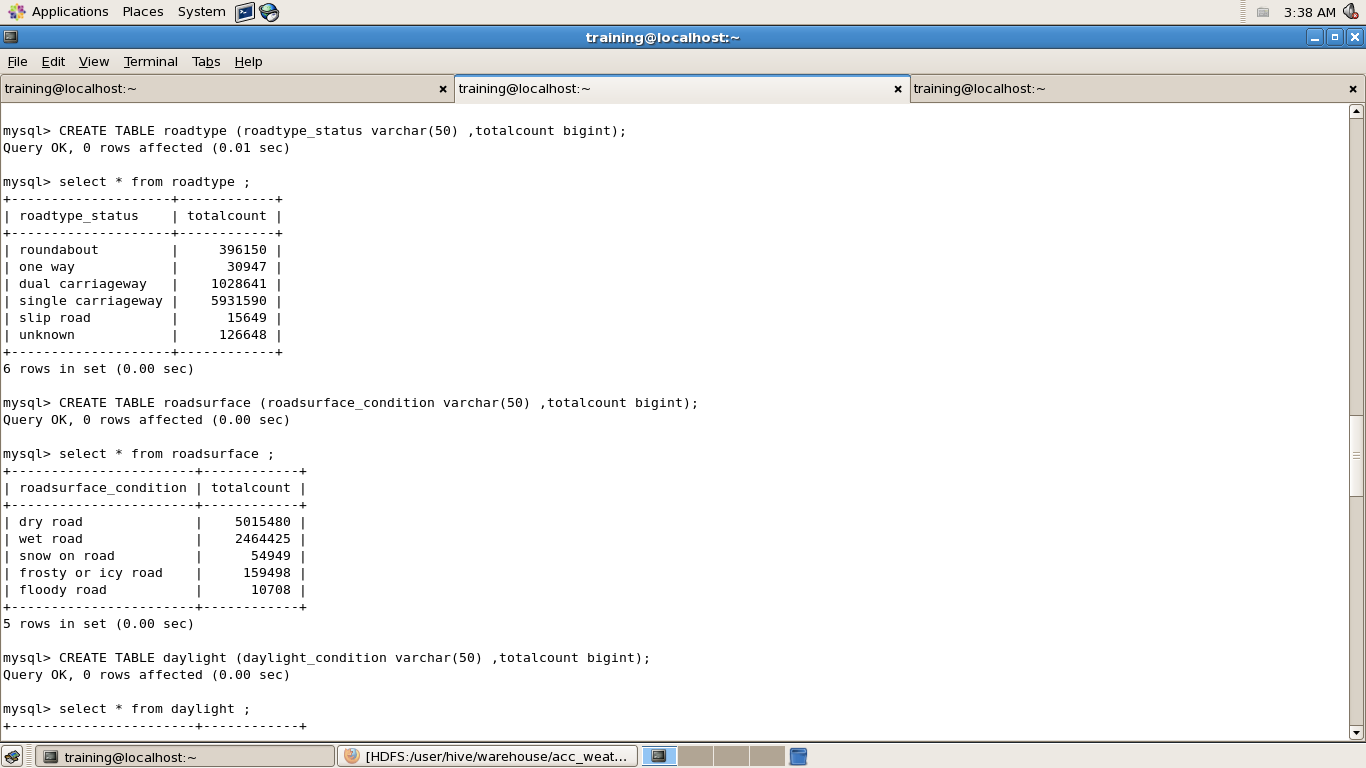
**CREATE TABLE skid (skidtype varchar(50) ,totalcount bigint);**

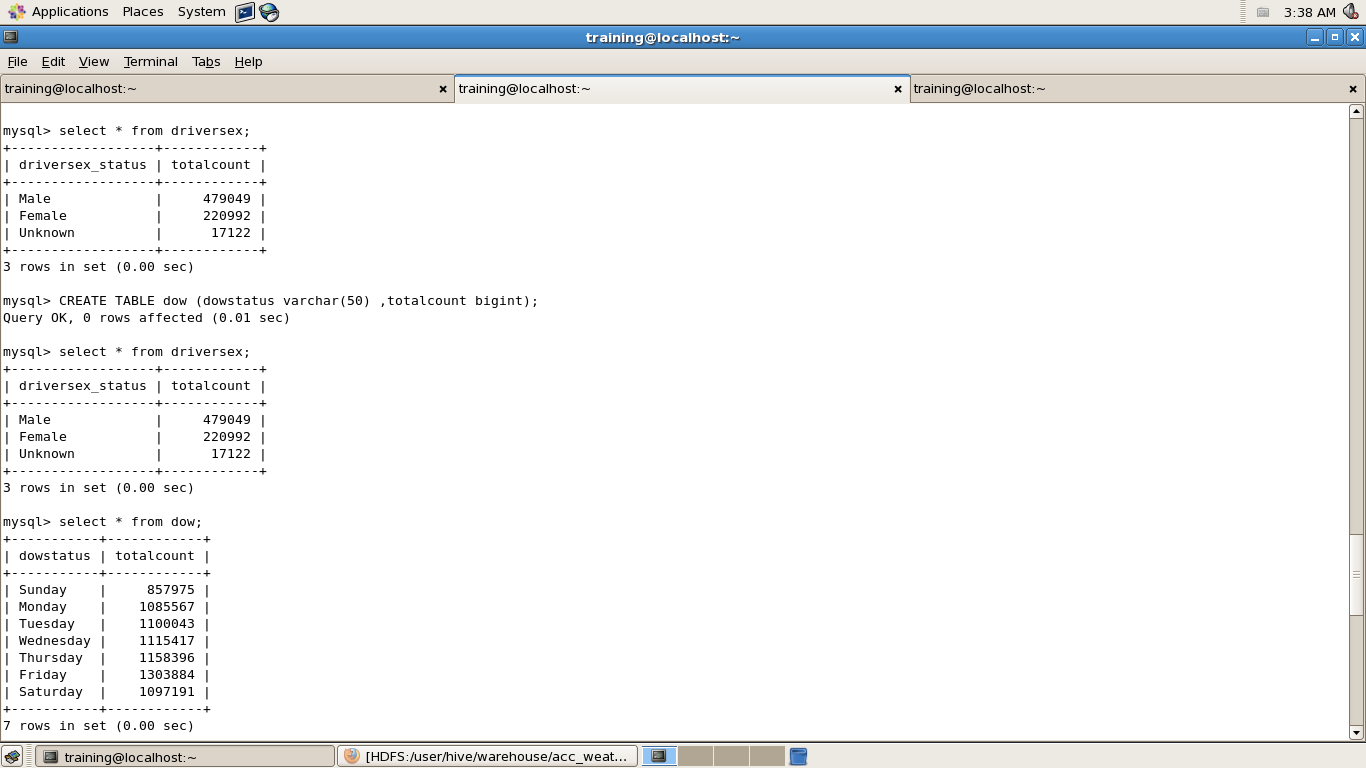
**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table skid --export-dir /user/hive/warehouse/acc\_skid/**

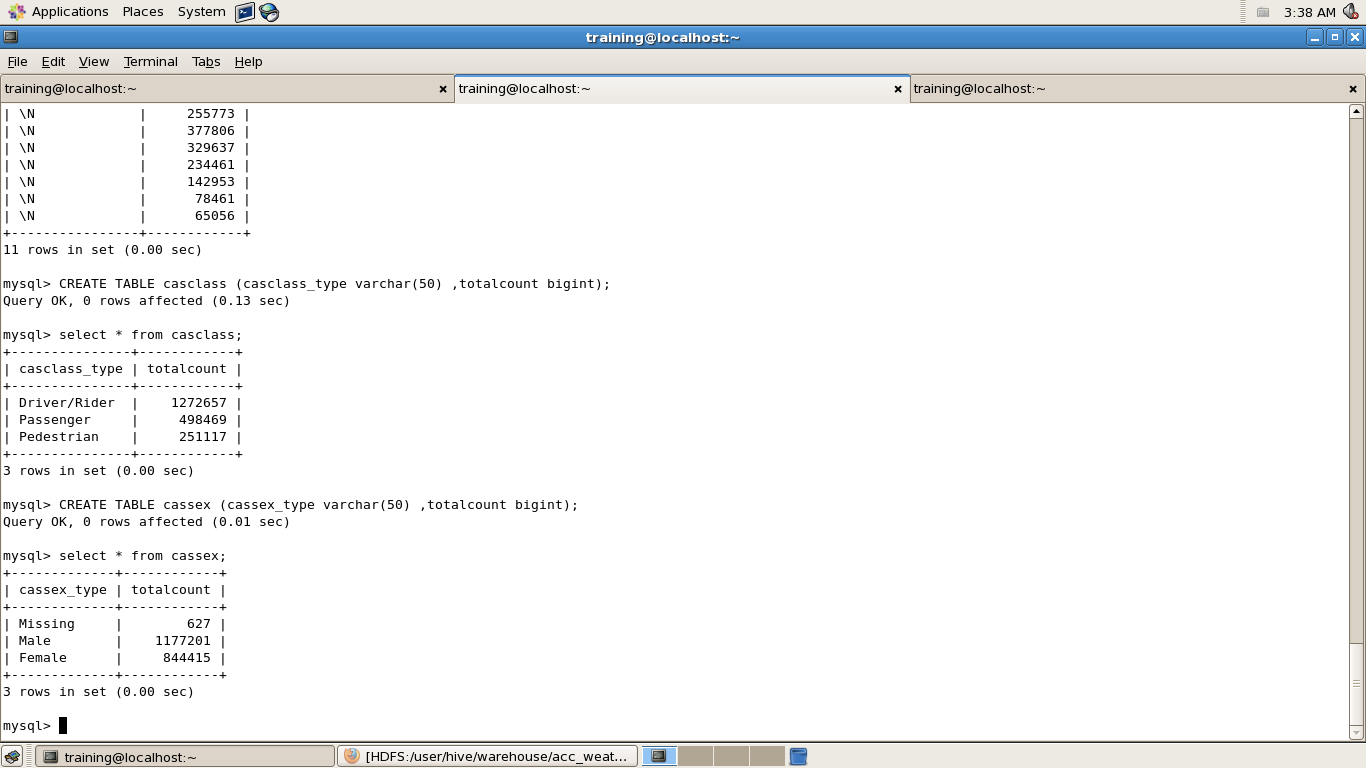
* **weather :**

**CREATE TABLE weather (weathertype varchar(50) ,totalcount bigint);**

**sqoop export --connect jdbc:mysql://localhost/training --username training --password training --table weather --export-dir /user/hive/warehouse/acc\_weather/**



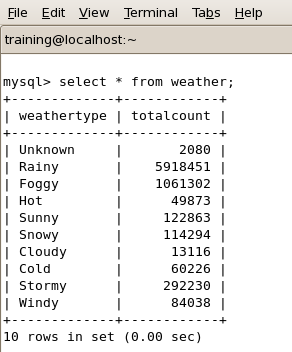




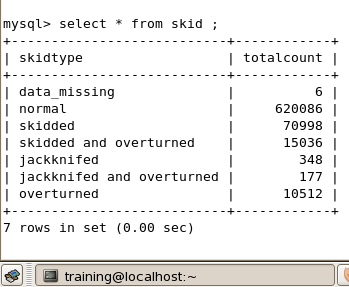
1. **Phase 5 :**

* **Use MySql to query all the tables and to get the possible data .**

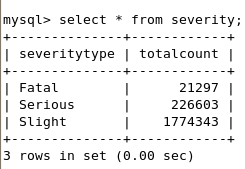
**select \* from weather ;**



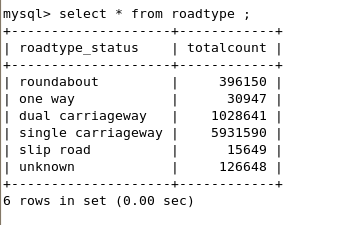
**select \* from skid ;**



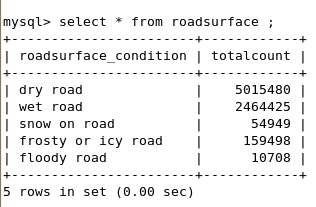
**select \* from severity ;**



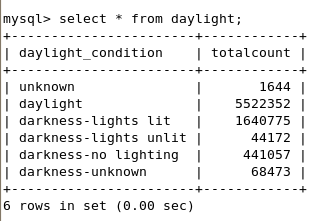
**select \* from roadtype ;**



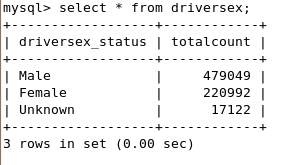
**select \* from roadsurafce ;**



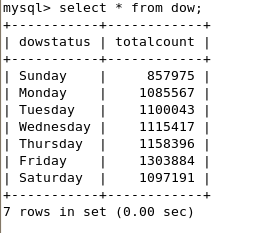
**select \* from daylight ;**



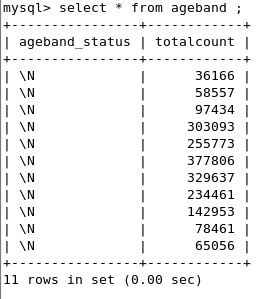
**select \* from driversex ;**



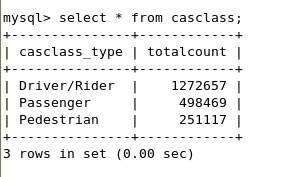
**select \* from dow ;**



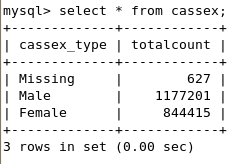
**select \* from ageband ;**



**select \* from casclass ;**



**select \* from cassex ;**





**After doing the project I came to the conclusion that the major accidents happened in the different circumstances . This are : weather conditions , skidding and overturned , severity conditions , road type conditions , road surface conditions , light conditions , sex of the driver , Day of week ,casualty sex , casualty class , age band .**

**Talking about the weather conditions , during the Raniy season the accidents happened the most .**

**Now talking about the skidding and overturned conditions the accidents happened the most when it the vehicle was at driving at normal speed .**

**Coming on the another reason for the major accidents to happen is severity type . The accidents happened the most when the severity type was Slight .**

**Another reason for the accidents to happen is the road type status . The major accidents happened when the road type status was Single Carriageway.**

**Another reason for the accidents to happen is road surface conditions . So when the road surface is dry that means major accidents happen when the road surface is Dry .**

**Another reason for the accident to occur is the light conditions . When it’s daylight the accidents happen the most .**

**Another reason for the accidents to be happened is the sex of the driver . So the maximum accidents happened when the sex of the driver is Male .**

**Another reason for the accidents is the day of the week on which day more accidents happened . So , the maximum accidents happened when the day of the week was Monday .**

**Another reason for the accidents to occur is the Casualty Class type . So , when the casualty class is Driver / Riding means they were riding single without carrying someone then the accidents happened the most .**

**Another reason for the accidents to occur the most is the Casualty Sex of the Driver . So when the Casualty Sex of the driver is MALE the accidents occurred the most .**

* **So at last I concluded my training by getting the actual reason for the major accidents to occur , and the reasons are different for different cases .**