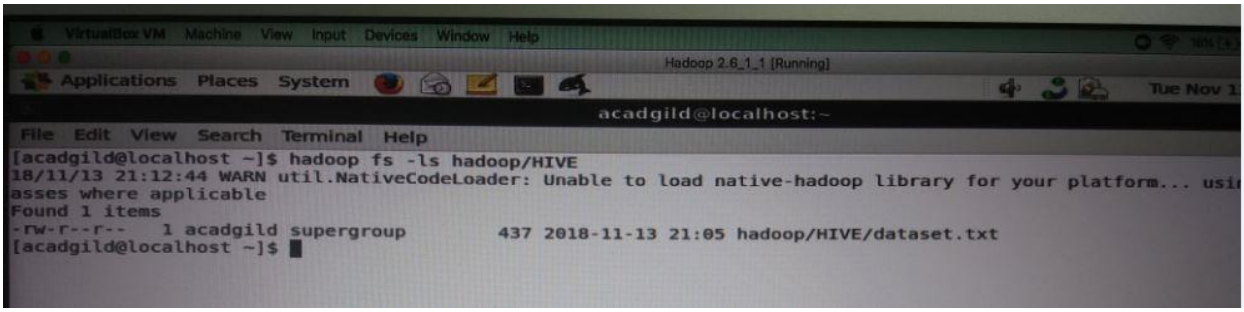
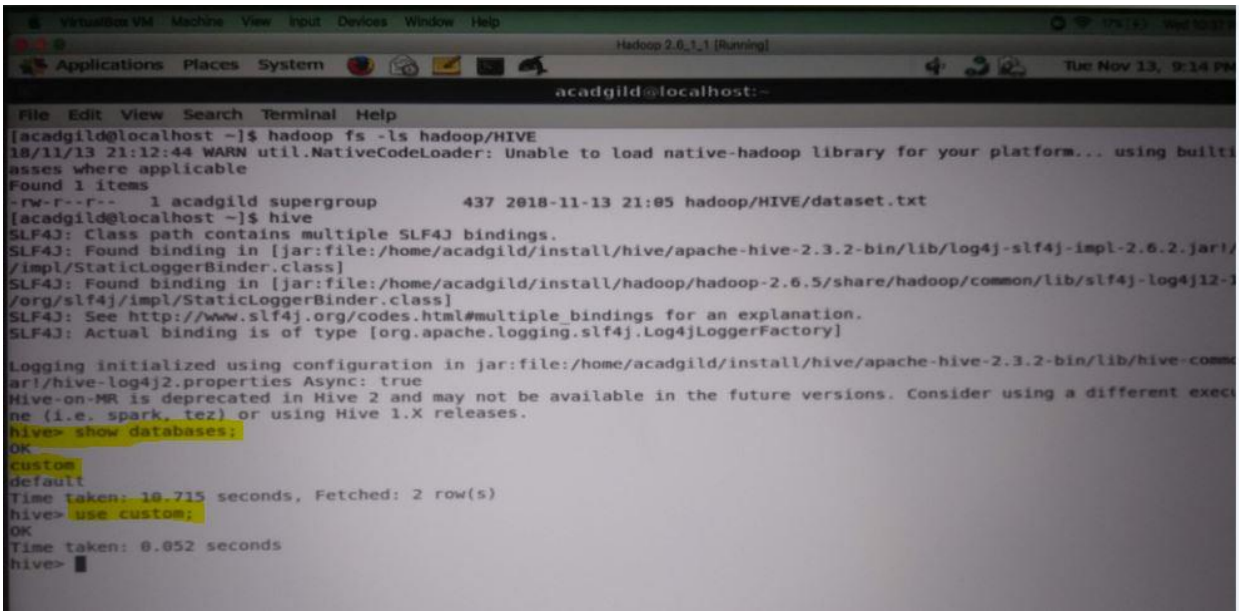
Assignment_8.1

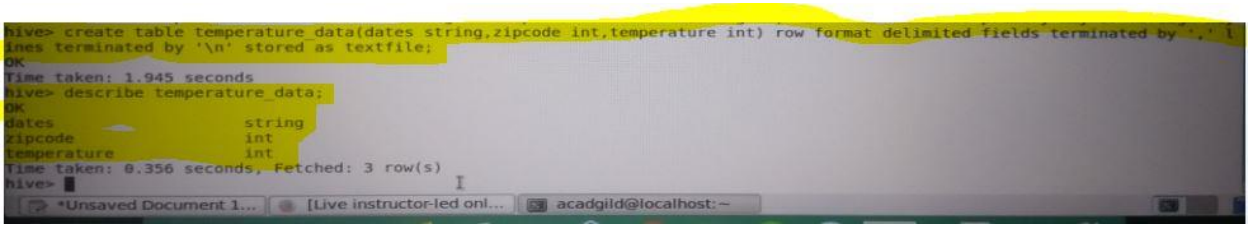
1. Copied the dataset file to hadoop on path /hadoop/HIVE/dataset.txt.



2. Started hive on command prompt by using command hive.
3. Created data custom using command '**create database custom'**.
4. Verified that the database has been created successfully by using command **show databases**.



5. Created table temperature_data in custom database using the command '**create table if not exists temperature_data (dates string, zip_code int,temperature int) row format delimited fields terminated by ',' lines terminated by '\n' stored as textfile** ;'



6. Inserted data into the table temperature_data from hadoop using command load data inpath '/hadoop/HIVE/dataset' into table temperature_data.

```
hive> load data inpath 'hadoop/HIVE/dataset.txt' into table temperature_data;
Loading data to table custom.temperature_data
OK
Time taken: 2.673 seconds
hive> select * from temperature_data;
OK
10-01-1990      123112  10
14-02-1991      283901  11
10-03-1990      381920  15
10-01-1991      302918  22
12-02-1990      384902  9
10-01-1991      123112  11
14-02-1990      283901  12
10-03-1991      381920  16
10-01-1990      302918  23
12-02-1991      384902  10
10-01-1993      123112  11
14-02-1994      283901  12
10-03-1993      381920  16
10-01-1994      302918  23
12-02-1991      384902  10
10-01-1991      123112  11
14-02-1990      283901  12
10-03-1991      381920  16
10-01-1990      302918  23
12-02-1991      384902  10
Time taken: 0.555 seconds, Fetched: 20 row(s)
hive>
```

7. To fetch date and temperature from temperature_data where zip code is greater than 300000 and less than 399999 used query **'select dates, temperature from temperature_data where zipcode > 300000 and zipcode < 399999;'**.

```
Time taken: 0.555 seconds, Fetched: 20 row(s)
hive> select dates,temperature from temperature_data where zipcode > 300000 and zipcode < 399999;
OK
10-03-1990      15
10-01-1991      22
12-02-1990      9
10-03-1991      16
10-01-1990      23
12-02-1991      10
10-03-1993      16
10-01-1994      23
12-02-1991      10
10-03-1991      16
10-01-1990      23
12-02-1991      10
Time taken: 0.512 seconds, Fetched: 12 row(s)
hive>
```

8. To calculate maximum temperature corresponding to every year from temperature_data used query **'select year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))), max(temperature) from temperature_data group by year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy')));'** but due to some issue it gets stuck and does not move forward. Everytime I run this query it gets stuck and I am not able to proceed further.

```
Time taken: 0.513 seconds, Fetched: 20 row(s)
hive> select year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))),max(temperature) from temperature_data group by year(fro
m_unixtime(unix_timestamp(dates,'mm-dd-yyyy')));
WARNING: Hive-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a different execu
tion engine (i.e. spark, tez) or using Hive 1.X releases.
Query ID = acadgild_20181113220306_2a1fe97e-0d8b-45d8-b95a-6e53e76cd26b
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from input data size: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1542114883196_0004, Tracking URL = http://localhost:8088/proxy/application_1542114883196_0004/
Kill Command = /home/acadgild/install/hadoop/hadoop-2.6.5/bin/hadoop job  -kill job_1542114883196_0004
```

9. Below are the queries that can be used to generate the desired output. Due to the above issue I was not able to execute the below queries.
10. To calculate max temperature from temperature_data table corresponding to those years which have at least 2 entries in the table used query **'select year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))), max(temperature) from temperature_data group by year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))) having count(*) > 1;'.**
11. To create view on the top of last query with name temperature_data_vw used query **'create view temperature_data_vw as select year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))), max(temperature) from temperature_data group by year(from_unixtime(unix_timestamp(dates,'mm-dd-yyyy'))) having count(*) > 1;'.**
12. To export the contents from temperature_data_vw to a file in local file system, such that each file is '|' delimited used the query **'insert overwrite local directory '/home/acadgild/HIVE/output' row format delimited fields terminated by '|' select * from temperature_data_vw;**'