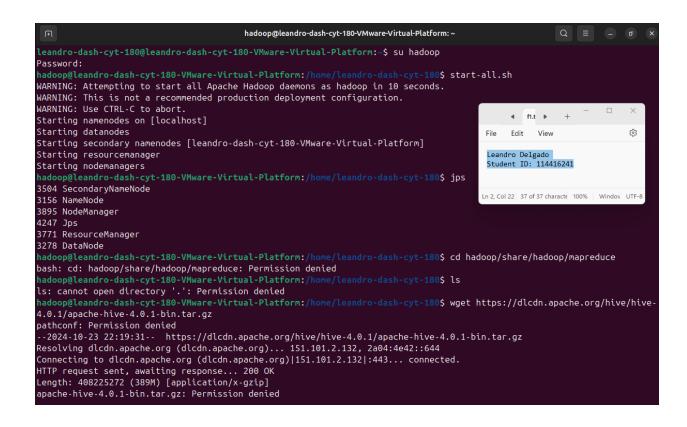
## **PROJECT 3**

Install and configure Hive, run simple HQL queries

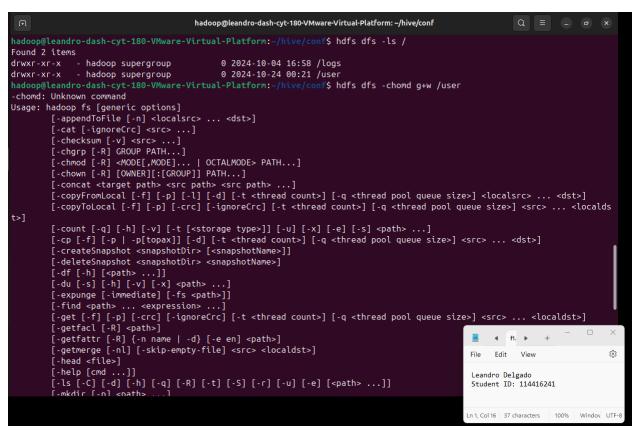
Elaborate by: Leandro Delgado Student Number:114416241 Professor: Tatiana Outkina Course: CYT-180

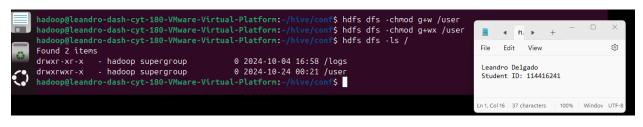




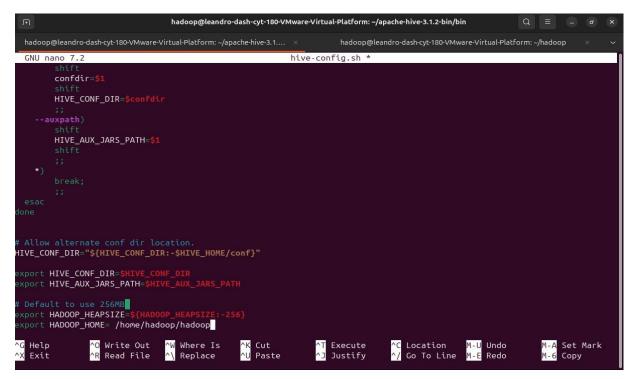


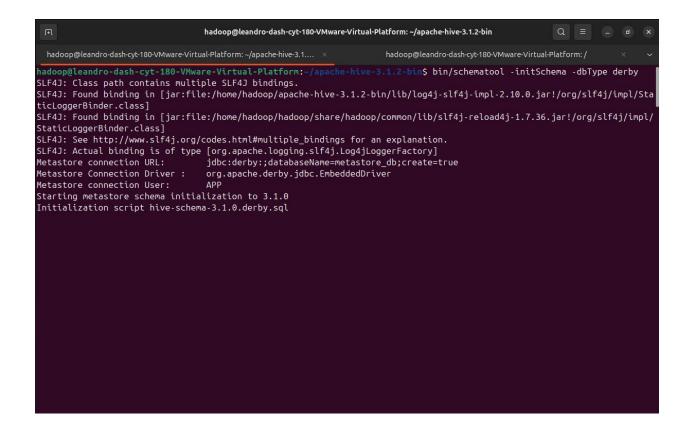
```
lib LICENSE licenses licenses.xml NOTICE RELEASE NOTES.txt scripts
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ ls
beeline-log4j2.properties.template hive-exec-log4j2.properties.template llap-cli-log4j2.properties.template
hive-default.xml.template
                                    hive-log4j2.properties.template
                                                                           llap-daemon-log4j2.properties.template
hive-env.sh.template
                                    ivysettings.xml
                                                                           parquet-logging.properties
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ cp hive-default.xml.template hive-site.xml
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ nano hive-site.xml
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ nano -/.bashrc
nano: invalid option -- '/'
Type 'nano -h' for a list of available options.
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:-/hive/conf$ nano -/.bashrc: nano: invalid option -- '/'
Type 'nano -h' for a list of available options.
                                                                                                   4 f1. ▶ +
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ nano ~/.bashrc
                                                                                               File Edit View
                                                                                                                           (6)3
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ source ~/.bashrc
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -ls
                                                                                               Leandro Delgado
ls: `.': No such file or directory
                                                                                               Student ID: 114416241
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -ls /
Found 2 items
drwxr-xr-x - hadoop supergroup
                                          0 2024-10-04 16:58 /logs
                                                                                              Ln 1, Col 16 37 characters 100% Windov UTF-8
             - hadoop supergroup
                                           0 2024-10-04 16:57 /test1
drwxr-xr-x
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -rm -r /test1
Deleted /test1
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -ls /
Found 1 items
drwxr-xr-x - hadoop supergroup
                                          0 2024-10-04 16:58 /logs
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -mkdir -p /user/hive/warehouse
 adoop@leandro-dash-cvt-180-VMware-Virtual-Platform:~/hive/conf$ hdfs dfs -ls /
```

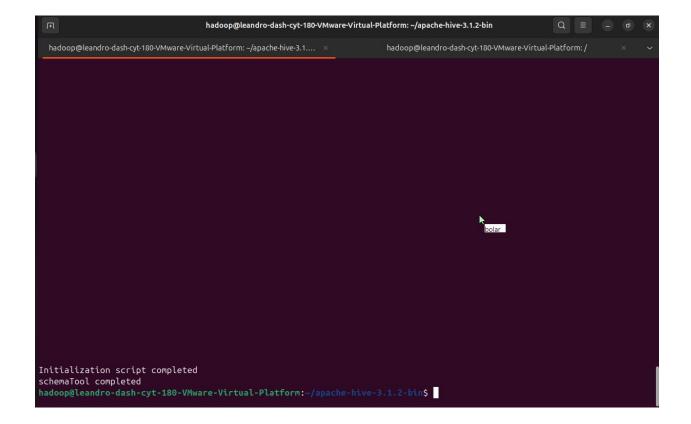


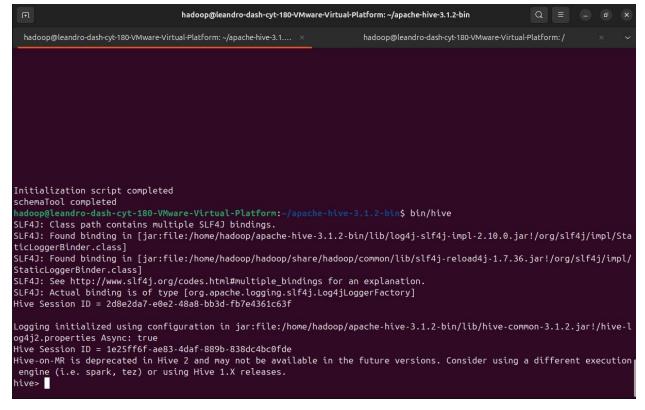


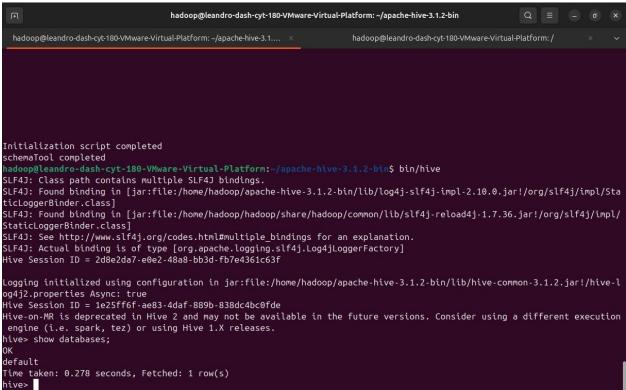
```
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform: ~/apache-hive-3.1....
                                                                                     hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform: ~
                                                                 /home/hadoop/.bashrc *
 f! shopt -oq posix; then
  if [ -f /usr/share/bash-completion/bash_completion ]; then
     . /usr/share/bash-completion/bash_completion
  elif [ -f /etc/bash_completion ]; then
    . /etc/bash_completion
 export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64
export HADOOP_HOME=/home/hadoop/hadoop
export HADOOP_INSTALL=$HAI
export HADOOP_MAPRED_HOME=
export HADOOP_COMMON_HOME=
export HADOOP_HDFS_HOME=$HADOOP_HOME
export HADOOP_YARN_HOME=$HADOOP_HOME
export HADOOP_COMMON_LIB_NATIVE_DIR=$
                                    IVE_DIR=$HADOOP_HOM
!E/bin:$HADOOP_WOME
                                                            E/lib/native
                                                           E/sbin:$H
export HADOOP_OPTS="-Djava.library.path=$HADOOP_HOME/lib/native
export HIVE_HOME=/home/hadoop/apache-hive-3.1.2-bin
                                   /bin
                                    [ line 134/135 (99%), col 33/33 (100%), char 4407/4408 (99%) ]
^G Help
^X Exit
                                                                                                                                    M-A Set Mark
M-6 Copy
                   ^O Write Out
                                       W Where Is
                                                          K Cut
                                                                              Execute
                                                                                                C Location
                                                                                                                  M-U Undo
                   ^R Read File
                                                                            ^J Justify
                                                                                                                 M-E Redo
                                         Replace
                                                         ^U Paste
                                                                                               ^/ Go To Line
```

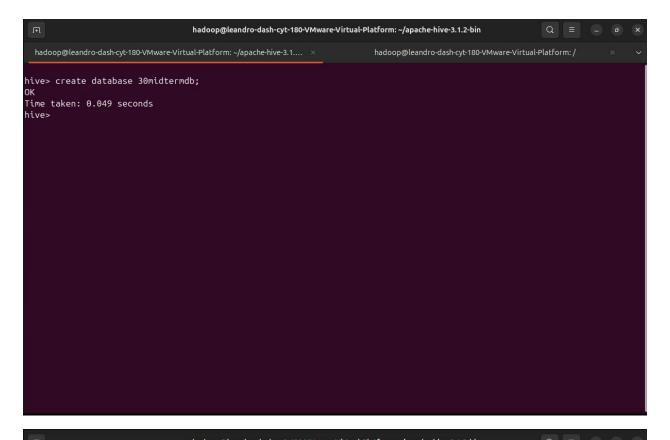


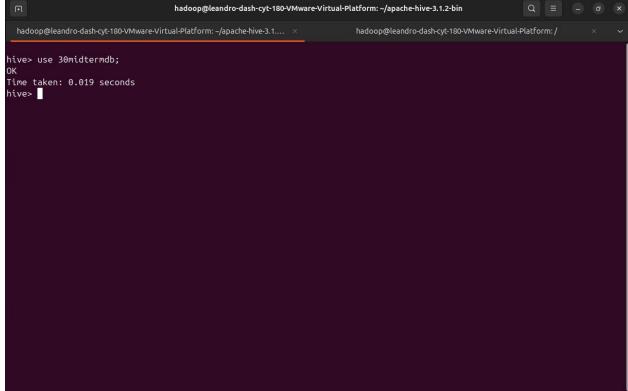


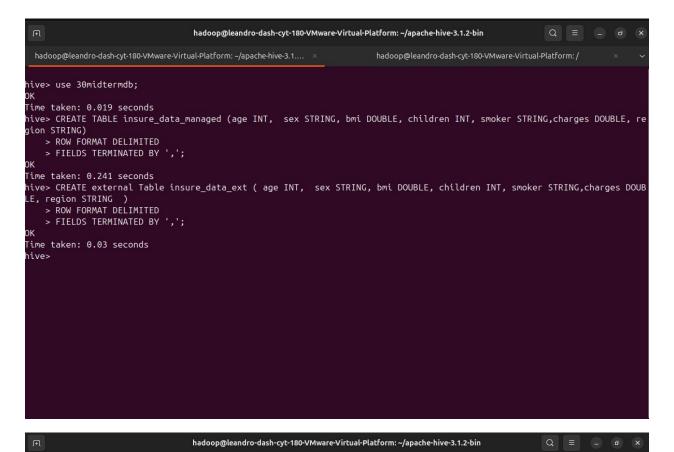


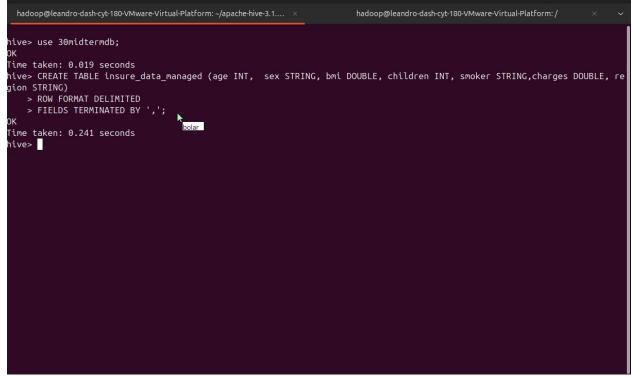








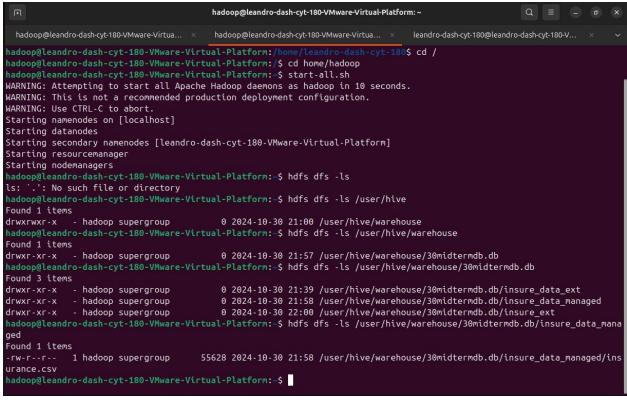




```
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform: ~/apache-hive-3.1.2-bin
                                                                                                        Q ≡
  hadoop@leandro-dash-cyt-180-VMware-Virtua... × hadoop@leandro-dash-cyt-180-VMware-Virtua... × leandro-dash-cyt-180@leandro-dash-cyt-180-V...
hive> use 30midtermdb;
Time taken: 0.019 seconds
hive> CREATE TABLE insure_data managed (age INT, sex STRING, bmi DOUBLE, children INT, smoker STRING, charges DOUBLE, re
gion STRING)
    > ROW FORMAT DELIMITED
    > FIELDS TERMINATED BY ',';
Time taken: 0.241 seconds bolar
hive> CREATE external Table insure_data_ext ( age INT, sex STRING, bmi DOUBLE, children INT, smoker STRING,charges DOUB
LE, region STRING )
    > ROW FORMAT DELIMITED
    > FIELDS TERMINATED BY ',';
OK
Time taken: 0.03 seconds
hive> cp /home/leandro-dash-cyt-180/Downloads/insurance.csv /tmp/insurance.csv
[1]+ Stopped
                              bin/hive
hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/apache-hive-3.1.2-bin$ bin/hive
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/log4j-slf4j-impl-2.10.0.jar!/org/slf4j/impl/Sta
ticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/hadoop/hadoop/share/hadoop/common/lib/slf4j-reload4j-1.7.36.jar!/org/slf4j/impl/
StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Hive Session ID = fba3b753-3d84-4ea3-8de7-eba463174863
Logging initialized using configuration in jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/hive-common-3.1.2.jar!/hive-l
og4j2.properties Async: true
Hive-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a different execution
```

I.I.				hadoop	@leandro-dash-cyt-1	180-VMware-Virtual-Platform: ~/apacl	he-hive-3.1.2-bin	Q = -	ō	x
hado	hadoop@leandro-dash-cyt-180-VMware-Virtua				× hadoop@leandro-dash-cyt-180-VMware-Vi		leandro-dash-cyt-180@leand	dro-dash-cyt-180-V		
23	female	23.18	2	no	northwest	14426.07385				
20	female	30.59	0	no	northeast	2459.7201				
32	female	41.1	0	no	southwest	3989.841				
43	female	34.58	1	no	northwest	7727.2532				
34	male	42.13	2	no	southeast	5124.1887				
30	male	38.83	1	no	southeast	18963.17192				
18	female	28.215	0	no	northeast	2200.83085				
41	female	28.31	1	no	northwest	7153.5539				
35	female	26.125	0	no	northeast	5227.98875				
57	male	40.37	0	no	southeast	10982.5013				
29	female	24.6	2	no	southwest	4529.477				
32	male	35.2	2	no	southwest	4670.64				
37	female	34.105	1	no	northwest	6112.35295				
18	male	27.36	1	yes	northeast	17178.6824				
43	female	26.7	2	yes	southwest	22478.6				
56	female	41.91	0	no	southeast	11093.6229				
38	male	29.26	2	no	northwest	6457.8434				
29	male	32.11	2	no	northwest	4433.9159				
22	female	27.1	0	no	southwest	2154.361				
52	female	24.13	1	yes	northwest	23887.6627				
40	female	27.4	1	no	southwest	6496.886				
23	female	34.865	0	no	northeast	2899.48935				
31	male	29.81	0	yes	southeast	19350.3689				
42	female	41.325	1	no	northeast	7650.77375				
24	female	29.925	0	no	northwest	2850.68375				
25	female	30.3	0	no	southwest	2632.992				
48	female	27.36	1	no	northeast	9447.3824				
23	female	28.49	1	yes	southeast	18328.2381				
45	male	23.56	2	no	northeast	8603.8234				
20	male	35.625	3	yes	northwest	37465.34375				
62	female	32.68	0	no	northwest	13844.7972				

```
nive> hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:-
nadoop@leandro-dash-cyt-180-VMware-Virtual-Platform:~/apache-hive-3.1.2-bin$ bin/hive
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/log4j-slf4j-impl-2.10.0.jar!/org/slf4j/impl/Sta
ticLoggerBinder.class]
slF4J: Found binding in [jar:file:/home/hadoop/hadoop/share/hadoop/common/lib/slf4j-reload4j-1.7.36.jar!/org/slf4j/impl/
StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Hive Session ID = d5d9a03c-993b-45e1-9a81-5937ef467c5c
ogging initialized using configuration in jar:file:/home/hadoop/apache-hive-3.1.2-bin/lib/hive-common-3.1.2.jar!/hive-L
og4i2.properties Async: true
Hive Session ID = 3036fe35-5852-45db-bfb9-e2291d335194
five-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a different execution
engine (i.e. spark, tez) or using Hive 1.X releases.
nive> set hive.exe.dynamic.partitioned=True;
Query returned non-zero code: 1, cause: hive configuration hive.exe.dynamic.partitioned does not exists.
nive> set hive.exec.dynamic.partition.mode=nostrict;
nive> CREATE TABLE insurance partitioned (age INT, sex STRING, bmi DOUBLE, children INT, smoker STRING, region STRING,
charges DOUBLE)
   > ;
Time taken: 0.482 seconds
nive> CREATE TABLE insurance_partitioned (age INT, sex STRING, bmi DOUBLE, children INT, smoker STRING, region STRING,
charges DOUBLE);
FAILED: Execution Error, return code 1 from org.apache.hadoop.hive.ql.exec.DDLTask. AlreadyExistsException(message:Table
hive.default.insurance_partitioned already exists)
nive> drop table insurance partitioned
```



```
Q =
                                    hadoop@leandro-dash-cyt-180-VMware-Virtual-Platform: ~/apache-hive-3.1.2-bin
  hadoop@leandro-dash-cyt-180-VMware-Virtua... ×
                                             hadoop@leandro-dash-cyt-180-VMware-Virtua... × leandro-dash-cyt-180@leandro-dash-cyt-180-V...
    > ROW FORMAT DELIMITED
    > FIELDS TERMINATED BY ',';
Time taken: 0.275 seconds
hive> SET hive.exec.dynamic.partition = true;
hive> SET hive.exec.dynamic.partition.mode = nonstrict;
hive> CREATE TABLE insure_partitioned (age INT, sex STRING, bmi DOUBLE, children INT, smoker STRING,charges DOUBLE)
    > partitioned by (region STRING)
> ROW FORMAT DELIMITED
    > FIELDS TERMINATED BY ',';
Time taken: 0.03 seconds
hive> show tables;
insure data managed
insure_partitioned
 fime taken: 0.015 seconds, Fetched: 2 row(s)
hive> LOAD DATA LOCAL INPATH 'file:///tmp/insurance.csv' into table insure_data_managed;
Loading data to table 30midtermdb.insure_data_managed
Time taken: 0.289 seconds
hive> INSERT into insure_partitioned PARTITION (region)
> SELECT age, sex, bmi, children, smoker, region , charges FROM insure_data_managed;
Query ID = hadoop_20241030224034_ae2070f2-3551-4978-b661-d4b411276b3a
Total jobs = 3
 aunching Job 1 out of 3
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>
```

