**EXP NO: 5**                              **INSTALLATION OF HIVE**
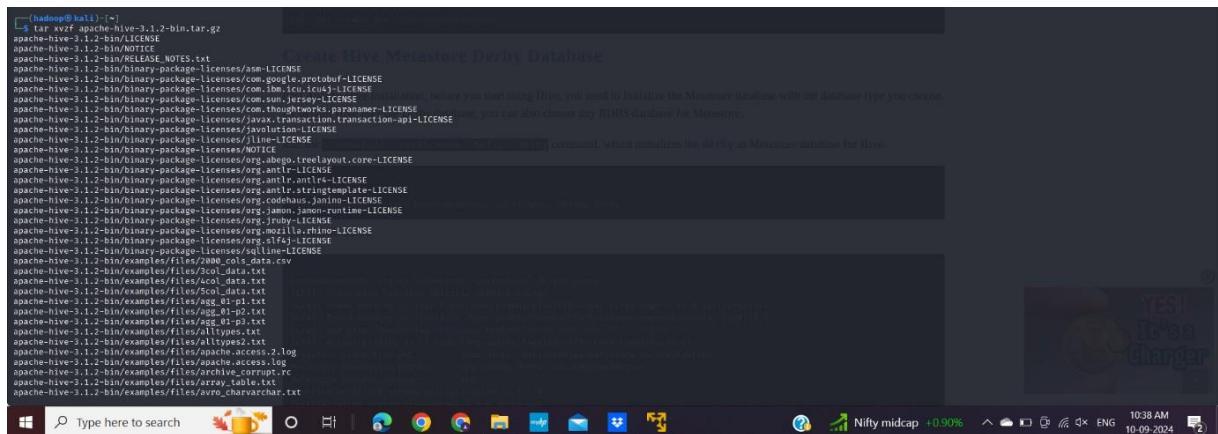
**$wget https://archive.apache.org/dist/hive/hive-3.1.2/apache-hive-3.1.2-bin.tar.gz**
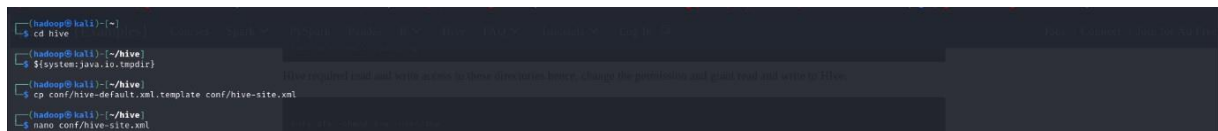


**$tar xvzf apache-hive-3.1.2-bin.tar.gz**



**$mv apache-hive-3.1.2-bin hive**

**$nano ~/.bashrc**

**$source ~/.bashrc**

**$cd hive**

**$cp conf/hive-default.xml.template conf/hive-site.xml**



**$nano conf/hive-site.xml**

**$start-all.sh**

```
File Actions Edit View Help
┌──(hadoop㉿kali)-[~]
└─$ start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as hadoop in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [kali]
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-11 04:59:16,429 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Starting resourcemanager
Starting nodemanagers
```

# $ jps

```
┌──(hadoop㉿kali)-[~]
└─$ jps
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
14436 NodeManager
16772 Jps
13830 SecondaryNameNode
14311 ResourceManager
13597 DataNode
13471 NameNode
```

**$hdfs dfs -mkdir /user**

**$hdfs dfs -mkdir /user/hive**

**$hdfs dfs -mkdir /user/hive/warehouse**

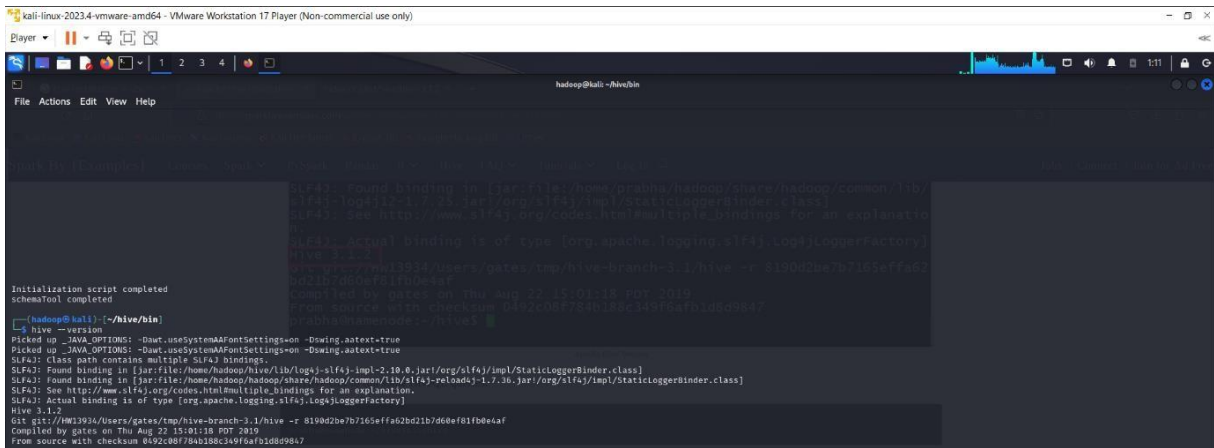**$hdfs dfs -mkdir /user/tmp**

**$hdfs dfs -chmod g+w /user/tmp**

**$hdfs dfs -chmod g+w /user/hive/warehouse**

```
┌──(hadoop㉿kali)-[~/hadoop/bin]
└─$ ./hdfs dfs -ls /user/
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-10 01:04:28,163 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
Found 2 items
drwxr-xr-x   - hadoop supergroup          0 2024-09-09 23:31 /user/hive
drwxrwxr-x   - hadoop supergroup          0 2024-09-09 23:31 /user/tmp
```
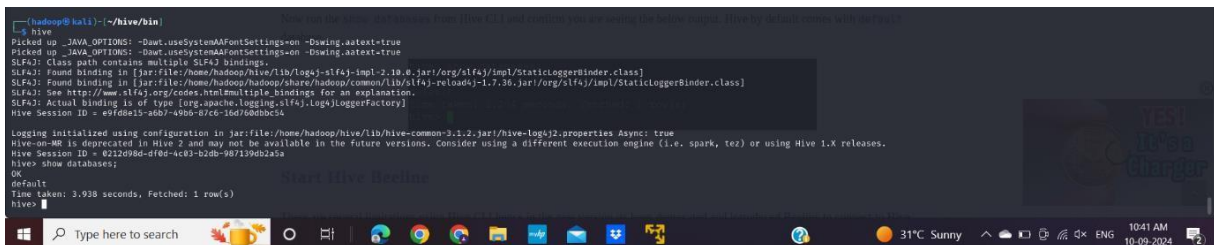
**$cd $HIVE_HOME/bin**

**$schematool -initSchema –dbType derby**

```
Found 2 items
drwxr-xr-x   - hadoop supergroup          0 2024-08-29 10:44 /tmp/hadoop-yarn
drwx-wx-wx   - hadoop supergroup          0 2024-09-02 04:35 /tmp/hive

┌──(hadoop㉿kali)-[~/hadoop/bin]
└─$ ./hdfs dfs -ls /user/
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-10 01:04:28,163 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 2 items
drwxr-xr-x   - hadoop supergroup          0 2024-09-09 23:31 /user/hive
drwxrwxr-x   - hadoop supergroup          0 2024-09-09 23:31 /user/tmp

┌──(hadoop㉿kali)-[~/hadoop/bin]
└─$ cd

┌──(hadoop㉿kali)-[~]
└─$ cd hive/bin

┌──(hadoop㉿kali)-[~/hive/bin]
└─$ schematool -initSchema -dbType derby
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hadoop/hive/lib/log4j-slf4j-impl-2.10.0.jar!/org/slf4j/impl/StaticLoggerBinder.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]
Metastore connection URL:        jdbc:derby:;databaseName=metastore_db;create=true
Metastore Connection Driver :    org.apache.derby.jdbc.EmbeddedDriver
Metastore connection User:       APP
Starting metastore schema initialization to 3.1.0
Initialization script hive-schema-3.1.0.derby.sql
```

**$hive**

**>show databases;**



**> CREATE DATABASE financials;**

```
hive> CREATE DATABASE financials;
OK
Time taken: 0.591 seconds
```

**> use financials;**

```
hive> use financials;
OK
Time taken: 0.229 seconds
```

**> CREATE TABLE finance_table( id INT, name STRING );**

```
hive> CREATE TABLE finance_table( id INT, name STRING );
OK
Time taken: 2.536 seconds
```

**> INSERT INTO finance_tableVALUES (1, 'Alice'), (2, 'Bob'), (3, 'Charlie');**

```
hive> INSERT INTO finance_table VALUES (1, 'Alice'), (2, 'Bob'), (3, 'Charlie');
Query ID = hadoop_20240910011318_759e97f4-dbcc-4020-a345-37b6aac0dbbf
Total jobs = 3
Launching Job 1 out of 3
Number of reduce tasks determined at compile time: 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_1725938931910_0001, Tracking URL = http://kali:8088/proxy/application_1725938931910_0001/
Kill Command = /home/hadoop/hadoop/bin/mapred job  -kill job_1725938931910_0001
Hadoop job information for Stage-1: number of mappers: 1; number of reducers: 1
2024-09-10 01:14:33,477 Stage-1 map = 0%,  reduce = 0%
2024-09-10 01:15:17,392 Stage-1 map = 100%,  reduce = 0%, Cumulative CPU 20.45 sec
2024-09-10 01:15:43,645 Stage-1 map = 100%,  reduce = 100%, Cumulative CPU 33.61 sec
MapReduce Total cumulative CPU time: 33 seconds 610 msec
Ended Job = job_1725938931910_0001
Stage-4 is selected by condition resolver.
Stage-3 is filtered out by condition resolver.
Stage-5 is filtered out by condition resolver.
Moving data to directory hdfs://localhost:9000/user/hive/warehouse/financials.db/finance_table/.hive-staging_hive_2024-09-10_01-13-18_205_31425232155846852-1/-ext-10000
Loading data to table financials.finance_table
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   Cumulative CPU: 33.61 sec   HDFS Read: 15668 HDFS Write: 291 SUCCESS
Total MapReduce CPU Time Spent: 33 seconds 610 msec
OK
Time taken: 151.732 seconds
```

> **CREATE VIEW myview AS SELECT name, id FROM finance_table;**

```
hive> CREATE VIEW myview AS SELECT name, id FROM finance_table;
OK
Time taken: 0.82 seconds
```

> **SELECT * FROM myview;**

```
hive> SELECT * FROM myview;
OK
Alice    1
Bob      2
Charlie 3
Time taken: 0.716 seconds, Fetched: 3 row(s)
hive>
```

> **DESCRIBE finance_table;**

```
hive> DESCRIBE finance_table;
OK
id                      int
name                    string
Time taken: 0.348 seconds, Fetched: 2 row(s)
```

> **ALTER TABLE finance_table ADD COLUMNS (age INT);**

>**quit;**

```
hive> ALTER TABLE finance_table ADD COLUMNS (age INT);
OK
Time taken: 0.457 seconds
hive> quit;
```