Task No: 8a Date:17/09/2025	Implement basis commands in HIVE. **Tools: HIVE , LINUX / WINDOWS**	CO4

AIM:

To install and configure the Apache Hive in windows operating system, and to perform basis commands in HIVE.

PROCEDURE:

1. Install Java Development Kit (JDK) version 8 or higher.
2. Install Hadoop-2.9.2, or use any other STABLE version for Hadoop.
3. Install MySQL Query Browser
4. Download and install Hive-3.1.2, or use any other STABLE version for Hive.
5. Set the environmental variables for HIVE_HOME and Path variables %HIVE_HOME%\bin
6. Open a NEW Command Window, check the path settings

   echo %HIVE_HOME%
7. Edit the Properties of hive-site.xml and Replace the value for <Your IP Address> with the IP Address of your System and replace <Your drive Folder> with the Hive folder Path.
8. Removing Special Characters and Adding few More Properties in hive-site.xml File.
9. Creating Hive User in MySQL Database for reading and writing data from it.
10. Grant permission to Users and Creating Metastore
11. Starting Hadoop, Hive Metastore and Hive shell prompt

    start-all.cmd

    hive --service metastore
12. Open a new cmd window and run the below command to start Hive

    > hive

Hive Basic Commands:

Show Databases:

SHOW DATABASES;

Use Database:

USE database_name;

Show Tables:

SHOW TABLES;

Create a Database:

CREATE DATABASE new_database;

Create a Table:

```
CREATE TABLE my_table (
    id INT,
    name STRING,
    age INT
);
```

Load Data into a Table:

```
LOAD DATA LOCAL INPATH '/path/to/datafile.csv' OVERWRITE INTO TABLE my_table;
```

Query Data:

```
SELECT * FROM my_table WHERE age > 25;
```

Insert Data into a Table:

```
INSERT INTO TABLE my_table VALUES (1, 'John', 30);
```

Describe Table:

```
DROP TABLE my_table;
```

Result:

Thus the installation and configuration of Apache Hive and basic commands are executed successfully.

Task No: 8a Date:	Use Hive to create, alter, and drop databases, tables, views, functions, and indexes **Tools: HIVE , LINUX**	CO4

AIM:

To Start the Apache Hive in windows operating system, and to execute HQL commands in HIVE.

PROCEDURE:

1. Install Java Development Kit (JDK) version 8 or higher.
2. Install Hadoop-2.9.2, or use any other STABLE version for Hadoop.
3. Install MySQL Query Browser and configure the Hadoop, msql and Hive
4. Starting Hadoop, Hive Metastore and Hive shell prompt

   start-all.cmd

   hive --service metastore
5. Open a new cmd window and run the below command to start Hive

   > hive
6. Execute the various Hql Commands in Hive shell
7. Stop the hive and other server

HQL COMMANDS:

Create Database

hive> create database demo;

hive> create a database if not exists demo;

hive> show databases;

hive> describe database extended demo;

Create Table

hive> create table demo.employee (Id int, Name string , Salary float)

row format delimited

fields terminated by ',' ;

hive> create table if not exists demo.employee (Id int, Name string , Salary float)

row format delimited

fields terminated by ',' ;

Alter Table

hive> alter table old_table_name rename to new_table_name;

hive> Alter table emp rename to employee_data;

Drop Table

hive> drop table new_employee;

Aggregate Functions in Hive

Load the below data file “empl_details” from local drive to HQL table “employee_data” and perform HQL function**.**

employee_data

Id	Name	Salary
1	Gaurav	30000
2	Aryan	20000
3	Vishal	40000
4	John	10000
5	Henry	25000
6	William	9000
7	Lisa	25000
8	Ronit	20000

hive> create table employee_data (Id int, Name string , Salary float)

row format delimited

fields terminated by ',' ;

hive> load data local inpath '/home/codegyani/hive/emp_details' into table employee_data;

hive> select max(Salary) from employee_data;

GROUP BY and HAVING Clause

hive> select department, sum(salary) from emp group by department;

hive> select department, sum(salary) from emp group by department having sum(salary)>=35000;

View and Indexes

HQL Views:

Views are generated based on user requirements and save any result set data as a view.

hive> CREATE VIEW emp_30000 AS

SELECT * FROM employee

WHERE salary>30000;

Dropping a View

hive> DROP VIEW emp_30000;

Creating an Index:

An Index is nothing but a pointer on a particular column of a table. Creating an index means creating a pointer on a particular column of a table.

hive> CREATE INDEX inedx_salary ON TABLE employee(salary)

AS 'org.apache.hadoop.hive.ql.index.compact.CompactIndexHandler';

Dropping an Index:

hive> DROP INDEX index_salary ON employee;

RESULTS:

Thus the installation, configuration of Apache Hive and HQL commands are executed successfully.