Ex: 5 210701144

Create tables in Hive and write queries to access the data in the table

AIM:

To create tables in Hive and write queries to access the data in the table.

PROCEDURE:

Installation of Hive:

1. Installing Apache Derby Install Apache Derby

10.14.2.0

https://db.apache.org/derby/derby_downloads.html#For+Java+8+and+Higher

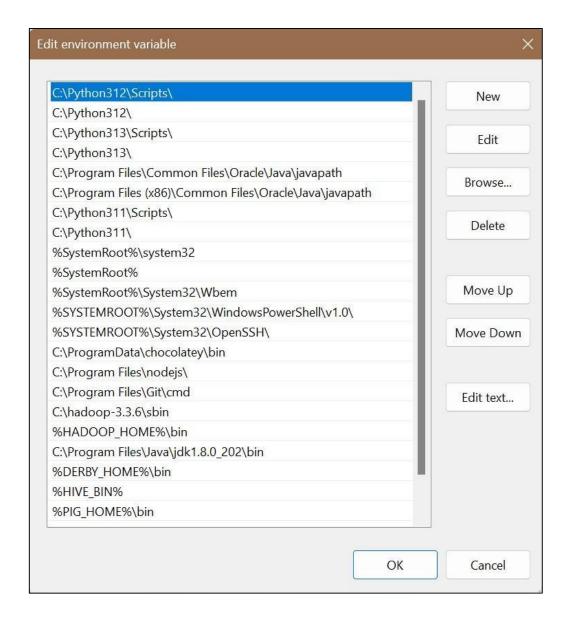
2. Downloading Apache Hive binaries

https://downloads.apache.org/hive/hive-3.1.2/

3. Setting environment variables

Variable	Value
HADOOP_HOME	C:\hadoop-3.3.6
HIVE_BIN	%HIVE_HOME%\bin
HIVE_HOME	C:\apache-hive-3.1.3-bin
HIVE_LIB	%HIVE_HOME%\lib

DERBY_HOME	C:\db-derby-10.14.2.0-bin	
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- 3.1. Copy Derby libraries we should go to the Derby libraries directory (db-derby-10.14.2.0\lib) and copy all *.jar files. Then, we should paste them within the Hive libraries directory.
- 3.2. Configuring hive-site.xml and Hive's Bin folder

Refer following link to download the file. Also download the guava file. Put hive-site.xml file to hive's conf location and replace hive's current guava file with this one in lib location. Also download the bin folder from link and replace the existing hive's bin folder.

https://ldrv.ms/f/s!ArSg3Xpur4Grmw0SDqW0g44T7HYU?e=wDsoBn

- 4. Starting Hadoop Services start-all.cmd
- 5. Derby Network Server: Run the following command in separate window to open Derby

StartNetworkServer -h 0.0.0.0

6. Starting Apache Hive

Go to Apache Hive's bin location with cd command and run the following command:

hive --service schematool -dbType derby -initSchema

7. Open Hive shell by typing:

hive

Create a Database:

Start by creating a database. Open the Hive CLI and follow the steps below:

1. Use the **CREATE DATABASE** statement to create a new database:

CREATE DATABASE sample;

2. Verify the database is present:

SHOW DATABASES;

3. Switch to the new database:

USE sample;

Create a Table in Hive

CREATE TABLE students (name STRING, roll INT, dept STRING);

Add Data

Run the **LOAD DATA LOCAL INPATH** command:

LOAD DATA INPATH

'/C:/Users/mercy/OneDrive/Documents/DataAnalytics/Hive/students.csv' WRITE INTO TABLE students;

List Hive Tables and Data

To show all tables in a selected database, use the following statement:

SHOW TABLES;

To show table column names and data types, run:

DESC students;

To display table data, use a **SELECT** statement. For example, to select everything in a table, run:

SELECT * FROM students;

OUTPUT:

```
C:\hive
SIF41: class path contains multiple SIF47 bindings.
SIF41: Found binding in [jar:file:/C:/hadoop-3.3.6/share/hadoop/common/lib/sIf4j-reload4j-1.7.36.jar!/org/sIf4j/impl/StaticLoggerBinder.class]
SIF41: Found binding in [jar:file:/C:/apache-hive-3.1.3-bin/lib/log4j-sIf4j-impl-2.17.1.jar!/org/sIf4j/impl/StaticLoggerBinder.class]
SIF41: See http://www.sIf4j.org/codes.html#multiple_bindings for an explanation.
SIF41: Actual binding is of type [org.sIf4j.impl.Reload4jloggerFactory]
SIF41: See http://www.sIF4j.org/codes.html#multiple_bindings for an explanation.
SIF41: Actual binding is of type [org.sIf4j.impl.Reload4jloggerFactory]
SIF41: Actual binding is of type [org.sIf4] SIF41: Actu
```

```
hive> SHOW DATABASES;

2224-88-26 20:02:59,018 NFO conf.HiveConf: Using the default value passed in for log id: 6cbb1c57-f5d7-4a6e-9925-c62b4c956239

2224-88-26 20:02:59,065 NFO ql.Driver: Compiling command(queryId=mercy_20240826208259_67375af-alb0-4590-9b97-93f24ele4032): SHOW DATABASES

2224-88-26 20:02:59,653 NFO ql.Driver: Concurrency mode is disabled, not creating a lock manager

2224-88-26 20:02:59,653 NFO ql.Driver: Semantic Analysis Completed (retrial = false)

2224-88-26 20:02:59,740 INFO ql.Driver: Returning Hive schema: Schema(fieldSchemas:[FieldSchema(name:database_name, type:string, comment:from deserializer)], properties:nul

1)

2224-88-26 20:02:59,840 INFO ql.Driver: Completed compiling command(queryId=mercy_20240826208259_6f3736af-alb0-4590-9b97-93f24ele4032); Time taken: 0.77 seconds

2224-88-26 20:02:59,840 INFO ql.Driver: Completed compiling command(queryId=mercy_20240826208259_6f3736af-alb0-4590-9b97-93f24ele4032); Time taken: 0.77 seconds

2224-88-26 20:02:59,846 INFO ql.Driver: Executing at lock manager

2224-88-26 20:02:59,846 INFO ql.Driver: Executing command(queryId=mercy_20240826208259_6f3736af-alb0-4590-9b97-93f24ele4032): SHOW DATABASES

2224-88-26 20:02:59,846 INFO ql.Driver: Executing command(queryId=mercy_20240826208259_6f3736af-alb0-4590-9b97-93f24ele4032): SHOW DATABASES

2224-88-26 20:02:59,846 INFO ql.Driver: Stating task [Stage=9:DOL] in serial mode

2224-88-26 20:02:59,870 INFO merce.DOLTask: results: 2

2224-88-26 20:02:59,870 INFO merce.DOLTask: results: 2

2224-88-26 20:02:59,870 INFO ql.Driver: Completed executing command(queryId=mercy_20240826200259_6f3736af-alb0-4590-9b97-93f24ele4032); Time taken: 0.061 seconds

OK

2224-88-26 20:02:59,970 INFO ql.Driver: Completed executing command(queryId=mercy_20240826200259_6f3736af-alb0-4590-9b97-93f24ele4032); Time taken: 0.061 seconds

OK

2224-88-26 20:02:59,970 INFO ql.Driver: Completed executing command(queryId=mercy_20240826200259_6f3736af-alb0-4590-9b97-93f24ele4032); Time taken: 0.061 seconds

OK

2224-88-26 20:02:59,970
```

```
2824-88-26 20:10:89,162 INFO utils.FileUtils: Creating directory if it doesn't exist: hdfs://localhost:9000/user/hive/warehouse/sample.db/students
2824-88-26 20:10:89,718 INFO ql.Driver: Completed executing command(queryId=mercy_20240826201008_7d484479-9c70-407e-9b5b-ef577623a7de); Time taken: 0.831 seconds
000
2824-88-26 20:10:89,719 INFO ql.Driver: OK
2824-88-26 20:10:89,719 INFO ql.Driver: Concurrency mode is disabled, not creating a lock manager
Time taken: 0.993 seconds
2824-88-26 20:10:89,722 INFO cliDriver: Time taken: 0.993 seconds
2824-88-26 20:10:89,723 INFO conf.HiveConf: Using the default value passed in for log id: 6cbb1c57-f5d7-4a6e-9925-c62b4c956239
2824-88-26 20:10:89,723 INFO session.SessionState: Resetting thread name to main
hive>
```

```
New DOD NYN LOOL 199AT 1/C //wers/mercy/OraDivs/Documents/DataMnalyytis/Mus/students.cov 0/0904TE 1700 178LE students;
2024-89-20 2019-89 56 2019-09 50 50 1995 or viview of the complete the set of the complete the
```

```
Nive: SHOW TABLES;
2024-08-26 28:40:08,827 INFO conf.HiveConf: Using the default value passed in for log id: 6cbblc57-f5d7-4a6e-9925-c62b4c956239
2024-08-26 28:40:08,828 INFO session.SessionState: Updating thread name to 6cbblc57-f5d7-4a6e-9925-c62b4c956239 main
2024-08-26 28:40:08,838 INFO ql.Driver: Compiling command(queryId=mercy_20240826204000_a3d158d3-c6f2-47b4-8afd-7301c6420533): SHOW TABLES
2024-08-26 28:40:08,086 INFO metastore.HiveMetastore: 0: get_database: @hiveMesample
2024-08-26 28:40:08,086 INFO metastore.HiveMetastore: 0: get_database: @hiveMesample
2024-08-26 28:40:08,087 INFO ql.Driver: Semantic Analysis Completed (retrial = false)
2024-08-26 28:40:08,087 INFO ql.Driver: Semantic Analysis Completed (retrial = false)
2024-08-26 28:40:08,087 INFO ql.Driver: Returning Hive Schemas: Schema(fieldSchemas:[FieldScheman(name:tab_name, type:string, comment:from deserializer)], properties:null)
2024-08-26 28:40:08,087 INFO ql.Driver: Completed compiling command(queryId=mercy_20240826204000_a3d158d3-c6f2-47b4-8afd-7301c6420533); Time taken: 0.646 seconds
2024-08-26 28:40:08,087 INFO ql.Driver: Completed compiling command(queryId=mercy_20240826204000_a3d158d3-c6f2-47b4-8afd-7301c6420533); Time taken: 0.646 seconds
2024-08-26 28:40:08,087 INFO ql.Driver: Concurrency mode is disabled, not creating a lock manager
2024-08-26 28:40:08,087 INFO ql.Driver: Starting task [Stage-of-Doll] in serial mode
2024-08-26 28:40:08,087 INFO ql.Driver: Starting task [Stage-of-Doll] in serial mode
2024-08-26 28:40:08,088 INFO metastore.HiveMetastore: 0: get_database: @hiveMesample
2024-08-26 28:40:08,088 INFO metastore.HiveMetastore: 0: get_database: @hiveMesample
2024-08-26 28:40:08,088 INFO metastore.HiveMetastore: 0: get_database: @hiveMesample pat=.*
2024-08-26 28:40:08,09,318 INFO ql.Driver: Completed executing command(queryId=mercy_20240826204000_a3d158d3-c6f2-47b4-8afd-7301c6420533); Time taken: 0.641 seconds

VA. 8224-08-26 28:40:08,09,318 INFO ql.Driver: Completed executing command(queryId=mercy_20240826204000_a3d158d
```

```
Divey DESC students;

2024-08-25 20:40:38,768 INFO conf.HiveConf: Using the default value passed in for log id: 6cbblc57-f5d7-4a6e-9925-c62b4c956239

2024-08-26 20:40:38,768 INFO session.SessionState: Updating thread name to 6cbblc57-f5d7-4a6e-9925-c62b4c956239 main

2024-08-26 20:40:38,770 INFO ql.Driver: Compiling command(queryId=mercy_20240826204082_742eccec-f18c-4465-82ba-0c86bbbaeae2): DESC students

2024-08-26 20:40:38,784 INFO mitsatore.HiveWebtaStore: 0: get_table: tbl=hive.sample.students

2024-08-26 20:40:38,784 INFO mitsatore.HiveWebtaStore: 0: get_table: tbl=hive.sample.students

2024-08-26 20:40:38,784 INFO mitsatore.HiveWebtaStore: 0: get_table: tbl=hive.sample.students

2024-08-26 20:40:38,831 INFO parse_DOLSemanticAnalyzer: analyzeDescribeTable done

2024-08-26 20:40:38,831 INFO ql.Driver: Semantic Analyzer: completed (retrial : false)

2024-08-26 20:40:38,832 INFO ql.Driver: Returning Hive schema: Schema(fieldSchemas:[FieldSchema(name:col_name, type:string, comment:from deserializer), FieldSchema(name:comment, type:string, comment:from deserializer), FieldSchema(a_type, type:string, comment:from deserializer), FieldSchema(name:comment, type
```

```
hive> SELECT * FROM students;

2024-08-26 20:41:12,643 INFO conf.HiveConf: Using the default value passed in for log id: 6cbb1c57-f5d7-4a6e-9925-c62b4c956239

2024-08-26 20:41:12,644 INFO session.SessionState: Updating thread name to 6cbb1c57-f5d7-4a6e-9925-c62b4c956239 main

2024-08-26 20:41:12,645 INFO ql.Driver: Compiling command(queryId=mercy_20240826204112_4f6f657c-0e35-400c-9a40-f9a19709922d): SELECT * F

2024-08-26 20:41:12,663 INFO ql.Driver: Concurrency mode is disabled, not creating a lock manager

2024-08-26 20:41:12,663 INFO parse.CalcitePlanner: Starting Semantic Analysis

2024-08-26 20:41:12,691 INFO parse.CalcitePlanner: Completed phase 1 of Semantic Analysis

2024-08-26 20:41:12,691 INFO parse.CalcitePlanner: Get metadata for source tables

2024-08-26 20:41:12,693 INFO hiveMetaStore.audit: ugi=mercy ip=unknown-ip-addr cmd=get_table: tbl=hive.sample.students

2024-08-26 20:41:12,791 INFO parse.CalcitePlanner: Get metadata for subqueries

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for subqueries

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for destination tables

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for destination tables

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for destination tables

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for subqueries

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for destination tables

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for subqueries

2024-08-26 20:41:12,751 INFO parse.CalcitePlanner: Get metadata for subqueries
```

```
OK
2024-08-26 20:41:14,144 INFO ql.Driver: OK
2024-08-26 20:41:14,145 INFO ql.Driver: Concurrency mode is disabled, not creating a lock manager
2024-08-26 20:41:14,169 INFO mapred.FileInputFormat: Total input files to process: 1
2024-08-26 20:41:14,288 INFO lazy.LazyStruct: Missing fields! Expected 3 fields but only got 1! Ignoring similar problems.
2024-08-26 20:41:14,291 INFO exec.TableScanOperator: RECORDS_OUT_INTERMEDIATE:0, RECORDS_OUT_OPERATOR_TS_0:10,
2024-08-26 20:41:14,291 INFO exec.SelectOperator: RECORDS_OUT_INTERMEDIATE:0, RECORDS_OUT_OPERATOR_SEL_1:10,
2024-08-26 20:41:14,291 INFO exec.ListSinkOperator: RECORDS_OUT_INTERMEDIATE:0, RECORDS_OUT_OPERATOR_LIST_SINK_3:10,
name,roll,dept NULL
Abhishek,110,CSE
NULL
NULL
Abhishek,110,CSE
NULL
NULL
Dev, 231,CSBS NULL
NULL
Sonakshi,241,CSBS
NULL
NULL
Sonakshi,241,CSBS
NULL
NULL
NULL
NULL
Ranveer,511,ECE NULL
NULL
Ranveer,511,ECE NULL
NULL
Ranveer,511,ECE NULL
NULL
NULL
Mercy,157,CSE NULL
NULL
Time taken: 1.5 seconds, Fetched: 10 row(s)
2024-08-26 20:41:14,321 INFO CliDriver: Time taken: 1.5 seconds, Fetched: 10 row(s)
2024-08-26 20:41:14,322 INFO Session.SessionState: Resetting thread name to main
hive>
hive>
```

RESULT:

Thus to create tables in Hive and write queries to access the data in the table is completed successfully.