



# Vidyavardhini's College of Engineering & Technology

## Department of Computer Engineering

Experiment No. 2
Use of Sqoop tool
Date of Performance:24/07/2023
Date of Submission:31/07/2023



**AIM:** To install SQOOP and execute basic commands of Hadoop eco system componentSqoop.

**THEORY:**

Installation and configuration of SQOOP

1) Download SQOOP from <https://sqoop.apache.org>

2) Unzip and Install SQOOP

After Downloading the SQOOP, we need to Unzip the sqoop-1.4.7.bin\_hadoop-2.6.0.tar.gz file.

3) Create a folder and move the final extracted file in it.

4) Set up the environment variables

a. Set SQOOP\_HOME

b. Set up path variable

5) Configure SQOOP

**Basic SQOOP commands:**

1. List Table This command lists the particular table of the database in MYSQL server.

```
sqoop list - tables --connect jdbc:mysql://localhost/payment --username gartner
```

2. Target directory

This command import table in a specific directory in HDFS. -m denotes mapper argument. They have an integer value.

```
$ sqoop import --connect jdbc:mysql://localhost/inventory --username jony -table inventory --m 1 --target-dir/inv
```

3. sqoop-eval This command runs quickly SQL queries of the respective database.

```
$ sqoop eval --connect --query "SQLQuery"
```



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4. sqoop – version This command displays version of the sqoop.

```
$ sqoop version sqoop {revnumber}
```

5. sqoop-job

This command allows us to create a job, the parameters that are created can be invoked at any time. They take options like (–create,–delete,–show,–exit).

```
$ sqoop job --create --import --connect --table
```

6. code gen

This Sqoop command creates java class files which encapsulate the imported records. All the

```
$ sqoop codegen --connect -table
```

java files are recreated, and new versions of a class are generated. They generate code to interact with database records. Retrieves a list of all the columns and their datatypes.

7. List Database This Sqoop command lists have all the available database in the RDBMS server.

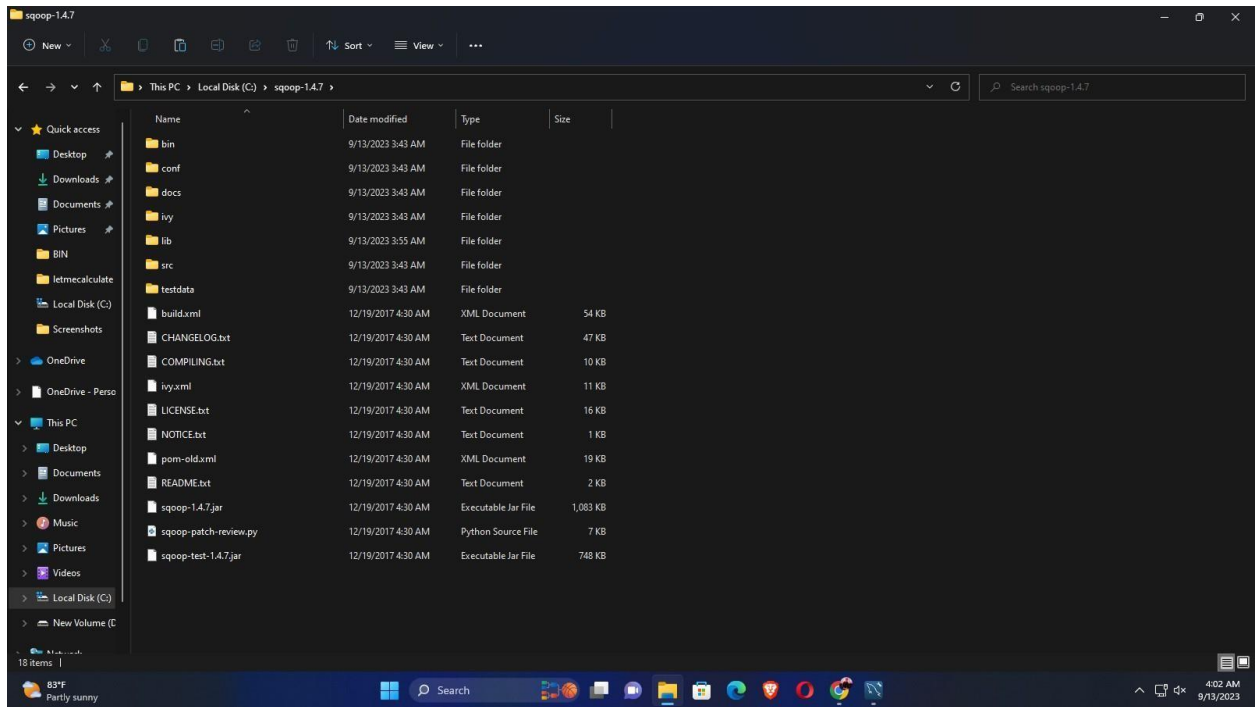
```
>$ sqoop list - database -- connect
```



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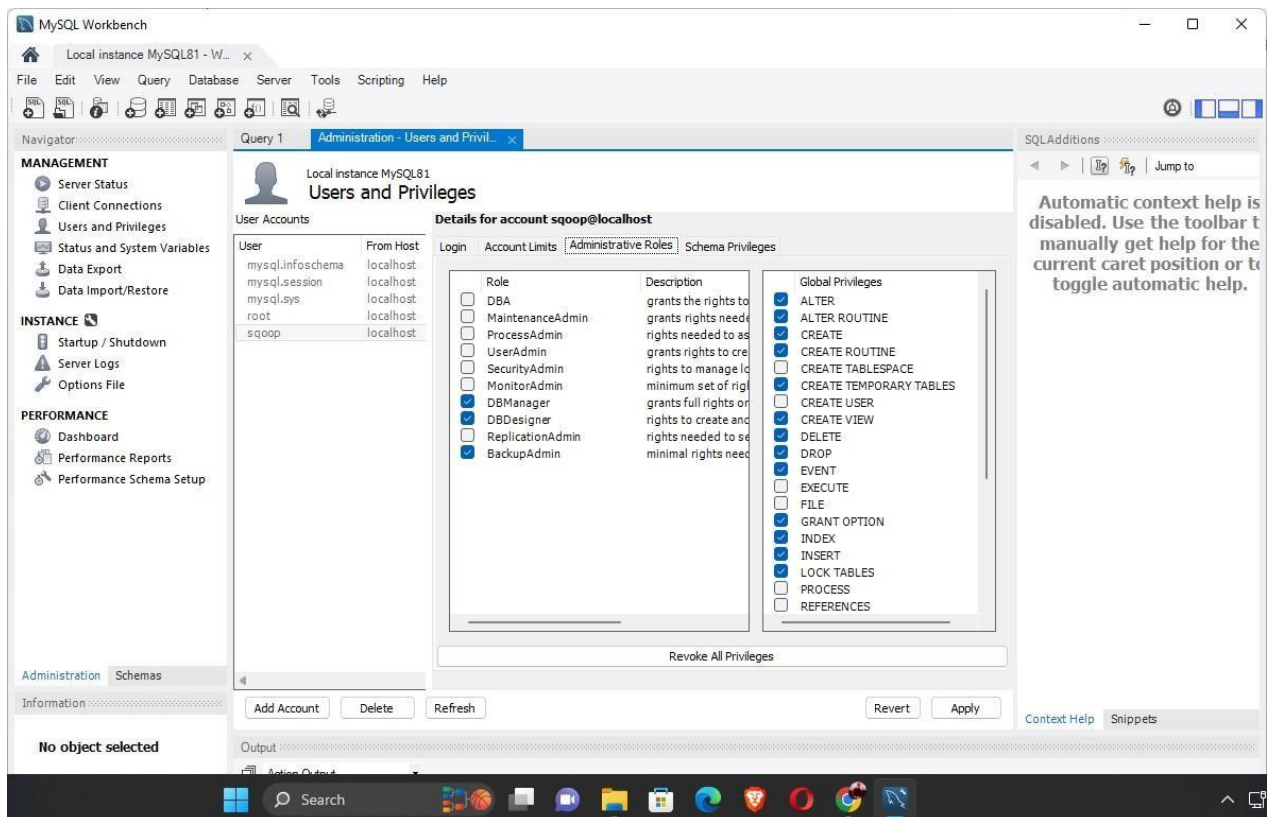
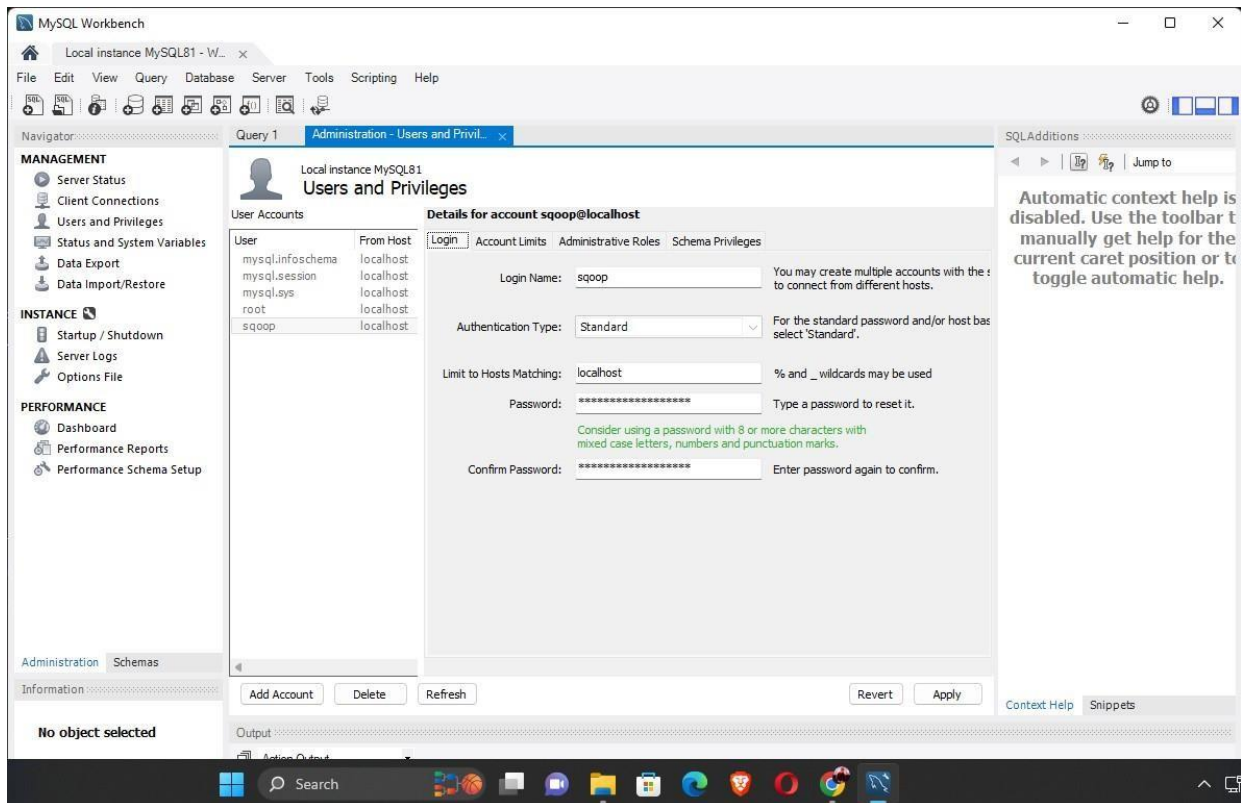
### OUTPUT:





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The screenshot shows the MySQL Workbench interface with the 'Administration - Users and Privileges' tab selected. The 'Users and Privileges' section is active, displaying details for the account 'sqoop@localhost'. The 'Schema Privileges' table shows the following:

Schema	Privileges
%_bigdata%	ALTER, ALTER ROUTINE, CREATE, CREATE ROUTINE, CREATE TEMPORARY TABLES, CREATE VIEW, DE

The 'Object Rights' section shows the following checked privileges:

- SELECT
- INSERT
- UPDATE
- DELETE
- EXECUTE
- SHOW VIEW

The 'DDL Rights' section shows the following checked privileges:

- CREATE
- ALTER
- REFERENCES
- INDEX
- CREATE VIEW
- CREATE ROUTINE
- ALTER ROUTINE
- EVENT
- DROP
- TRIGGER

The 'Other Rights' section shows the following checked privileges:

- GRANT OPTION
- CREATE TEMPORARY TABLES
- LOCK TABLES

The 'Output' section shows 'Action Output' with columns for #, Time, Action, Message, and Duration / Fetch.

The screenshot shows the MySQL Workbench interface with the 'Administration - Users and Privileges' tab selected. The 'Users and Privileges' section is active, displaying details for the account 'hive@localhost'. The 'Schema Privileges' table shows the following:

Schema	Privileges
%_bigdata%	ALTER, ALTER ROUTINE, CREATE, CREATE ROUTINE, CREATE TEMPORARY TABLES, CREATE VIEW, DE

The 'Object Rights' section shows the following checked privileges:

- SELECT
- INSERT
- UPDATE
- DELETE
- EXECUTE
- SHOW VIEW

The 'DDL Rights' section shows the following checked privileges:

- CREATE
- ALTER
- REFERENCES
- INDEX
- CREATE VIEW
- CREATE ROUTINE
- ALTER ROUTINE
- EVENT
- DROP
- TRIGGER

The 'Other Rights' section shows the following checked privileges:

- GRANT OPTION
- CREATE TEMPORARY TABLES
- LOCK TABLES

The 'Output' section shows 'Action Output' with columns for #, Time, Action, Message, and Duration / Fetch.





```
MySQL 8.1 Command Line Client
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.1.0 MySQL Community Server - GPL

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> grant all privileges on test_bigdata.* to 'sqoop'@'localhost';
Query OK, 0 rows affected (0.00 sec)

mysql> grant all privileges on test_bigdata.* to 'hive'@'localhost';
Query OK, 0 rows affected (0.00 sec)

mysql>
```

```
Command Prompt
Microsoft Windows [Version 10.0.22000.2295]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>echo %SQOOP_HOME%
C:\sqoop-1.4.7

C:\Users\admin>sqoop list-databases --connect jdbc:mysql://localhost/ --username sqoop -P
Warning: HBASE_HOME and HBASE_VERSION not set.
Warning: HCAT_HOME not set
Warning: HCATALOG_HOME does not exist HCatalog imports will fail.
Please set HCATALOG_HOME to the root of your HCatalog installation.
Warning: ACCUMULO_HOME not set.
Warning: ZOOKEEPER_HOME not set.
Warning: HBASE_HOME does not exist HBase imports will fail.
Please set HBASE_HOME to the root of your HBase installation.
Warning: ACCUMULO_HOME does not exist Accumulo imports will fail.
Please set ACCUMULO_HOME to the root of your Accumulo installation.
Warning: ZOOKEEPER_HOME does not exist Accumulo imports will fail.
Please set ZOOKEEPER_HOME to the root of your Zookeeper installation.
2023-09-13 04:22:22,757 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
Enter password:
2023-09-13 04:22:26,809 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
Loading class `com.mysql.jdbc.Driver'. This is deprecated. The new driver class is `com.mysql.cj.jdbc.Driver'. The drive
r is automatically registered via the SPI and manual loading of the driver class is generally unnecessary.
mysql
information_schema
performance_schema
sys
C:\Users\admin>
```



```
Command Prompt
No such sqoop tool: list. See 'sqoop help'.

C:\Users\admin>sqoop list-tables --connect jdbc:mysql://localhost/ --username sqoop -P
Warning: HBASE_HOME and HBASE_VERSION not set.
Warning: HCAT_HOME not set
Warning: HCATALOG_HOME does not exist HCatalog imports will fail.
Please set HCATALOG_HOME to the root of your HCatalog installation.
Warning: ACCUMULO_HOME not set.
Warning: ZOOKEEPER_HOME not set.
Warning: HBASE_HOME does not exist HBase imports will fail.
Please set HBASE_HOME to the root of your HBase installation.
Warning: ACCUMULO_HOME does not exist Accumulo imports will fail.
Please set ACCUMULO_HOME to the root of your Accumulo installation.
Warning: ZOOKEEPER_HOME does not exist Accumulo imports will fail.
Please set ZOOKEEPER_HOME to the root of your Zookeeper installation.
2023-09-13 04:25:49,023 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
Enter password:
2023-09-13 04:25:53,985 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
Loading class `com.mysql.jdbc.Driver'. This is deprecated. The new driver class is `com.mysql.cj.jdbc.Driver'. The drive
r is automatically registered via the SPI and manual loading of the driver class is generally unnecessary.

C:\Users\admin>
```

## CONCLUSION:

The experiment focused on Sqoop, a key element in Hadoop. It demonstrated Sqoop's ability to connect with databases, transfer data between Hadoop and relational databases, and perform data transformations. The exercise highlighted Sqoop's role in bridging the gap between Hadoop and relational databases, making it vital for organizations dealing with diverse data sources. Proficiency in Sqoop empowers data professionals to optimize data workflows for large-scale projects.