Name: Vedant Jolly

Roll No: 2019130026

Class: BE COMPS

Batch: A

EXPERIMENT NO. 6 SQOOP

AIM: Execute import and export commands on Sqoop.

Drive link (zipped file and jars uploaded here):
https://drive.google.com/drive/folders/1IQremNRzaTLuGmlkKBgs8cc2bXxCPa-4?usp=sharing

1. Download the zipped file of Sqoop and extract it somewhere else.
2. Delete the commons-lang3-3.4 jar from sqoop/lib.
3. Download the commons-lang-2.6 and mysql-connector-java-8.0.30 jar from the drive and copy them to your sqoop/lib folder.

Environment Variables:
SQOOP_HOME: C:\sqoop-1.4.7.bin__hadoop-2.6.0
User Variables and System Variables → Path: C:\sqoop-1.4.7.bin__hadoop-2.6.0\bin

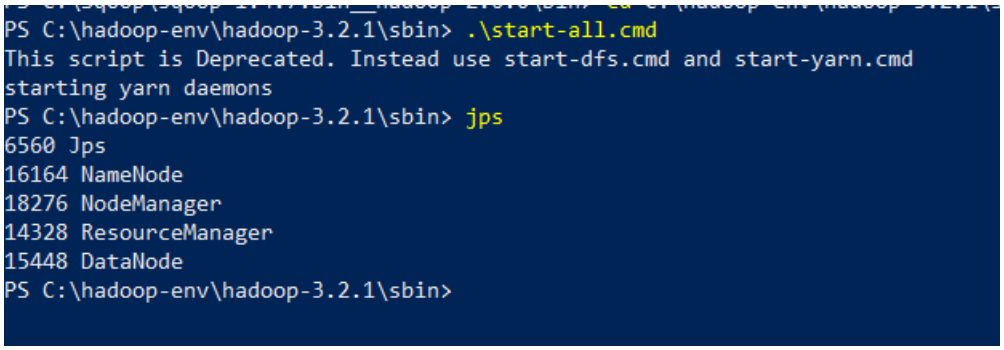
C:\sqoop-1.4.7.bin__hadoop-2.6.0\bin>sqoop version

Sqoop installation successful.

```
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> sqoop version
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.
2022-11-01 14:19:41,577 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
Sqoop 1.4.7
git commit id 2328971411f57f0cb683dfb79d19d4d19d185dd8
Compiled by maugli on Thu Dec 21 15:59:58 STD 2017
```

Starting the nodes and yarn:

PS C:\WINDOWS\system32> cd F:\Hadoop\hadoop-3.2.2\sbin
PS F:\Hadoop\hadoop-3.2.2\sbin> .\start-all.cmd
This script is Deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons
PS F:\Hadoop\hadoop-3.2.2\sbin> jps
20804 DataNode
22296 NameNode
14892 ResourceManager
16204 Jps
17020 NodeManager
PS F:\Hadoop\hadoop-3.2.2\sbin>



IMPORTING DATA FROM MySQL TO SQOOP:

C:\Users\Vedant>mysql -u root -p
Enter password: **********
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.21 MySQL Community Server - GPL

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

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.

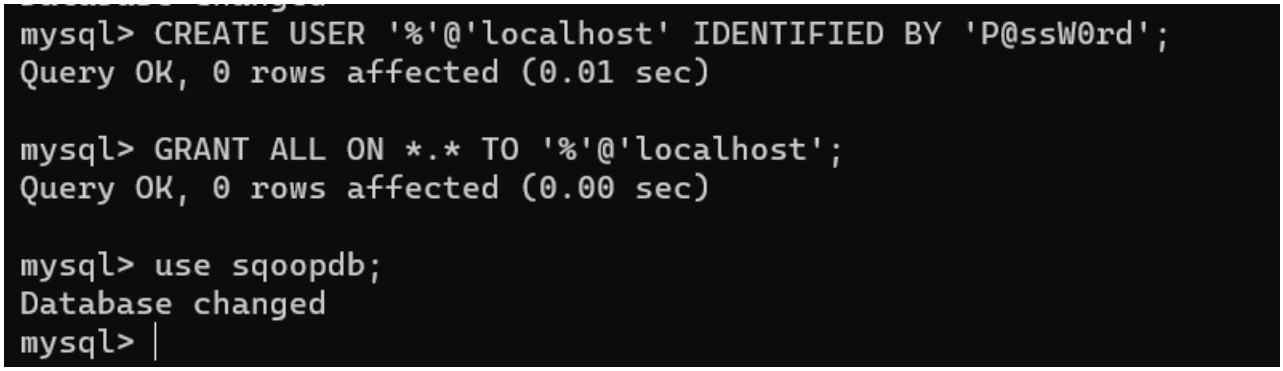
mysql> CREATE DATABASE sqoopdb;
Query OK, 1 row affected (1.58 sec)

```
C:\Users\vedan>mysql -u root -p
Enter password: *************
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 22
Server version: 8.0.31 MySQL Community Server - GPL

Copyright (c) 2000, 2022, 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> CREATE DATABASE sqoopdb;
Query OK, 1 row affected (0.01 sec)
```

mysql> use sqoopdb;
Database changed
mysql> CREATE USER '%'@'localhost' IDENTIFIED BY 'P@ssW0rd';
Query OK, 0 rows affected (0.16 sec)

mysql> GRANT ALL ON *.* TO '%'@'localhost';
Query OK, 0 rows affected (0.18 sec)

mysql> use sqoopdb;
Database changed



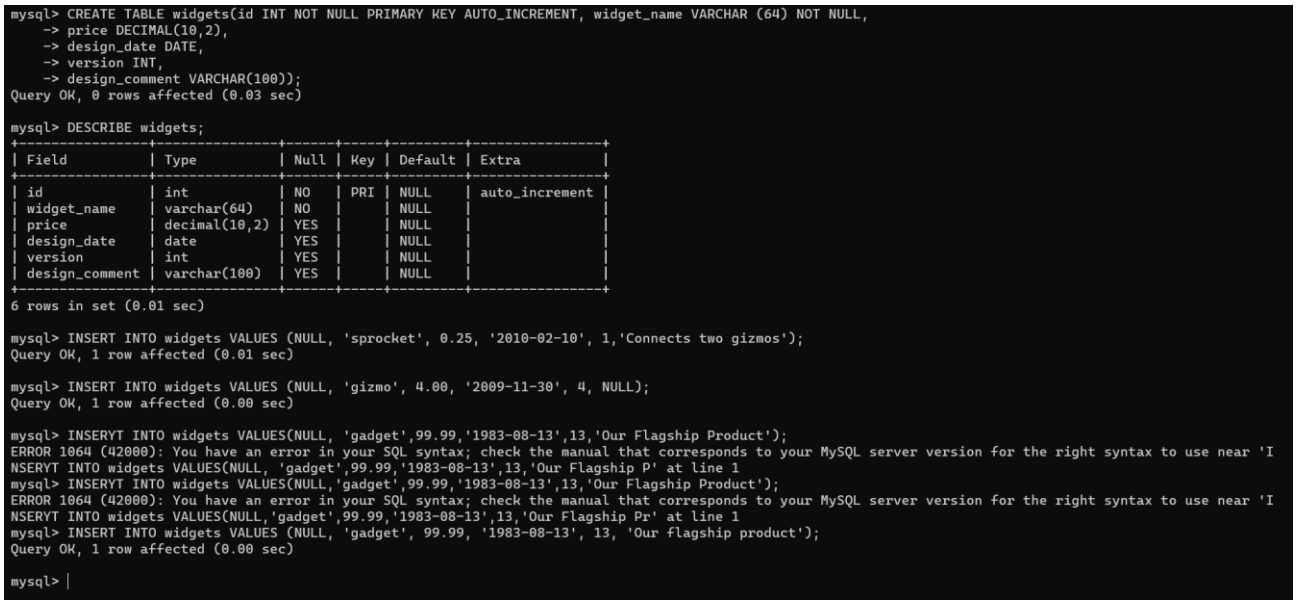

```
mysql> CREATE TABLE widgets(
    -> id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
    -> widget_name VARCHAR (64) NOT NULL,
    -> price DECIMAL(10,2),
    -> design_date DATE,
    -> version INT,
    -> design_comment VARCHAR(100));
Query OK, 0 rows affected (0.04 sec)

mysql> DESCRIBE widgets;
+---------------+--------------+------+-----+---------+----------------+
| Field         | Type         | Null | Key | Default | Extra          |
+---------------+--------------+------+-----+---------+----------------+
| id            | int          | NO   | PRI | NULL    | auto_increment |
| widget_name   | varchar(64)  | NO   |     | NULL    |                |
| price         | decimal(10,2)| YES  |     | NULL    |                |
| design_date   | date         | YES  |     | NULL    |                |
| version       | int          | YES  |     | NULL    |                |
| design_comment| varchar(100) | YES  |     | NULL    |                |
+---------------+--------------+------+-----+---------+----------------+
6 rows in set (0.01 sec)

mysql> INSERT INTO widgets VALUES (NULL, 'sprocket', 0.25, '2010-02-10', 1,'Connects two
gizmos');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO widgets VALUES (NULL, 'gizmo', 4.00, '2009-11-30', 4, NULL);
Query OK, 1 row affected (0.01 sec)
```

mysql> INSERT INTO widgets VALUES (NULL, 'gadget', 99.99, '1983-08-13', 13, 'Our flagship product');
Query OK, 1 row affected (0.01 sec)

mysql> select * from widgets;

```
+----+-------------+-------+-------------+---------+----------------------+
| id | widget_name | price | design_date | version | design_comment       |
+----+-------------+-------+-------------+---------+----------------------+
|  1 | sprocket    |  0.25 | 2010-02-10  |       1 | Connects two gizmos  |
|  2 | gizmo       |  4.00 | 2009-11-30  |       4 | NULL                 |
|  3 | gadget      | 99.99 | 1983-08-13  |      13 | Our flagship product |
+----+-------------+-------+-------------+---------+----------------------+
```

3 rows in set (0.00 sec)

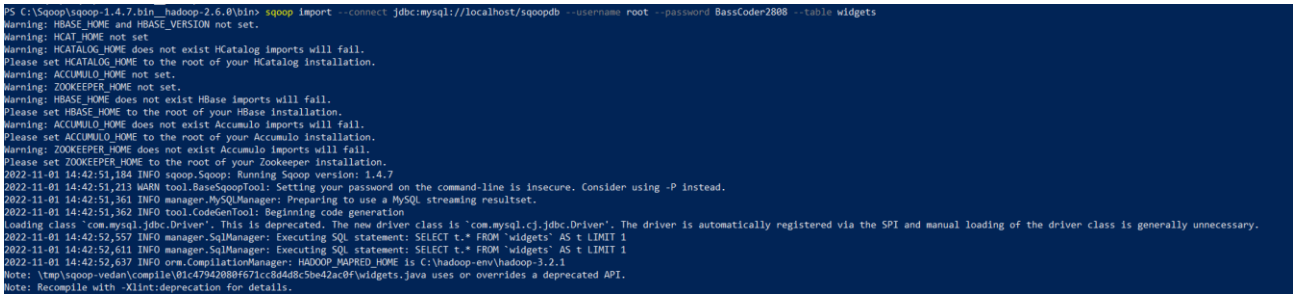


```
mysql> CREATE TABLE widgets(id INT NOT NULL PRIMARY KEY AUTO_INCREMENT, widget_name VARCHAR (64) NOT NULL,
    -> price DECIMAL(10,2),
    -> design_date DATE,
    -> version INT,
    -> design_comment VARCHAR(100));
Query OK, 0 rows affected (0.03 sec)

mysql> DESCRIBE widgets;
+---------------+---------------+------+-----+---------+----------------+
| Field         | Type          | Null | Key | Default | Extra          |
+---------------+---------------+------+-----+---------+----------------+
| id            | int           | NO   | PRI | NULL    | auto_increment |
| widget_name   | varchar(64)   | NO   |     | NULL    |                |
| price         | decimal(10,2) | YES  |     | NULL    |                |
| design_date   | date          | YES  |     | NULL    |                |
| version       | int           | YES  |     | NULL    |                |
| design_comment | varchar(100)  | YES  |     | NULL    |                |
+---------------+---------------+------+-----+---------+----------------+
6 rows in set (0.01 sec)

mysql> INSERT INTO widgets VALUES (NULL, 'sprocket', 0.25, '2010-02-10', 1,'Connects two gizmos');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO widgets VALUES (NULL, 'gizmo', 4.00, '2009-11-30', 4, NULL);
Query OK, 1 row affected (0.00 sec)

mysql> INSERYT INTO widgets VALUES(NULL, 'gadget',99.99,'1983-08-13',13,'Our Flagship Product');
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'I
NSERYT INTO widgets VALUES(NULL, 'gadget',99.99,'1983-08-13',13,'Our Flagship P' at line 1
mysql> INSERYT INTO widgets VALUES(NULL,'gadget',99.99,'1983-08-13',13,'Our Flagship Product');
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'I
NSERYT INTO widgets VALUES(NULL,'gadget',99.99,'1983-08-13',13,'Our Flagship Pr' at line 1
mysql> INSERT INTO widgets VALUES (NULL, 'gadget', 99.99, '1983-08-13', 13, 'Our flagship product');
Query OK, 1 row affected (0.00 sec)

mysql>
```

```
mysql> SELECT * FROM widgets;
+----+-------------+-------+-------------+---------+----------------------+
| id | widget_name | price | design_date | version | design_comment       |
+----+-------------+-------+-------------+---------+----------------------+
|  1 | sprocket    |  0.25 | 2010-02-10  |       1 | Connects two gizmos  |
|  2 | gizmo       |  4.00 | 2009-11-30  |       4 | NULL                 |
|  3 | gadget      | 99.99 | 1983-08-13  |      13 | Our flagship product |
+----+-------------+-------+-------------+---------+----------------------+
3 rows in set (0.00 sec)
```

Now importing this to SQOOP:

C:\sqoop-1.4.7.bin__hadoop-2.6.0\bin>sqoop import --connect jdbc:mysql://localhost/sqoopdb --username root --password YOURPASSWORD --table widgets



```
2022-11-01 14:43:21,542 INFO mapreduce.Job:  map 0% reduce 0%
2022-11-01 14:43:33,785 INFO mapreduce.Job:  map 33% reduce 0%
2022-11-01 14:43:34,796 INFO mapreduce.Job:  map 67% reduce 0%
2022-11-01 14:43:35,803 INFO mapreduce.Job:  map 100% reduce 0%
2022-11-01 14:43:35,818 INFO mapreduce.Job: Job job_1667292680785_0001 completed successfully
2022-11-01 14:43:35,949 INFO mapreduce.Job: Counters: 33
        File System Counters
                FILE: Number of bytes read=0
                FILE: Number of bytes written=705834
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=295
                HDFS: Number of bytes written=130
                HDFS: Number of read operations=18
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=6
                HDFS: Number of bytes read erasure-coded=0
        Job Counters
                Launched map tasks=3
                Other local map tasks=3
                Total time spent by all maps in occupied slots (ms)=29058
                Total time spent by all reduces in occupied slots (ms)=0
                Total time spent by all map tasks (ms)=29058
                Total vcore-milliseconds taken by all map tasks=29058
                Total megabyte-milliseconds taken by all map tasks=29755392
        Map-Reduce Framework
                Map input records=3
                Map output records=3
                Input split bytes=295
                Spilled Records=0
                Failed Shuffles=0
                Merged Map outputs=0
                GC time elapsed (ms)=204
                CPU time spent (ms)=9667
                Physical memory (bytes) snapshot=800608256
                Virtual memory (bytes) snapshot=1392447488
                Total committed heap usage (bytes)=599785472
                Peak Map Physical memory (bytes)=274993152
                Peak Map Virtual memory (bytes)=475439104
        File Input Format Counters
                Bytes Read=0
        File Output Format Counters
                Bytes Written=130
2022-11-01 14:43:35,956 INFO mapreduce.ImportJobBase: Transferred 130 bytes in 33.5412 seconds (3.8758 bytes/sec)
2022-11-01 14:43:35,961 INFO mapreduce.ImportJobBase: Retrieved 3 records.
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin>
```

Checking the data which is imported:

C:\sqoop-1.4.7.bin_hadoop-2.6.0\bin>hdfs dfs -cat widgets/*
Connects two gizmos,2010-02-10,1,0.25,1,sprocket
null,2009-11-30,2,4.00,4,gizmo
Our flagship product,1983-08-13,3,99.99,13,gadget

C:\sqoop-1.4.7.bin_hadoop-2.6.0\bin>hdfs dfs -ls widgets/
Found 4 items
-rw-r--r--   1 Vedant supergroup   0 2022-10-20 20:14 widgets/_SUCCESS
-rw-r--r--   1 Vedant supergroup   49 2022-10-20 20:14 widgets/part-m-00000
-rw-r--r--   1 Vedant supergroup   31 2022-10-20 20:14 widgets/part-m-00001
-rw-r--r--   1 Vedant supergroup   50 2022-10-20 20:14 widgets/part-m-00002

C:\sqoop-1.4.7.bin_hadoop-2.6.0\bin>hdfs dfs -cat widgets/part-m-00000
Connects two gizmos,2010-02-10,1,0.25,1,sprocket

C:\sqoop-1.4.7.bin_hadoop-2.6.0\bin>hdfs dfs -cat widgets/part-m-00001
null,2009-11-30,2,4.00,4,gizmo

C:\sqoop-1.4.7.bin_hadoop-2.6.0\bin>hdfs dfs -cat widgets/part-m-00002
Our flagship product,1983-08-13,3,99.99,13,gadget

```
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -cat widgets/*
2022-11-01 14:45:38,740 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
1,sprocket,0.25,2010-02-10,1,Connects two gizmos
2,gizmo,4.00,2009-11-30,4,null
3,gadget,99.99,1983-08-13,13,Our flagship product
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -ls widgets/
Found 4 items
-rw-r--r--   1 vedan supergroup          0 2022-11-01 14:43 widgets/_SUCCESS
-rw-r--r--   1 vedan supergroup         49 2022-11-01 14:43 widgets/part-m-00000
-rw-r--r--   1 vedan supergroup         31 2022-11-01 14:43 widgets/part-m-00001
-rw-r--r--   1 vedan supergroup         50 2022-11-01 14:43 widgets/part-m-00002
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -cat widgets/part-m-00000
2022-11-01 14:46:09,461 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
1,sprocket,0.25,2010-02-10,1,Connects two gizmos
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -cat widgets/part-m-00001
2022-11-01 14:46:23,056 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2,gizmo,4.00,2009-11-30,4,null
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -cat widgets/part-m-00002
2022-11-01 14:46:33,607 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
3,gadget,99.99,1983-08-13,13,Our flagship product
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin>
```

(You will now see a widgets.java file being created in your sqoop/bin folder.)

Import is successful.

EXPORTING DATA FROM SQOOP TO MySQL:

Create a random CSV file:

emp_data.csv

A	B	C	D	E
1201	gopal	manager	50000	TP
1202	manisha	preader	50000	TP
1203	kalil	dev	30000	AC
1204	prasanth	dev	30000	AC
1205	kranthi	admin	20000	TP

Now copy this CSV file to hdfs:

C:\Users\Vedant>hdfs dfs -mkdir /emp

C:\Users\Vedant>hdfs dfs -copyFromLocal
C:/Users/Vedant/Desktop/SEM7/BDA/emp_data.csv /emp

C:\Users\Vedant>hdfs dfs -cat /emp/emp_data.csv
1201,gopal,manager,50000,TP
1202,manisha,preader,50000,TP
1203,kalil,dev,30000,AC
1204,prasanth,dev,30000,AC
1205,kranthi,admin,20000,TP

```
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -copyFromLocal "C:\Users\vedan\OneDrive\Desktop\emp_data.csv" /emp
2022-11-01 14:51:52,645 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin> hdfs dfs -cat /emp/emp_data.csv
2022-11-01 14:52:33,099 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
1201    gopal   manager 50000   TP
1202    manisha prereader       50000   TP
1203    kalil   dev     30000   AC
1204    prasanth        dev     30000   AC
1205    kranthi admin   20000   TP
PS C:\Sqoop\sqoop-1.4.7.bin__hadoop-2.6.0\bin>
```

Create a table in MySQL:

(REMEMBER: The datatype of all attributes HAS to be VARCHAR)

```
mysql> CREATE TABLE employee (
    ->  id VARCHAR(20),
    ->  name VARCHAR(20),
    ->  deg VARCHAR(20),
    ->  salary VARCHAR(20),
    ->  dept VARCHAR(10));
Query OK, 0 rows affected (0.32 sec)

mysql> describe employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | varchar(20) | YES  |     | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| deg    | varchar(20) | YES  |     | NULL    |       |
| salary | varchar(20) | YES  |     | NULL    |       |
| dept   | varchar(10) | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
5 rows in set (0.06 sec)
```

```
mysql> CREATE TABLE employee (
    -> id VARCHAR(20),
    -> name VARCHAR(20),
    -> deg VARCHAR(20),
    -> salary VARCHAR(20),
    -> dept VARCHAR(10));
Query OK, 0 rows affected (0.02 sec)

mysql> describe employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | varchar(20) | YES  |     | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| deg    | varchar(20) | YES  |     | NULL    |       |
| salary | varchar(20) | YES  |     | NULL    |       |
| dept   | varchar(10) | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Exporting this data from SQOOP:

C:\sqoop-1.4.7.bin hadoop-2.6.0\bin>sqoop export --verbose --connect jdbc:mysql://localhost/sqoopdb --username root --password YOURPASSWORD --table employee --input-fields-terminated-by "," --input-lines-terminated-by "\n" --export-dir /emp

```
C:\sqoop-1.4.7.bin__hadoop-2.6.0\bin>sqoop export --verbose --connect jdbc:mysql://localhost/sqoopdb --username root --password Mj26060
1@M --table employee --input-fields-terminated-by "," --input-lines-terminated-by "\n" --export-dir /emp
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.
2022-10-20 22:02:08,112 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
2022-10-20 22:02:08,188 DEBUG tool.BaseSqoopTool: Enabled debug logging.
2022-10-20 22:02:08,189 WARN tool.BaseSqoopTool: Setting your password on the command-line is insecure. Consider using -P instead.
2022-10-20 22:02:08,330 DEBUG sqoop.ConnFactory: Loaded manager factory: org.apache.sqoop.manager.oracle.OraOopManagerFactory
2022-10-20 22:02:08,362 DEBUG sqoop.ConnFactory: Loaded manager factory: com.cloudera.sqoop.manager.DefaultManagerFactory
2022-10-20 22:02:08,363 DEBUG sqoop.ConnFactory: Trying ManagerFactory: org.apache.sqoop.manager.oracle.OraOopManagerFactory
2022-10-20 22:02:08,458 DEBUG oracle.OraOopManagerFactory: Data Connector for Oracle and Hadoop can be called by Sqoop!
2022-10-20 22:02:08,459 DEBUG sqoop.ConnFactory: Trying ManagerFactory: com.cloudera.sqoop.manager.DefaultManagerFactory
2022-10-20 22:02:08,466 DEBUG manager.DefaultManagerFactory: Trying with scheme: jdbc:mysql:
2022-10-20 22:02:08,520 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
2022-10-20 22:02:08,534 DEBUG sqoop.ConnFactory: Instantiated ConnManager org.apache.sqoop.manager.MySQLManager@4fcd19b3
2022-10-20 22:02:08,534 INFO tool.CodeGenTool: Beginning code generation
2022-10-20 22:02:08,554 DEBUG manager.SqlManager: Execute getColumnInfoRawQuery : SELECT t.* FROM `employee` AS t LIMIT 1
Loading class `com.mysql.jdbc.Driver'. This is deprecated. The new driver class is `com.mysql.cj.jdbc.Driver'. The driver is automatica
lly registered via the SPI and manual loading of the driver class is generally unnecessary.
2022-10-20 22:02:08,897 DEBUG manager.SqlManager: No connection paramenters specified. Using regular API for making connection.
2022-10-20 22:02:10,542 DEBUG manager.SqlManager: Using fetchSize for next query: 0
2022-10-20 22:02:10,543 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `employee` AS t LIMIT 1
2022-10-20 22:02:11,021 DEBUG manager.SqlManager: Found column id of type [12, 20, 0]
2022-10-20 22:02:11,022 DEBUG manager.SqlManager: Found column name of type [12, 20, 0]
2022-10-20 22:02:11,026 DEBUG manager.SqlManager: Found column deg of type [12, 20, 0]
```

```
2022-10-20 22:02:08,520 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
2022-10-20 22:02:08,534 DEBUG sqoop.ConnFactory: Instantiated ConnManager org.apache.sqoop.manager.MySQLManager@4fcd19b3
2022-10-20 22:02:08,534 INFO tool.CodeGenTool: Beginning code generation
2022-10-20 22:02:08,554 DEBUG manager.SqlManager: Execute getColumnInfoRawQuery : SELECT t.* FROM `employee` AS t LIMIT 1
Loading class `com.mysql.jdbc.Driver'. This is deprecated. The new driver class is `com.mysql.cj.jdbc.Driver'. The driver is automatica
lly registered via the SPI and manual loading of the driver class is generally unnecessary.
2022-10-20 22:02:08,897 DEBUG manager.SqlManager: No connection paramenters specified. Using regular API for making connection.
2022-10-20 22:02:10,542 DEBUG manager.SqlManager: Using fetchSize for next query: 0
2022-10-20 22:02:10,543 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `employee` AS t LIMIT 1
2022-10-20 22:02:11,021 DEBUG manager.SqlManager: Found column id of type [12, 20, 0]
2022-10-20 22:02:11,022 DEBUG manager.SqlManager: Found column name of type [12, 20, 0]
2022-10-20 22:02:11,026 DEBUG manager.SqlManager: Found column deg of type [12, 20, 0]
2022-10-20 22:02:11,027 DEBUG manager.SqlManager: Found column salary of type [12, 20, 0]
2022-10-20 22:02:11,032 DEBUG manager.SqlManager: Found column dept of type [12, 10, 0]
2022-10-20 22:02:11,082 DEBUG orm.ClassWriter: selected columns:
2022-10-20 22:02:11,083 DEBUG orm.ClassWriter:   deg
2022-10-20 22:02:11,087 DEBUG orm.ClassWriter:   dept
2022-10-20 22:02:11,091 DEBUG orm.ClassWriter:   id
2022-10-20 22:02:11,093 DEBUG orm.ClassWriter:   name
2022-10-20 22:02:11,095 DEBUG orm.ClassWriter:   salary
2022-10-20 22:02:11,137 DEBUG manager.SqlManager: Using fetchSize for next query: 0
2022-10-20 22:02:11,138 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `employee` AS t LIMIT 1
2022-10-20 22:02:11,146 DEBUG manager.SqlManager: Found column id of type VARCHAR
2022-10-20 22:02:11,147 DEBUG manager.SqlManager: Found column name of type VARCHAR
2022-10-20 22:02:11,149 DEBUG manager.SqlManager: Found column deg of type VARCHAR
2022-10-20 22:02:11,150 DEBUG manager.SqlManager: Found column salary of type VARCHAR
2022-10-20 22:02:11,151 DEBUG manager.SqlManager: Found column dept of type VARCHAR
2022-10-20 22:02:11,170 DEBUG orm.ClassWriter: Writing source file: \tmp\sqoop-Manvita\compile\675762f89e182e6a1f4b953af11d3352\employe
e.java
2022-10-20 22:02:11,171 DEBUG orm.ClassWriter: Table name: employee
2022-10-20 22:02:11,172 DEBUG orm.ClassWriter: Columns: deg:12, dept:12, id:12, name:12, salary:12,
2022-10-20 22:02:11,177 DEBUG orm.ClassWriter: sourceFilename is employee.java
2022-10-20 22:02:11,187 DEBUG orm.CompilationManager: Found existing \tmp\sqoop-Manvita\compile\675762f89e182e6a1f4b953af11d3352\
2022-10-20 22:02:11,188 INFO orm.CompilationManager: HADOOP_MAPRED_HOME is F:\Hadoop\hadoop-3.2.2
2022-10-20 22:02:16,760 DEBUG orm.CompilationManager: Returning jar file path F:\Hadoop\hadoop-3.2.2\share\hadoop\common\hadoop-common-
3.2.2-tests.jar;F:\Hadoop\hadoop-3.2.2\share\hadoop\common\hadoop-common-3.2.2.jar;F:\Hadoop\hadoop-3.2.2\share\hadoop\common\sources\h
```

```
2022-10-20 22:02:37,443 INFO mapreduce.Job: The url to track the job: http://LAPTOP-5DAULED7:8088/proxy/application_1666268885719_0008/

2022-10-20 22:02:37,445 INFO mapreduce.Job: Running job: job_1666268885719_0008
2022-10-20 22:02:59,644 INFO mapreduce.Job: Job job_1666268885719_0008 running in uber mode : false
2022-10-20 22:02:59,649 INFO mapreduce.Job:  map 0% reduce 0%
2022-10-20 22:03:22,401 INFO mapreduce.Job:  map 100% reduce 0%
2022-10-20 22:03:34,650 INFO mapreduce.Job: Job job_1666268885719_0008 completed successfully
2022-10-20 22:03:34,988 INFO mapreduce.Job: Counters: 33
        File System Counters
                FILE: Number of bytes read=0
                FILE: Number of bytes written=975452
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=923
                HDFS: Number of bytes written=0
                HDFS: Number of read operations=19
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=0
                HDFS: Number of bytes read erasure-coded=0
        Job Counters
                Launched map tasks=4
                Data-local map tasks=4
                Total time spent by all maps in occupied slots (ms)=78653
                Total time spent by all reduces in occupied slots (ms)=0
                Total time spent by all map tasks (ms)=78653
                Total vcore-milliseconds taken by all map tasks=78653
                Total megabyte-milliseconds taken by all map tasks=80540672
        Map-Reduce Framework
                Map input records=5
                Map output records=5
                Input split bytes=531
                Spilled Records=0
                Failed Shuffles=0
                Merged Map outputs=0
                GC time elapsed (ms)=731
```

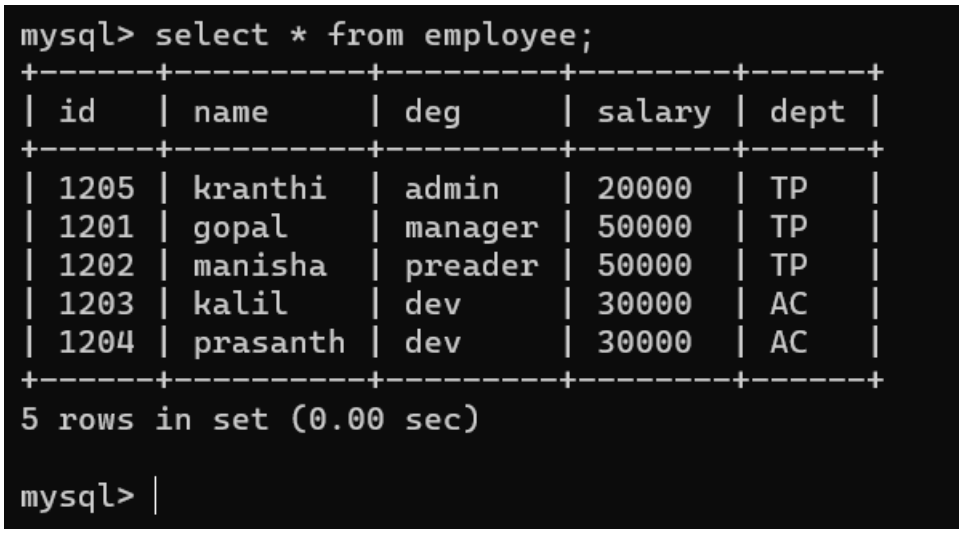
```
                HDFS: Number of write operations=0
                HDFS: Number of bytes read erasure-coded=0
        Job Counters
                Launched map tasks=4
                Data-local map tasks=4
                Total time spent by all maps in occupied slots (ms)=78653
                Total time spent by all reduces in occupied slots (ms)=0
                Total time spent by all map tasks (ms)=78653
                Total vcore-milliseconds taken by all map tasks=78653
                Total megabyte-milliseconds taken by all map tasks=80540672
        Map-Reduce Framework
                Map input records=5
                Map output records=5
                Input split bytes=531
                Spilled Records=0
                Failed Shuffles=0
                Merged Map outputs=0
                GC time elapsed (ms)=731
                CPU time spent (ms)=14634
                Physical memory (bytes) snapshot=858497024
                Virtual memory (bytes) snapshot=1355128832
                Total committed heap usage (bytes)=671612928
                Peak Map Physical memory (bytes)=228188160
                Peak Map Virtual memory (bytes)=353902592
        File Input Format Counters
                Bytes Read=0
        File Output Format Counters
                Bytes Written=0
2022-10-20 22:03:35,043 INFO mapreduce.ExportJobBase: Transferred 923 bytes in 73.112 seconds (12.6245 bytes/sec)
2022-10-20 22:03:35,054 INFO mapreduce.ExportJobBase: Exported 5 records.

C:\sqoop-1.4.7.bin__hadoop-2.6.0\bin>
```

Now we will check if the data is being exported to MySQL:

mysql> select * from employee;

```
+---------+-------+------+--------+----------+
| id      | name  | deg  | salary | dept     |
+---------+-------+------+--------+----------+
| admin   | 20000 | 1205 | TP     | kranthi  |
| manager | 50000 | 1201 | TP     | gopal    |
| dev     | 30000 | 1204 | AC     | prasanth |
| dev     | 30000 | 1203 | AC     | kalil    |
| preader | 50000 | 1202 | TP     | manisha  |
+---------+-------+------+--------+----------+
```

5 rows in set (0.00 sec)



Export is successful.

CONCLUSION: In this experiment I learnt how to use Sqoop to import data from DBMS to HDFS and export data from HDFS to DBMS.