#### Task 1

Use Sqoop tool to export data present in SQOOPOUT folder made while demo of Import table

Table imported with Import command is Person Table

HDFS Files where the table is imported is

Table was imported with 2 MR Jobs with command as below

sqoop import --connect jdbc:mysql://localhost/simplidb --table person -username root -P --target-dir /sqoopoutbyid -m 2 --split-by Person\_Id

```
18/03/31 05:01:27 INFO mapreduce.Job: Job job 15/2293135360_9016 completed successfully
18/03/31 05:01:28 INFO mapreduce.Job: Counters: 31
File System Counters
File: Number of bytes read-0
File: Number of bytes vritten=256014
File: Number of bytes vritten=256014
File: Number of large read operations=0
File: Number of large read operations=0
File: Number of large read operations=0
File: Number of bytes vritten=138
HDFS: Number of bytes vritten=138
HDFS: Number of bytes vritten=138
HDFS: Number of operations=8
HDFS: Number of read operations=8
HDFS: Number of read operations=0
HDFS: Number of vrite operations=4
Job Counters
Killed map tasks=1
Launched map tasks=2
Other local map tasks=2
Total time spent by all maps in occupied slots (ms)=53267
Total time spent by all map tasks (ms)=53267
Total vcore-milliseconds taken by all map tasks=54545408
Map-Reduce Framework
Map input records=4
Map output records=4
Map output records=4
Input split bytes=225
Spilled Records=0
Faled Shuffles=0
Merged Map output=0
Get time alapsed (ms)=764
DP time spent (ms)=6359
Polyed Shuffles=0
Merged Map output=6
Get time lapsed (ms)=764
DP time spent (ms)=6359
Polyed Shuffles=0
File Output Format Counters
Bytes Read-6
File Output Format Counters
Bytes Read-6
File Output Format Counters
Bytes Written=138
18/03/31 05:01:28 INFO mapreduce.ImportJobBase: Transferred 138 bytes in 57.9674 seconds (2.3806 bytes/sec)
18/03/31 05:01:28 INFO mapreduce.ImportJobBase: Retrieved 4 records.
```

```
| Taxing | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 1
```

## Output is

```
[acadgild@localhost ~]$ hadoop fs -cat /sqoopoutById/part-m-00000
18/03/31 05:19:04 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
1.Shyam,Ram,Patna,Bihar
2.Tanya,Priya,Whitefiled,Bangalore
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost -]$ hadoop fs -cat /sqoopoutById/part-m-00001
18/03/31 05:19:13 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
3.James,Brown,New York,United States
4.Jhon,Miller, Los Angeles ,United States
[acadgild@localhost ~]$ ■
```

Now we have export back this to sql.

#### Solution Approach

- Creating new Database 'Exported' in MySQL
- Export data from HDFS to MySQL

```
Last login: Sat Mar 31 05:15:18 2018 from 192.168.0.3

[acadgild@localhost ~]$ sudo service mysqld start

[sudo] password for acadgild:

Starting mysqld:

[acadgild@localhost ~]$ mysql -u root -p

Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 63

Server version: 8.0.3-rc-log MySQL Community Server (GPL)

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

mysql>
```

- Created database named as 'Exported'

- Set Database 'Exported' as Active Database and list all the tables under that database.

```
mysql> use Exported;
Database changed
mysql> show tables;
Empty set (0.01 sec)
mysql> ■
```

- Created new table named as person in database 'Exported'

No Records in Person Table

```
mysql> select * from Person;
Empty set (0.00 sec)
mysql>
```

- Command to export the data from HDFS to mysql sqoop export --connect jdbc:mysql://localhost/Exported --table Person --username root -P -export-dir /sqoopoutByld

```
[acadgild@localhost ~]$ sqoop export --connect jdbc:mysql://localhost/Exported --table Person --username root -P -export-dir /sqoopoutById Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../hcatalog does not exist! HCatalog jobs will fail. Please set $HCAT HOME to the root of your Hcatalog installation. Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail. Please set $ACCUMULO HOME to the root of your Accumulo installation. 18/03/31_05:29:19 INFO sqoop.Sqoop: Running Sqoop version: 1.4.6
        8/03/31 05:29:19 INFO sqoop.Sqoop: Running Sqoop Terison.
Her password:
8/03/31 05:29:24 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
8/03/31 05:29:24 INFO manager.MySQLManager: Preparing code generation
at Mar 31 05:29:24 INFO tool.CodeGenTool: Beginning code generation
at Mar 31 05:29:24 IST 2018 WARN: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5.45+, 5.6.26+ and 5.7
6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServer
ertificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certi
 .6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyserver Certificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certificate verification.

18/08/31 05:29:27 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/31 05:29:27 INFO orm.CompilationManager: HADOOP MAPRED HOME is /home/acadgild/install/hadoop/hadoop-2.6.5

Note: /tmp/sqoop-acadgild/compile/f404c23cfld/dd69b93909bef16b2a52/Person.java uses or overrides a deprecated API.

Note: Recompile with -Xlint:deprecation for details.

18/08/31 05:29:32 INFO orm.CompilationManager: Writing jar file: /tmp/sqoop-acadgild/compile/f404c23cfld/dd69b93909bef16b2a52/Person.jar

18/08/31 05:29:32 INFO manreduce.ExportJobBase: Beginning export of Person

SLF4J: Class path contains multiple SLF4J bindings.

SLF4J: Found binding in [jar:file:/home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class
SLF41: Found binding in [jar:file:/home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoglerBinder.class]
SLF41: Found binding in [jar:file:/home/acadgild/install/habase/habase-1.2.6/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF41: See http://www.slf4j.org/codes.htmt/multiple_bindings for an explanation.
SLF41: Actual binding is of type [org.slf4j.impl.log4jloggerFactory]
I8/08/31 05:29:33 MNF0 Configuration.deprecation: mapred.red.class and seprecated. Instead, use mapreduce.job.jar
I8/08/31 05:29:33 INF0 Configuration.deprecation: mapred.red.classks.speculative.execution is deprecated. Instead, use mapreduce.pob.jar
I8/08/31 05:29:36 INF0 Configuration.deprecation: mapred.map.tasks.speculative.execution is deprecated. Instead, use mapreduce.map.speculative
I8/08/31 05:29:36 INF0 Configuration.deprecation: mapred.map.tasks.speculative.execution is deprecated. Instead, use mapreduce.map.speculative
I8/08/31 05:29:36 INF0 Configuration.deprecation: mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps
I8/08/31 05:29:36 INF0 Cient.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
I8/08/31 05:29:36 INF0 input.FileInputFormat: Total input paths to process: 2
I8/08/31 05:29:40 INF0 input.FileInputFormat: Total input paths to process: 2
I8/08/31 05:29:40 INF0 input.FileInputFormat: Total input paths to process: 2
I8/08/31 05:29:40 INF0 mapreduce.JobSubmitter: number of splits:3
I8/08/31 05:29:40 INF0 mapreduce.JobSubmitter: number of splits:3
I8/08/31 05:29:40 INF0 mapreduce.JobSubmitter: Submitting tokens for job: job_1522393135360_0019
I8/08/31 05:29:42 INF0 mapreduce.Jobs: Infut the process is a special information deprecation: mapred.map.tasks.speculative.execution is deprecated. Instead, use mapreduce.map.speculative
I8/08/31 05:29:40 INF0 mapreduce.Jobs: Running job: job _1522393135360_0019
I8/08/31 05:29:42 INF0 mapreduce.Jobs: Running job: job _1522393135360_0019
I8/08/31 05:30:00 INF0 mapreduce
 18/03/31 05:30:00 TMED maproduce Job: map 0% reduce 0%
18/03/31 05:30:42 INFO mapreduce.Job: Counters: 30
File System Counters
FILE: Number of bytes read=0
FILE: Number of bytes written=383043
                                                                                                   FILE: Number of bytes written=383043
FILE: Number of read operations=0
FILE: Number of large read operations=0
HDFS: Number of write operations=0
HDFS: Number of bytes read=763
HDFS: Number of bytes written=0
HDFS: Number of read operations=18
HDFS: Number of large read operations=0
HDFS: Number of write operations=0
HDFS: Number of write operations=0
HDFS: Number of write operations=0
                                                   Job Counters
                                                                                                   nters
Launched map tasks=3
Data-local map tasks=3
Total time spent by all maps in occupied slots (ms)=112326
Total time spent by all reduces in occupied slots (ms)=0
Total time spent by all map tasks (ms)=112326
Total vcore-milliseconds taken by all map tasks=112326
Total megabyte-milliseconds taken by all map tasks=115021824
                                               Nap-Reduce Framework
Map input records=4
Map output records=4
Input split bytes=512
Spilled Records=0
Failed Shuffles=0
Merged Map outputs=0
GC time elapsed (ms)=1445
CPU time spent (ms)=8650
Physical memory (bytes) s
                                                                                                      Physical memory (bytes) snapshot=320831488
Virtual memory (bytes) snapshot=6183997440
Total committed heap usage (bytes)=97714176
                                                 File Input Format Counters
Bytes Read=0
File Output Format Counters
                                                                                                      Bytes Written=0
18/03/31 05:30:42 INFO mapreduce.ExportJobBase: Transferred 763 bytes in 66.5412 seconds (11.4666 bytes/sec)
18/03/31 05:30:42 INFO mapreduce.ExportJobBase: Exported 4 records.
     ou have new mail in /var/spool/mail/acadgild
acadgild@localhost ~]$
```

Validated if records are exported to mysql

```
mysql> select * from Person;
                                              city
 person id | lname | fname
                             area
             Shyam |
                     Ram
                              Patna
                                               Bihar
          2
                     Priya
                              Whitefiled
                                               Bangalore
             Tanya
                                              United States
             James
                      Brown
                              New York
             Jhon
                     Miller
                               Los Angeles
                                              United States
4 rows in set (0.00 sec)
mysql>
```

### Task2

Use Sqoop tool to export data present in SQOOPOUT folder made while demo of Import table with parameter person id =3.

# Command to Import

sqoop import --connect jdbc:mysql://localhost/simplidb --table person -- username root -P --target-dir /sqoopout where -m 1 —where person id = 3

```
| 18/98/31 | 66:841:54 | NWO mapreduce. Job: Numning job: job. 152293135360 | 6020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18/93/31 | 66:851:7 | TWO mapreduce. Job: mp | 69% reduce W |
| 18/93/31 | 66:851:7 | TWO mapreduce. Job: mp | 108% reduce W |
| 18/93/31 | 66:853:2 | TWO mapreduce. Job: mp | 108% reduce W |
| 18/93/31 | 66:853:2 | TWO mapreduce. Job: job | 152239313580 | 6020 completed successfully |
| 18/93/31 | 66:853:3 | TWO mapreduce. Job: job | 152239313580 | 6020 completed successfully |
| 18/93/31 | 66:853:3 | TWO mapreduce. Job: job | 152239313580 | 6020 completed successfully |
| 18/93/31 | 66:853:3 | TWO mapreduce. Job: job | 152239313580 | 6020 completed successfully |
| 18/93/31 | 66:853:3 | TWO mapreduce. Job: job | 152239313580 | 6020 completed successfully |
| 18/93/31 | 66:853:3 | TWO mapreduce. Job | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
```

```
[acadgild@localhost ~]$ hadoop fs -ls /sqoopout_where
18/03/31 06:08:37 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 2 items
-rw-r--r-- 1 acadgild supergroup 0 2018-03-31 06:05 /sqoopout_where/_SUCCESS
-rw-r--r-- 1 acadgild supergroup 37 2018-03-31 06:05 /sqoopout_where/part-m-00000
[acadgild@localhost ~]$ hadoop fs -cat /sqoopout_where/part-m-00000
18/03/31 06:08:54 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
3, James, Brown, New York,United States
[acadgild@localhost ~]$ ■
```

Created new table Person\_copy to export above value

```
mysql> Create table Person_Copy(
    -> person_id INT NOT NULL,
    -> lname varchar(20),
    -> area varchar(20),
    -> city varchar(20),
    -> PRIMARY KEY (person_id)
    -> );
Query OK, 0 rows affected (0.25 sec)

mysql> select * from Person_Cpoy;
ERROR 1146 (42S02): Table 'Exported.Person_Cpoy' doesn't exist
mysql> select * from Person_Copy;
Empty set (0.03 sec)
mysql> ■
```

#### Export Command -

sqoop export --connect jdbc:mysql://localhost/Exported --table Person\_Copy --username root -P - export-dir /sqoopout\_where

```
New did 100 learning to 15 sapps apport --connect jobs.nysql://hocalhos/Exported --table Person_Copy --username root -P -export-dir /sqoopout_where Memorany Discourses and Exported in Lapsony-Copy = 1.4.5 bits habstop 2.0.4-alpha/../hocallog does not exist! MCatalog jobs will fail.

Please set SMCA! MDME to the root of your McCatalog installation.

Naming:/ Mone/Acadajild/install/spoop/Spoop: Naming Sqoop versions: 1.4.6

Please set SACCUMILD HDME to the root of your Accumulo installation.

10/89/310 60:1133 IMF0 genops.Spoop: Naming Sqoop versions: 1.4.6

Inter password:

10/89/310 60:1133 IMF0 genops.Spoop: Naming Sqoop versions: 1.4.6

Inter password:

10/89/310 60:1133 IMF0 genops.Poop: Naming Sqoop versions: 1.4.6

Sat Nor 11 00:113 IMF0 genops.Poop: Naming Sqoop versions: 1.4.6

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```