

PROGRAM :

```
import java.util.Scanner;
import com.cloudera.sqoop.*;
import com.cloudera.sqoop.tool.*;

public class SqoopImpExp {
    private static SqoopOptions options;
    private static String DBURL = "jdbc:mysql://localhost:3306/";
    private static final String USERNAME = "root";
    private static final String PASSWORD = "123";
    private static final String IMPORT_DIR = "/home/abhi/sqoop/output/";           // will be
used in case of import
    private static final String EXPORT_FILE = "/home/abhi/sqoop/input/data";       // will be
used in case of export
    private static final int MAX = 100;
    public static void initialize(String db, String table){
        DBURL += db;
        options = new SqoopOptions(DBURL,table);
        options.setUsername(USERNAME);
        options.setPassword(PASSWORD);
        options.setFieldsTerminatedBy(',');
        options.setLinesTerminatedBy('\n');
    }
    // IMPORTING.. i.e mysql table to hdfs file
    public static void mysqlToHdfs(){

        System.out.println("----- IMPORT OPERATION -----");

        options.setTargetDir(IMPORT_DIR);

        @SuppressWarnings("deprecation")
        ImportTool it = new ImportTool();
        int retVal = it.run(options);

        if(retVal == 0){
            System.out.println("SUCCESSFULLY Imported...");
        }
        else{
            System.out.println("ERROR");
        }
    }
    // EXPORTING... i.e hdfs file to mysql table
    public static void hdfsToMysql(){
        /*Scanner s = new Scanner(System.in);
        String temp=null;
        String []buffer = new String[MAX];

        System.out.println("----- EXPORT OPERATION -----");
        System.out.println("\nEnter column names sequentially (enter quit once done...) : ");
        System.out.println("----- ");
```

```

int i;
for(i=0; i<MAX; ++i){
    System.out.print("Enter column name (" + i + ") : ");
    temp = s.next();
    if(temp.equalsIgnoreCase("quit"))
        break;
    buffer[i] = temp.toString();
}
String []columns = new String[i];
for(int j=0; j<i; ++j)
    columns[j] = buffer[j].toString();*/
String []columns = {"book_id", "book_title", "book_author"};

options.setExportDir(EXPORT_FILE);
options.setDbOutputColumns(columns);
options.setUpdateMode(SqoopOptions.UpdateMode.AllowInsert);

ExportTool it = new ExportTool();
int retVal = it.run(options);

if(retVal == 0){
    System.out.println("SUCCESSFULLY Exported...");
}
else{
    System.out.println("ERROR");
}
}
public static void main(String []args)
{
    String db, table;
    int choice;
    Scanner s = new Scanner(System.in);
    do{
        System.out.print("\nEnter name of the database : ");
        db = s.next();
        System.out.print("\nEnter name of the table : ");
        table = s.next();
        initialize(db, table);
        System.out.println("===== SQOOP =====");
        System.out.println("1. MySQL to HDFS [IMPORT]");
        System.out.println("2. HDFS to MySQL [EXPORT]");
        System.out.println("3. Exit");
        System.out.print("\nEnter choice : ");
        choice = s.nextInt();
        switch(choice){
            case 1 : mysqlToHdfs(); break;
            case 2 : hdfsToMysql(); break;
            case 3 : System.exit(0);

            default: System.out.println("Invalid choice... Please try again...");
        }
    }while(choice != 3); } }

```

OUTPUT:

Enter name of the database : eBooks

Enter name of the table : eBooks

===== SQOOP =====

1. MySQL to HDFS [IMPORT]

2. HDFS to MySQL [EXPORT]

3. Exit

Enter choice : 1

----- IMPORT OPERATION -----

15/09/30 18:16:57 WARN sqoop.ConnFactory: \$SQOOP_CONF_DIR has not been set in the environment. Cannot check for additional configuration.

15/09/30 18:16:57 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.

15/09/30 18:16:57 INFO tool.CodeGenTool: Beginning code generation

15/09/30 18:16:58 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `eBooks` AS t LIMIT 1

15/09/30 18:16:58 INFO orm.CompilationManager: \$HADOOP_MAPRED_HOME is not set

Note: /tmp/sqoop-aditya/compile/6328ebe7475c17042bf9e036f2f161e9/eBooks.java uses or overrides a deprecated API.

Note: Recompile with -Xlint:deprecation for details.

15/09/30 18:17:00 INFO orm.CompilationManager: Writing jar file: /tmp/sqoop-aditya/compile/6328ebe7475c17042bf9e036f2f161e9/eBooks.jar

15/09/30 18:17:06 INFO mapred.JobClient: map 0% reduce 0%

15/09/30 18:17:06 INFO mapred.JobClient: map 50% reduce 0%

15/09/30 18:17:09 INFO mapred.JobClient: map 66% reduce 0%

15/09/30 18:17:15 INFO mapred.JobClient: map 80% reduce 0%

15/09/30 18:17:17 INFO mapred.LocalJobRunner:

15/09/30 18:17:17 INFO mapred.Task: Task 'attempt_local_0001_m_000004_0' done.

15/09/30 18:17:18 INFO mapred.JobClient: map 100% reduce 0%

15/09/30 18:17:18 INFO mapred.JobClient: Job complete: job_local_0001

15/09/30 18:17:18 INFO mapred.JobClient: Counters: 12

15/09/30 18:17:18 INFO mapred.JobClient: File Output Format Counters

15/09/30 18:17:18 INFO mapred.JobClient: Bytes Written=353

15/09/30 18:17:18 INFO mapred.JobClient: FileSystemCounters

15/09/30 18:17:18 INFO mapred.JobClient: FILE_BYTES_READ=5098340

15/09/30 18:17:18 INFO mapred.JobClient: FILE_BYTES_WRITTEN=5312279

15/09/30 18:17:18 INFO mapred.JobClient: File Input Format Counters

15/09/30 18:17:18 INFO mapred.JobClient: Bytes Read=0

15/09/30 18:17:18 INFO mapred.JobClient: Map-Reduce Framework

15/09/30 18:17:18 INFO mapred.JobClient: Map input records=5

15/09/30 18:17:18 INFO mapred.JobClient: Physical memory (bytes) snapshot=0

15/09/30 18:17:18 INFO mapred.JobClient: Spilled Records=0

15/09/30 18:17:18 INFO mapred.JobClient: CPU time spent (ms)=0

15/09/30 18:17:18 INFO mapred.JobClient: Total committed heap usage

(bytes)=288358400

15/09/30 18:17:18 INFO mapred.JobClient: Virtual memory (bytes) snapshot=0

15/09/30 18:17:18 INFO mapred.JobClient: Map output records=5

15/09/30 18:17:18 INFO mapred.JobClient: SPLIT_RAW_BYTES=541

15/09/30 18:17:18 INFO mapreduce.ImportJobBase: Transferred 0 bytes in 17.7256 seconds (0 bytes/sec)

15/09/30 18:17:18 INFO mapreduce.ImportJobBase: Retrieved 5 records.

SUCCESSFULLY Imported...

|1,Android Application Development For Dummies,Donn Felker

2,Android Wireless Application Development,Lauren Darcey

3,professional Android 4 Application Development,Reto Meier

4,Assembly Language Step by Step - Programming with Linux,Jeff Duntemann

5,Computer System Architecture,M Morris Mano

Enter name of the database : eBooks

Enter name of the table : eBooks

===== SQOOP =====

1. MySQL to HDFS [IMPORT]
2. HDFS to MySQL [EXPORT]
3. Exit

Enter choice : 2

```
15/09/30 18:24:58 WARN sqoop.ConnFactory: $SQOOP_CONF_DIR has not been set in
the environment. Cannot check for additional configuration.
15/09/30 18:24:58 INFO manager.MySQLManager: Preparing to use a MySQL streaming
resultset.
15/09/30 18:24:58 INFO tool.CodeGenTool: Beginning code generation
15/09/30 18:25:00 INFO manager.SqlManager: Executing SQL statement: SELECT t.*
FROM `eBooks` AS t LIMIT 1
15/09/30 18:25:00 INFO manager.SqlManager: Executing SQL statement: SELECT t.*
FROM `eBooks` AS t LIMIT 1
15/09/30 18:25:00 INFO orm.CompilationManager: $HADOOP_MAPRED_HOME is not set
Note: /tmp/sqoop-aditya/compile/186899d5a6a7f4e00e739a3c724bcd92/eBooks.java
15/09/30 18:25:06 INFO mapred.JobClient: map 0% reduce 0%
15/09/30 18:25:09 INFO mapred.JobClient: map 100% reduce 0%
15/09/30 18:25:18 INFO mapred.JobClient: Job complete: job_local_0001
15/09/30 18:25:18 INFO mapred.JobClient: Counters: 12
15/09/30 18:25:18 INFO mapred.JobClient:   File Output Format Counters
15/09/30 18:25:18 INFO mapred.JobClient:     Bytes Written=0
15/09/30 18:25:18 INFO mapred.JobClient:   FileSystemCounters
15/09/30 18:25:19 INFO mapred.JobClient:     FILE_BYTES_READ=4084587
15/09/30 18:25:19 INFO mapred.JobClient:     FILE_BYTES_WRITTEN=4247408
15/09/30 18:25:19 INFO mapred.JobClient:   File Input Format Counters
15/09/30 18:25:19 INFO mapred.JobClient:     Bytes Read=0
15/09/30 18:25:19 INFO mapred.JobClient: Map-Reduce Framework
15/09/30 18:25:19 INFO mapred.JobClient:   Map input records=5
15/09/30 18:25:19 INFO mapred.JobClient:   Physical memory (bytes) snapshot=0
15/09/30 18:25:19 INFO mapred.JobClient:   Spilled Records=0
15/09/30 18:25:19 INFO mapred.JobClient:   CPU time spent (ms)=0
15/09/30 18:25:19 INFO mapred.JobClient:   Total committed heap usage
(bytes)=241172480
15/09/30 18:25:19 INFO mapred.JobClient:   Virtual memory (bytes) snapshot=0
15/09/30 18:25:19 INFO mapred.JobClient:   Map output records=5
15/09/30 18:25:19 INFO mapred.JobClient:   SPLIT_RAW_BYTES=511
15/09/30 18:25:19 INFO mapreduce.ExportJobBase: Transferred 0 bytes in 15.1269
seconds (0 bytes/sec)
15/09/30 18:25:19 INFO mapreduce.ExportJobBase: Exported 5 records.
SUCCESSFULLY Exported...
```

```
mysql> select * from eBooks;
```

book_id	book_title	book_author
1	Android Application Development For Dummies	Donn Felker
2	Android Wireless Application Development	Lauren Darcey
3	professional Android 4 Application Development	Reto Meier
4	Assembly Language Step by Step - Programming with Linux	Jeff Duntemann
5	Computer System Architecture	M Morris Mano

```
5 rows in set (0.00 sec)
```