PROJECT TASK-1

MIGRATING HISTORICAL DATA TABLE FROM MySQL TO HDFS

➢ Created a new database called bank,use database named bank and created new table bankdetails followed by inserted 10 records with different fields related to bank domain.
The table with inserted 10 records is displayed.
mysql> select * from bankdetails;

➢ Using SQOOP import data of table bankdetails with 10 records is migrated from MySQL to HDFS with the following command.
bin/sqoop import --connect jdbc:mysql://localhost/bank -username hiveuser -password Hive@123 --table bankdetails -m1
The 10 records are migrated to HDFS and cat command is used to view the imported data with the command
hadoop fs -cat bankdetails/part-r-00000

```
sobiya@sobiya:~$ hadoop fs -ls
Found 2 items
drwxr-xr-x   - sobiya supergroup          0 2022-02-19 23:37 bankdetails
drwxr-xr-x   - sobiya supergroup          0 2022-02-19 01:24 demo
sobiya@sobiya:~$ hadoop fs -ls bankdetails
Found 2 items
-rw-r--r--   3 sobiya supergroup          0 2022-02-19 23:37 bankdetails/_SUCCESS
-rw-r--r--   3 sobiya supergroup       1043 2022-02-19 23:37 bankdetails/part-m-00000
sobiya@sobiya:~$ hadoop fs -cat bankdetails/part-m-00000
AFC239076,Active,Savings,Chennai,Anna nagar,8976459087,101,Anjali,Female,HJU124,anjaliofficial@gmail.com
BNH987098,Active,Current,Chennai,Thiruvanmiyur,9045679812,102,Abhinay,Male,DFR987,abhinayofficial@gmail.com
MLP231290,Dormant,Savings,Coimbatore,Peelamedu,7823091287,103,Sneha,Female,VCS876,snehaofficial@gmail.com
MOP907610,Active,Savings,Trichy,Thillai nagar,9721901076,104,Balaji,Male,TVY543,Balajiofficial@gmail.com
LDX409854,Dormant,Current,Coimbatore,Ukkadam,8054901234,105,Akshay,Male,NST816,Akshayofficial@gmail.com
DCG902387,Active,Savings,Salem,Fort main,9600912817,106,Niroop,Male,KLP709,niroopofficial@gmail.com
NLE509820,Dormant,Current,Salem,Omalur,8710659265,107,Preetha,Female,CVR104,Preethaofficial@gmail.com
BKE408710,Active,Current,Tiruppur,Vellakovil,7012309834,108,Sobiya,Female,RKS901,Sobiyaofficial@gmail.com
TKR201950,Dormant,Savings,Erode,Perundurai,9712093476,109,Navya,Female,VWE401,Navyaofficial@gmail.com
NLY109539,Active,Current,Coimbatore,Perur,8109382910,110,Sidharth,Male,EXT601,Sidharthofficial@gmail.com
sobiya@sobiya:~$ 
```

PROJECT TASK-2

MIGRATING INCREMENTAL MODIFIED OF NEW RECORDS TO EXISTING DATA FROM MySQL INTO HDFS

➤ Adding new 3 records to the existing table bankdetails in MySQL.Below are the new 3 records inserted into MySQL.

111|Keerthi|Female|8103581901|Tiruppur|Keerthiofficial@gmail.com|MLO291740|Current|Vellakovil|CZS761|Active
112|Gayathri|Female|9103581933|Tiruppur|Gayathriofficial@gmail.com|TSD230912|Savings|Kangeyam|AZX876|Dormant
113|Malavika|Female|9912092387|Chennai|Malavikaofficial@gmail.com|XEM103876|Savings|Porur|CLP761|Active

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➤ Altering the table bankdetails by adding new column ts (for time stamp) and automatic update of the timestamp whenever new record is inserted with the following command.

alter table bankdetails add ts timestamp default current_timestamp on update current_timestamp;

➤ Using SQOOP importing the last modified(delta) records ie., newly added 3 records to HDFS with the following command.

bin/sqoop import --connect jdbc:mysql://localhost/bank -username hiveuser -password Hive@123 --table bankdetails --incremental lastmodified -check-column ts -m1 --merge-key customer_id

➢ After importing from MySQL to HDFS the imported data with newly added 3 records.

hadoop fs -cat bankdetails/part-r-00000

The following screenshot displays the incremented data to the existing data in HDFS along with the timestamp.

```
sobiya@sobiya:~/hadoop-2.9.0$ hadoop fs -ls
Found 3 items
drwxr-xr-x   - sobiya supergroup          0 2022-02-21 16:56 _sqoop
drwxr-xr-x   - sobiya supergroup          0 2022-02-21 16:56 bankdetails
drwxr-xr-x   - sobiya supergroup          0 2022-02-19 01:24 demo
sobiya@sobiya:~/hadoop-2.9.0$ hadoop fs -ls bankdetails
Found 2 items
-rw-r--r--   3 sobiya supergroup          0 2022-02-21 16:56 bankdetails/_SUCCESS
-rw-r--r--   3 sobiya supergroup       1650 2022-02-21 16:56 bankdetails/part-r-00000
sobiya@sobiya:~/hadoop-2.9.0$ hadoop fs -cat bankdetails/part-r-00000
AFC239076,Active,Savings,Chennai,Anna nagar,8976459087,101,Anjali,Female,HJU124,anjaliofficial@gmail.com,2022-02-21 15:18:30.0
BNH987098,Active,Current,Chennai,Thiruvanmiyur,9045679812,102,Abhinay,Male,DFR987,abhinayofficial@gmail.com,2022-02-21 15:18:30.0
MLP231290,Dormant,Savings,Coimbatore,Peelamedu,7823091287,103,Sneha,Female,VCS876,snehaofficial@gmail.com,2022-02-21 15:18:30.0
MOP907610,Active,Savings,Trichy,Thillai nagar,9721901076,104,Balaji,Male,TVY543,Balajiofficial@gmail.com,2022-02-21 15:18:30.0
LDX409854,Dormant,Current,Coimbatore,Ukkadam,8054901234,105,Akshay,Male,NST816,Akshayofficial@gmail.com,2022-02-21 15:18:30.0
DCG902387,Active,Savings,Salem,Fort main,9600912817,106,Niroop,Male,KLP709,niroopofficial@gmail.com,2022-02-21 15:18:30.0
NLE509820,Dormant,Current,Salem,Omalur,8710659265,107,Preetha,Female,CVR104,Preethaofficial@gmail.com,2022-02-21 15:18:30.0
BKE408710,Active,Current,Tiruppur,Vellakovil,7012309834,108,Sobiya,Female,RKS901,Sobiyaofficial@gmail.com,2022-02-21 15:18:30.0
TKR201950,Dormant,Savings,Erode,Perundurai,9712093476,109,Navya,Female,VWE401,Navyaofficial@gmail.com,2022-02-21 15:18:30.0
NLY109539,Active,Current,Coimbatore,Perur,8109382910,110,Sidharth,Male,EXT601,Sidharthofficial@gmail.com,2022-02-21 15:18:30.0
MLO291740,Active,Current,Tiruppur,Vellakovil,8103581901,111,Keerthi,Female,CZS761,Keerthiofficial@gmail.com,2022-02-21 15:24:37.0
TSD230912,Dormant,Savings,Tiruppur,Kangeyam,9103581933,112,Gayathri,Female,AZX876,Gayathriofficial@gmail.com,2022-02-21 16:44:28.0
XEM103876,Active,Savings,Chennai,Porur,9912092387,113,Malavika,Female,CLP761,Malavikaofficial@gmail.com,2022-02-21 16:50:44.0
sobiya@sobiya:~/hadoop-2.9.0$
```