Loading Historical Transactions Data into NoSQL Database

Commands to load the past transactions data into NoSQL database

Note:

I am following an approach to read all card history transaction data by using Spark. Hence as confirmed by instructor in Mid Submission Session I am proceeding with pyspark approach.

Still, for submission, I coded a program in .py to load CSV to hbase and create a table card_tramsaction.

This below code is going to load all CSV into NoSQL in batch mode.

```
import happybase
#create connection
connection = happybase.Connection('localhost', port=9090 ,autoconnect=False)
#open connection to perform operations
def open_connection():
        connection.open()
#close the opened connection
def close_connection():
connection.close()
#list all tables in Hbase
def list_tables():
 print "fetching all table"
 open_connection()
 tables = connection.tables()
 close_connection()
 print "all tables fetched"
 return tables

#create the required table
def create_table(name,cf):
 print "creating table " + name
 tables = list_tables()
 if name not in tables:
  open_connection()
  connection.create_table(name, cf)
  close_connection()
  print "table created"
```

```
 else:
  print "table already present"
#get the pointer to a table
def get_table(name):
open_connection()
 table = connection.table(name)
 close_connection()
 return table
#batch insert data in events table
def batch_insert_data(filename,tableName):
 print "starting batch insert of events"
 file = open(filename, "r")
 table = get_table(tableName)
 open_connection()
 i=0
 for line in file:

  temp = line.strip().split(",")
  #Skip the first row
  if temp[0]!='card_id':
    table.put(bytes(i) , { 'info:card_id':bytes(temp[0]),
                                                    'info:member_id':bytes(temp[1]),
                                                    'info:amount':bytes(temp[2]),
                                                    'info:postcode':bytes(temp[3]),
                                                    'info:pos_id':bytes(temp[4]),
                                                    'info:transaction_dt':bytes(temp[5]),
                                                    'info:status':bytes(temp[6])})
  i=i+1

 file.close()

 print "batch insert done"
 close_connection()
# Batch insert data of card_transactions.csv file.
create_table('card_transactions', {'info' : dict(max_versions=5) })
batch_insert_data('card_transactions.csv','card_transactions')
```

<Command to list the table in which the data is loaded and the command to get the count of the rows of the table>

1) Login to Putty and enter as root user.
2) Run thrift server
3) Give Hbase Shell and press enter.
4) Give “list” to see all tables in hbase

```
hbase(main):001:0> list
TABLE
card_transactions
employee
look_up_table
3 row(s) in 0.1970 seconds

=> ["card_transactions", "employee", "look_up_table"]
hbase(main):002:0>
```

5) Give “ count ‘card_transactions’ “ in command line.

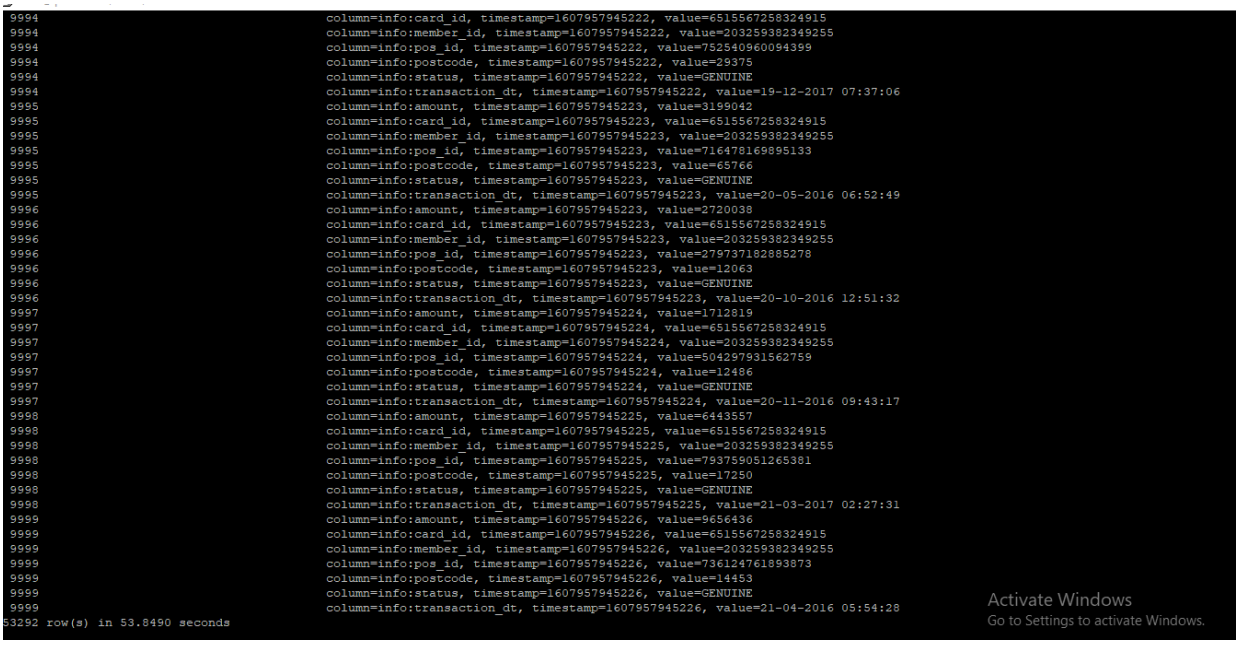
```
=> ["card_transactions", "employee", "look_up_table"]
hbase(main):002:0> count 'card_transactions'
Current count: 1000, row: 10898
```

```
Current count: 53000, row: 9735
53292 row(s) in 4.1730 seconds
```

Screenshot of the table created

1) Scan ‘card_transactions’

```
9736  column=info:pos_id, timestamp=1607957944969, value=546062979209182
9736  column=info:postcode, timestamp=1607957944969, value=95991
9736  column=info:status, timestamp=1607957944969, value=GENUINE
9736  column=info:transaction_dt, timestamp=1607957944969, value=03-01-2018 12:46:58
9737  column=info:amount, timestamp=1607957944972, value=816027
9737  column=info:card_id, timestamp=1607957944972, value=6011706374151856
9737  column=info:member_id, timestamp=1607957944972, value=199243620982420
9737  column=info:pos_id, timestamp=1607957944972, value=546062979209182
9737  column=info:postcode, timestamp=1607957944972, value=95991
9737  column=info:status, timestamp=1607957944972, value=GENUINE
9737  column=info:transaction_dt, timestamp=1607957944972, value=03-01-2018 23:18:59
9738  column=info:amount, timestamp=1607957944973, value=4042654
9738  column=info:card_id, timestamp=1607957944973, value=6011706374151856
9738  column=info:member_id, timestamp=1607957944973, value=199243620982420
9738  column=info:pos_id, timestamp=1607957944973, value=599304777798828
9738  column=info:postcode, timestamp=1607957944973, value=96727
9738  column=info:status, timestamp=1607957944973, value=GENUINE
9738  column=info:transaction_dt, timestamp=1607957944973, value=03-12-2017 08:53:52
9739  column=info:amount, timestamp=1607957944974, value=4034933
9739  column=info:card_id, timestamp=1607957944974, value=6011706374151856
9739  column=info:member_id, timestamp=1607957944974, value=199243620982420
9739  column=info:pos_id, timestamp=1607957944974, value=068029537978614
9739  column=info:postcode, timestamp=1607957944974, value=14511
9739  column=info:status, timestamp=1607957944974, value=GENUINE
9739  column=info:transaction_dt, timestamp=1607957944974, value=05-11-2017 10:15:33
974   column=info:amount, timestamp=1607957932834, value=5093161
974   column=info:card_id, timestamp=1607957932834, value=4380357644954006
974   column=info:member_id, timestamp=1607957932834, value=012871894714576
974   column=info:pos_id, timestamp=1607957932834, value=114439686882626
974   column=info:postcode, timestamp=1607957932834, value=10919
974   column=info:status, timestamp=1607957932834, value=GENUINE
974   column=info:transaction_dt, timestamp=1607957932834, value=05-10-2017 01:06:28
9740  column=info:amount, timestamp=1607957944975, value=3173523
9740  column=info:card_id, timestamp=1607957944975, value=6011706374151856
9740  column=info:member_id, timestamp=1607957944975, value=199243620982420
9740  column=info:pos_id, timestamp=1607957944975, value=771819356785069
9740  column=info:postcode, timestamp=1607957944975, value=72143
9740  column=info:status, timestamp=1607957944975, value=GENUINE
9740  column=info:transaction_dt, timestamp=1607957944975, value=05-12-2017 15:19:17
9741  column=info:amount, timestamp=1607957944976, value=2070998
9741  column=info:card_id, timestamp=1607957944976, value=6011706374151856
9741  column=info:member_id, timestamp=1607957944976, value=199243620982420
9741  column=info:pos_id, timestamp=1607957944976, value=771819356785069
9741  column=info:postcode, timestamp=1607957944976, value=72143
```


9994 column=info:card_id, timestamp=1607957945222, value=6515567258324915
9994 column=info:member_id, timestamp=1607957945222, value=203259382349255
9994 column=info:pos_id, timestamp=1607957945222, value=752540960094399
9994 column=info:postcode, timestamp=1607957945222, value=29375
9994 column=info:status, timestamp=1607957945222, value=GENUINE
9994 column=info:transaction_dt, timestamp=1607957945222, value=19-12-2017 07:37:06
9995 column=info:amount, timestamp=1607957945223, value=3199042
9995 column=info:card_id, timestamp=1607957945223, value=6515567258324915
9995 column=info:member_id, timestamp=1607957945223, value=203259382349255
9995 column=info:pos_id, timestamp=1607957945223, value=716478169895133
9995 column=info:postcode, timestamp=1607957945223, value=65766
9995 column=info:status, timestamp=1607957945223, value=GENUINE
9995 column=info:transaction_dt, timestamp=1607957945223, value=20-05-2016 06:52:49
9996 column=info:amount, timestamp=1607957945223, value=2720038
9996 column=info:card_id, timestamp=1607957945223, value=6515567258324915
9996 column=info:member_id, timestamp=1607957945223, value=203259382349255
9996 column=info:pos_id, timestamp=1607957945223, value=279737182885278
9996 column=info:postcode, timestamp=1607957945223, value=12063
9996 column=info:status, timestamp=1607957945223, value=GENUINE
9996 column=info:transaction_dt, timestamp=1607957945223, value=20-10-2016 12:51:32
9997 column=info:amount, timestamp=1607957945224, value=1712819
9997 column=info:card_id, timestamp=1607957945224, value=6515567258324915
9997 column=info:member_id, timestamp=1607957945224, value=203259382349255
9997 column=info:pos_id, timestamp=1607957945224, value=504297931562759
9997 column=info:postcode, timestamp=1607957945224, value=12486
9997 column=info:status, timestamp=1607957945224, value=GENUINE
9997 column=info:transaction_dt, timestamp=1607957945224, value=20-11-2016 09:43:17
9998 column=info:amount, timestamp=1607957945225, value=6443557
9998 column=info:card_id, timestamp=1607957945225, value=6515567258324915
9998 column=info:member_id, timestamp=1607957945225, value=203259382349255
9998 column=info:pos_id, timestamp=1607957945225, value=793759051265381
9998 column=info:postcode, timestamp=1607957945225, value=17250
9998 column=info:status, timestamp=1607957945225, value=GENUINE
9998 column=info:transaction_dt, timestamp=1607957945225, value=21-03-2017 02:27:31
9999 column=info:amount, timestamp=1607957945226, value=9656436
9999 column=info:card_id, timestamp=1607957945226, value=6515567258324915
9999 column=info:member_id, timestamp=1607957945226, value=203259382349255
9999 column=info:pos_id, timestamp=1607957945226, value=736124761893873
9999 column=info:postcode, timestamp=1607957945226, value=14453
9999 column=info:status, timestamp=1607957945226, value=GENUINE
9999 column=info:transaction_dt, timestamp=1607957945226, value=21-04-2016 05:54:28
53292 row(s) in 53.8490 seconds
Activate Windows
Go to Settings to activate Windows.