

## Loading the Lookup Table

### Commands to load the relevant data in the Lookup Table

<Commands to perform the loading of data in the lookup table>

```
CREATE TABLE IF NOT EXISTS ranked_card_transactions_orc
(
    `card_id`          STRING,
    `amount`           DOUBLE,
    `postcode`         STRING,
    `transaction_dt`   TIMESTAMP,
    `rank`             INT
) stored AS orc tblproperties ("orc.compress"="SNAPPY");
```

```
CREATE TABLE IF NOT EXISTS card_ucl_orc
(
    `card_id` STRING,
    `ucl`     DOUBLE
) stored AS orc tblproperties ("orc.compress"="SNAPPY");
```

```
INSERT overwrite TABLE ranked_card_transactions_orc
SELECT b.card_id,
       b.amount,
       b.postcode,
       b.transaction_dt,
       b.rank
FROM   (
        SELECT a.card_id,
               a.amount,
               a.postcode,
               a.transaction_dt,
               rank() OVER(partition BY a.card_id ORDER BY a.transaction_dt DESC, amount DESC) AS rank
        FROM   (
                SELECT card_id,
                       amount,
                       postcode,
                       transaction_dt
                FROM   card_transactions_hbase
                WHERE  status = 'GENUINE') a ) b
WHERE  b.rank <= 10;
```

```
INSERT overwrite TABLE card_ucl_orc
SELECT a.card_id,
      (a.average + (3 * a.standard_deviation)) AS ucl
FROM (
      SELECT card_id,
             avg(amount) AS average,
             stddev(amount) AS standard_deviation
      FROM ranked_card_transactions_orc
      GROUP BY card_id) a;
```

```
INSERT overwrite TABLE lookup_data_hbase
SELECT rcto.card_id,
      cuo.ucl,
      cms.score,
      rcto.postcode,
      rcto.transaction_dt
FROM ranked_card_transactions_orc rcto
JOIN card_ucl_orc cuo
ON cuo.card_id = rcto.card_id
JOIN (
      SELECT DISTINCT card.card_id,
                      score.score
      FROM card_member_orc card
      JOIN member_score_orc score
      ON card.member_id = score.member_id) AS c
ms
ON rcto.card_id = cms.card_id
WHERE rcto.rank = 1;
```

**<Command to see the table created and it's content>**

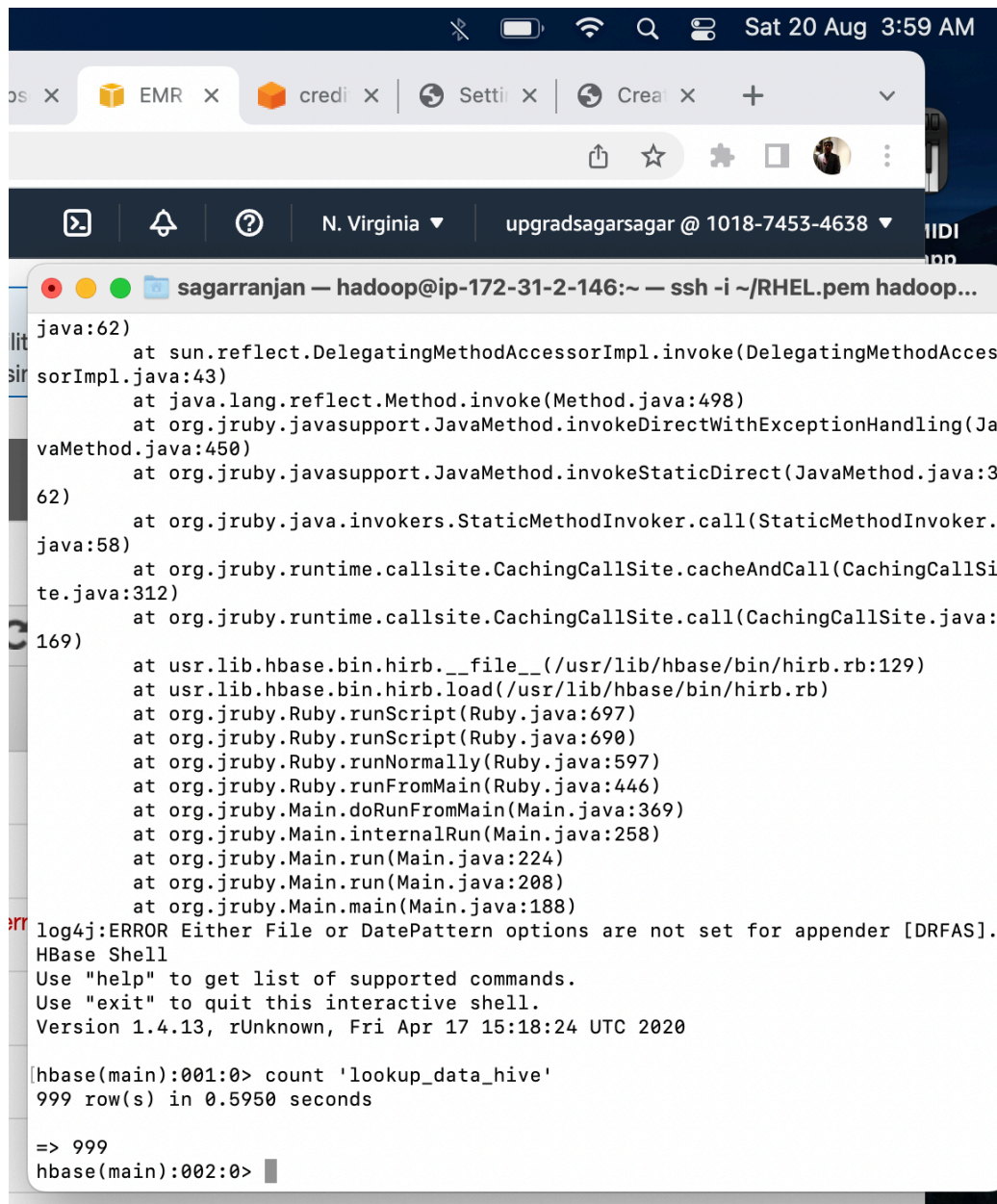
**<Command>**

```
SELECT Count(*) FROM lookup_data_hbase;

SELECT * FROM lookup_data_hbase LIMIT 10;
```

## Screenshot of the created table

<Screenshot of the table created>



```
sagarranjan — hadoop@ip-172-31-2-146:~ — ssh -i ~/RHEL.pem hadoop...
java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAcces
sorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:498)
    at org.jruby.javasupport.JavaMethod.invokeDirectWithExceptionHandling(Ja
vaMethod.java:450)
    at org.jruby.javasupport.JavaMethod.invokeStaticDirect(JavaMethod.java:3
62)
    at org.jruby.java.invokers.StaticMethodInvoker.call(StaticMethodInvoker.
java:58)
    at org.jruby.runtime.callsite.CachingCallSite.cacheAndCall(CachingCallSi
te.java:312)
    at org.jruby.runtime.callsite.CachingCallSite.call(CachingCallSite.java:
169)
    at usr.lib.hbase.bin.hirb.__file__(/usr/lib/hbase/bin/hirb.rb:129)
    at usr.lib.hbase.bin.hirb.load(/usr/lib/hbase/bin/hirb.rb)
    at org.jruby.Ruby.runScript(Ruby.java:697)
    at org.jruby.Ruby.runScript(Ruby.java:690)
    at org.jruby.Ruby.runNormally(Ruby.java:597)
    at org.jruby.Ruby.runFromMain(Ruby.java:446)
    at org.jruby.Main.doRunFromMain(Main.java:369)
    at org.jruby.Main.internalRun(Main.java:258)
    at org.jruby.Main.run(Main.java:224)
    at org.jruby.Main.run(Main.java:208)
    at org.jruby.Main.main(Main.java:188)
log4j:ERROR Either File or DatePattern options are not set for appender [DRFAS].
HBase Shell
Use "help" to get list of supported commands.
Use "exit" to quit this interactive shell.
Version 1.4.13, rUnknown, Fri Apr 17 15:18:24 UTC 2020

[hbase(main):001:0> count 'lookup_data_hive'
999 row(s) in 0.5950 seconds

=> 999
[hbase(main):002:0>
```

```

Sat 20 Aug 4:00 AM
EMR x credi x Setti x Crea x +
N. Virginia upgradsagarsagar @ 1018-7453-4638
sagarranjan — hadoop@ip-172-31-2-146:~ — ssh -i ~/RHEL.pem hadoop...

=1660947987244, value=2018-01-30 02:03:54
6595928469079750 column=lookup_card_family:score, timestamp=1660947987244,
value=412
6595928469079750 column=lookup_card_family:ucl, timestamp=1660947987244, va
lue=1.142797041440079E7
6595928469079750 column=lookup_transaction_family:postcode, timestamp=16609
47987244, value=98349
6595928469079750 column=lookup_transaction_family:transaction_dt, timestamp
=1660947987244, value=2018-01-24 12:38:22
6597703848279563 column=lookup_card_family:score, timestamp=1660947987244,
value=218
6597703848279563 column=lookup_card_family:ucl, timestamp=1660947987244, va
lue=1.4718634149498457E7
6597703848279563 column=lookup_transaction_family:postcode, timestamp=16609
47987244, value=95699
6597703848279563 column=lookup_transaction_family:transaction_dt, timestamp
=1660947987244, value=2018-01-27 10:51:49
6598830758632447 column=lookup_card_family:score, timestamp=1660947987244,
value=293
6598830758632447 column=lookup_card_family:ucl, timestamp=1660947987244, va
lue=1.2227949982601807E7
6598830758632447 column=lookup_transaction_family:postcode, timestamp=16609
47987244, value=19421
6598830758632447 column=lookup_transaction_family:transaction_dt, timestamp
=1660947987244, value=2018-01-30 00:18:34
6599900931314251 column=lookup_card_family:score, timestamp=1660947987244,
value=297
6599900931314251 column=lookup_card_family:ucl, timestamp=1660947987244, va
lue=1.2121408572464656E7
6599900931314251 column=lookup_transaction_family:postcode, timestamp=16609
47987244, value=97423
6599900931314251 column=lookup_transaction_family:transaction_dt, timestamp
=1660947987244, value=2018-01-31 11:25:16
999 row(s) in 1.4300 seconds

hbase(main):003:0>

```