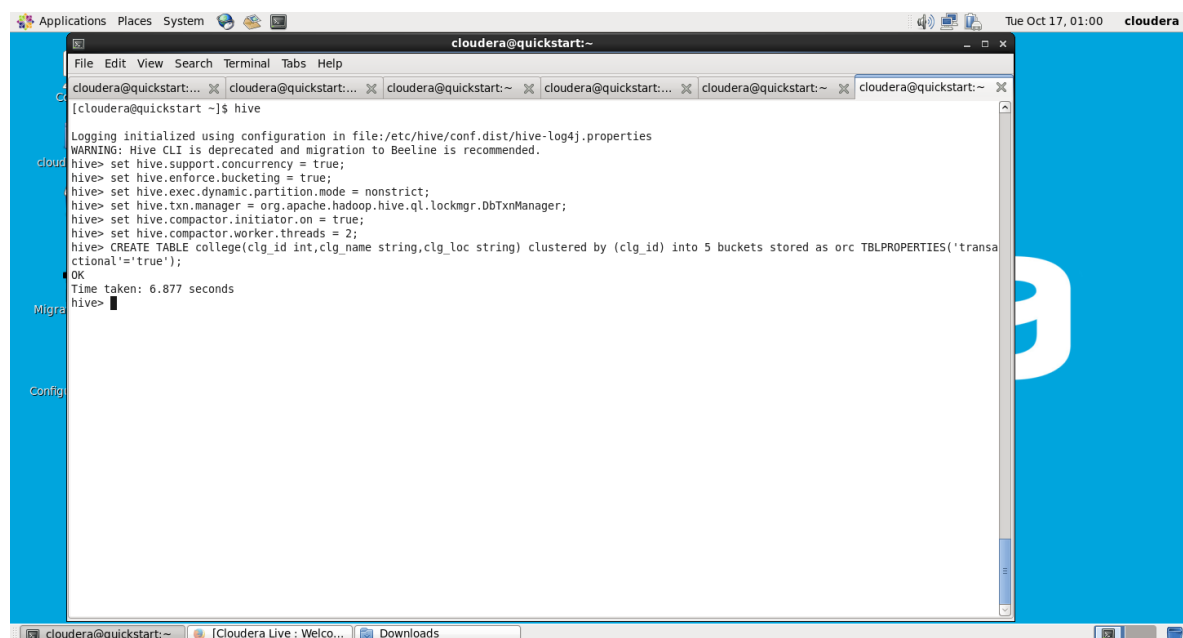# Transactions in Hive:

The different row-level transactions available in Hive 0.14 are as follows:

1. Insert
2. Delete
3. Update

The below properties needs to be set appropriately in *hive shell* , order-wise to work with transactions in Hive, By default they are turned off in hive:

Creating a Table That Supports Hive Transactions:

The create table can be checked using the command *show tables.*

Inserting Data into a Hive Table:

Contents of the table can be viewed using :

Updating the Data in Hive Table:

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```
Time taken: 0.251 seconds, Fetched: 7 row(s)
hive> UPDATE college set clg_id = 8 where clg_id = 7;
Query ID = cloudera_20171017010606_1b7d941d-ee1b-4301-ad4b-492714faf57d
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks determined at compile time: 5
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1507287275802_0017, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1507287275802_0017/
Kill Command = /usr/lib/hadoop/bin/hadoop job  -kill job_1507287275802_0017
Hadoop job information for Stage-1: number of mappers: 5; number of reducers: 5
2017-10-17 01:06:57,832 Stage-1 map = 0%,   reduce = 0%
2017-10-17 01:07:51,514 Stage-1 map = 40%,   reduce = 0%, Cumulative CPU 7.58 sec
2017-10-17 01:07:52,800 Stage-1 map = 60%,   reduce = 0%, Cumulative CPU 10.01 sec
2017-10-17 01:07:54,004 Stage-1 map = 100%,   reduce = 0%, Cumulative CPU 12.76 sec
2017-10-17 01:08:41,064 Stage-1 map = 100%,   reduce = 20%, Cumulative CPU 14.72 sec
2017-10-17 01:08:42,498 Stage-1 map = 100%,   reduce = 80%, Cumulative CPU 20.93 sec
2017-10-17 01:08:43,939 Stage-1 map = 100%,   reduce = 100%, Cumulative CPU 23.21 sec
MapReduce Total cumulative CPU time: 23 seconds 410 msec
Ended Job = job_1507287275802_0017
Loading data to table default.college
Table default.college stats: [numFiles=6, numRows=7, totalSize=4362, rawDataSize=0]
MapReduce Jobs Launched:
Stage-Stage-1: Map: 5  Reduce: 5   Cumulative CPU: 23.41 sec   HDFS Read: 50173 HDFS Write: 975 SUCCESS
Total MapReduce CPU Time Spent: 23 seconds 410 msec
OK
Time taken: 129.685 seconds
hive> select * from college;
OK
5       stanford        uk
6       JNTUA   atp
1       nec     nlr
8       cambridge       us
```

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```
4       lpu     del
Time taken: 0.282 seconds, Fetched: 7 row(s)
hive> UPDATE college set clg_name = 'IIT' where clg_id = 6;
Query ID = cloudera_20171017011212_90be54b8-5a42-4b9d-9fa1-ad488eea8600
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks determined at compile time: 5
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1507287275802_0018, Tracking URL = http://quickstart.cloudera:8088/proxy/application_1507287275802_0018/
Kill Command = /usr/lib/hadoop/bin/hadoop job  -kill job_1507287275802_0018
Hadoop job information for Stage-1: number of mappers: 5; number of reducers: 5
2017-10-17 01:13:19,160 Stage-1 map = 0%,   reduce = 0%
2017-10-17 01:14:05,626 Stage-1 map = 40%,   reduce = 0%, Cumulative CPU 9.21 sec
2017-10-17 01:14:06,869 Stage-1 map = 60%,   reduce = 0%, Cumulative CPU 9.65 sec
2017-10-17 01:14:08,066 Stage-1 map = 100%,   reduce = 0%, Cumulative CPU 10.58 sec
2017-10-17 01:14:51,673 Stage-1 map = 100%,   reduce = 100%, Cumulative CPU 19.27 sec
MapReduce Total cumulative CPU time: 19 seconds 560 msec
Ended Job = job_1507287275802_0018
Loading data to table default.college
Table default.college stats: [numFiles=7, numRows=7, totalSize=5061, rawDataSize=0]
MapReduce Jobs Launched:
Stage-Stage-1: Map: 5  Reduce: 5   Cumulative CPU: 19.56 sec   HDFS Read: 50145 HDFS Write: 938 SUCCESS
Total MapReduce CPU Time Spent: 19 seconds 560 msec
OK
Time taken: 117.04 seconds
hive> select * from college;
OK
5       stanford        uk
6       IIT     atp
1       nec     nlr
8       cambridge       us
2       vit     vlr
```

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Deleting a Row from Hive Table:

Check deleted row using select * from college: