

```

bmsce@bmsce-Precision-T1700:~$ cd cassandra
bmsce@bmsce-Precision-T1700:~/cassandra$ cd apache-cassandra-3.11.0/
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0$ cd bin
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh
bash: ./cqlsh: No such file or directory
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh.
bash: ./cqlsh.: No such file or directory
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh> CREATE KEYSPACE students WITH REPLICATION={
... 'class':'SimpleStrategy',
... 'replication_factor':1};
cqlsh> DESCRIBE KEYSPACES;

students system_schema system_auth system_system_distributed system_traces

cqlsh> SELECT * FROM system_schema.keyspaces;
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table schema_keyspaces"
cqlsh> SELECT * FROM system_schema.keyspaces;

keyspace_name | durable_writes | replication
-----
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system_system | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}
students | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}

(6 rows)
cqlsh> USE students;
cqlsh:students> create table Student_info(
... rollno int PRIMARY KEY,
... stdname text,
... DateofJoining timestamp,
... LastExamPercent double);
[1]+ Stopped ./cqlsh
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh> USE students;
...
[2]+ Stopped ./cqlsh
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh> DESCRIBE KEYSPACES

students system_schema system_auth system_system_distributed system_traces

cqlsh> SELECT * FROM system_schema.keyspaces
... ?

keyspace_name | durable_writes | replication
-----
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system_system | True | {'class': 'org.apache.cassandra.locator LocalStrategy'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}
students | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}

(6 rows)
cqlsh> USE students
... ?
cqlsh:students> create table Student_info(
... rollno int PRIMARY KEY,
... stdname text,
... DateofJoining timestamp,
... LastExamPercent double);
SyntaxException: line 2:12 no viable alternative at input '(' (create table Student_info( [1]...)
cqlsh:students> create table Student_info( rollno int PRIMARY KEY, stdname text, DateofJoining timestamp, LastExamPercent double);
cqlsh:students> DESCRIBE TABLES;

student_info

cqlsh:students> DESCRIBE TABLE student_info;

CREATE TABLE students.student_info (
rollno int PRIMARY KEY,
dateofjoining timestamp,
lastexampercent double,
stdname text
) WITH bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND dclocal_read_repair_chance = 0.1
AND default_time_to_live = 0
AND gc_grace_seconds = 864000
AND max_index_interval = 2048
AND memtable_flush_period_in_ms = 0
AND min_index_interval = 128
AND read_repair_chance = 0.0
AND speculative_retry = '99PERCENTILE';

cqlsh:students> BEGIN BATCH
... INSERT INTO
... student_info(RollNo,StudName,DateofJoining,LastExamPercent)
... VALUES (1,'Michael Storm','2012-03-29', 69.6)
... INSERT INTO student_info
... (RollNo,StudName,DateofJoining,LastExamPercent) VALUES
... (2,'Stephen Fox','2013-02-27', 72.5)
... APPLY BATCH;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Undefined column name studname"
cqlsh:students> BEGIN BATCH INSERT INTO student_info(rollno,stdname,dateofjoining,lastexampercent) VALUES (1,'Michael Storm','2012-03-29', 69.6) INSERT INTO student_info (rollno,stdname,dateofjoining,lastexampercent) VALUES (2,'Stephen Fox','2013-02-27', 72.5) APPLY BATCH;
cqlsh:students> SELECT * from student_info;

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(2 rows)
cqlsh:students> script
[3]+ Stopped ./cqlsh
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ script
Script started, file is typescript
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ stopecript
stopecript: command not found
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ script
Script started, file is typescript
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ exit
exit
Script done, file is typescript
bmsce@bmsce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ script output.txt
Script started, file is output.txt

```

```

$rmooce-Precision-71700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqqlsh> DESCRIBE KEYSPACES;

students system_schema system_auth system_system_distributed system_traces

cqqlsh> SELECT * FROM system_schema.keyspaces
... ;

keyspace_name | durable_writes | replication
-----
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system_system | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}
students | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}

(6 rows)
cqqlsh> USE students;
cqqlsh:students> create table Student_Info(
... RollNo int PRIMARY KEY,
... StudName text,
... DateofJoining timestamp,
... LastExamPercent double);
AlreadyExists: Table 'students.student_info' already exists
cqqlsh:students> DESCRIBE TABLES;

student_info

cqqlsh:students> DESCRIBE TABLE student_info

CREATE TABLE students.student_info (
  rollno int PRIMARY KEY,
  dateofjoining timestamp,
  lastexampercent double,
  stdname text
) WITH bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND dclocal_read_repair_chance = 0.1
AND default_time_to_live = 0
AND gc_grace_seconds = 864000
AND max_index_interval = 2048
AND memtable_flush_period_in_ms = 0
AND min_index_interval = 128
AND read_repair_chance = 0.0
AND speculative_retry = '99PERCENTILE';

cqqlsh:students> SELECT * from student_info;

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(2 rows)
cqqlsh:students> UPDATE student_info SET stdname='David Sheen' WHERE rollno=2 ;
cqqlsh:students> SELECT * FROM student_info WHERE rollno in (1,2,3);

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | David Sheen

(2 rows)
cqqlsh:students> INSERT INTO student_info
... (rollno,StudName,dateofjoining,LastExamPercent) VALUES
(2,'Stephen Fox','2013-02-27', 72.5);
InvalidRequest: Error from server: code=2200 [Invalid query] message="Undefined column name stdname"
cqqlsh:students> INSERT INTO student_info (rollno,stdname,dateofjoining,lastexampercent) VALUES (2,'Stephen Fox','2013-02-27', 72.5);
cqqlsh:students> SELECT * from student_info;

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(2 rows)
cqqlsh:students> INSERT INTO student_info (rollno,stdname,dateofjoining,lastexampercent) VALUES (3,'Stephen Fox','2013-02-27', 72.5);
cqqlsh:students> SELECT * from student_info;

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox
3 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(3 rows)
cqqlsh:students> INSERT INTO student_info (rollno,stdname,dateofjoining,lastexampercent) VALUES (4,'Stephen Fox','2013-02-27', 72.5);
cqqlsh:students> UPDATE student_info SET stdname='David Sheen' WHERE rollno=2 ;
cqqlsh:students> SELECT * from student_info;

rollno | dateofjoining | lastexampercent | stdname
-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | David Sheen
4 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox
3 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(4 rows)
cqqlsh:students> CREATE INDEX ON student_info(stdname);
cqqlsh:students> SELECT * FROM student_info WHERE stdname='Stephen Fox'
... ;

rollno | dateofjoining | lastexampercent | stdname
-----
4 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox
3 | 2013-02-26 18:30:00.000000+0000 | 72.5 | Stephen Fox

(2 rows)
cqqlsh:students> CREATE INDEX ON student_info(lastexampercent);
cqqlsh:students> SELECT rollno,lastexampercent FROM student_info LIMIT 2;

rollno | lastexampercent
-----
1 | 69.6
2 | 72.5

(2 rows)
cqqlsh:students> SELECT rollno,stdname AS "Name" FROM student_info
... ;

rollno | Name
-----
1 | Michael Storm
2 | David Sheen
4 | Stephen Fox
3 | Stephen Fox

(4 rows)
```

```

cqlsh:students> UPDATE student_info SET stdname="Samaira", lastexampercent=85.7 WHERE rollno=3;
SyntaxException: line 1:41 no viable alternative at input ',' (UPDATE student_info SET stdname=["Samair"]a,...)
cqlsh:students> UPDATE student_info SET stdname="Samaira",lastexampercent=85.7 WHERE rollno=3;
SyntaxException: line 1:41 no viable alternative at input ',' (UPDATE student_info SET stdname=["Samair"]a,...)
cqlsh:students> UPDATE student_info SET stdname="Samaira" lastexampercent=85.7 WHERE rollno=3;
SyntaxException: line 2:22 no viable alternative at input 'lastexampercent' (UPDATE student_info SET stdname=["Samair"]a" lastexampercent...)
cqlsh:students> UPDATE student_info
... SET stdname="Samaira" lastexampercent=85.7 WHERE rollno=3;
SyntaxException: line 2:22 no viable alternative at input 'lastexampercent' (UPDATE student_infoSET stdname=["Samair"]a" lastexampercent...)
cqlsh:students> UPDATE student_info
... SET stdname='Samaira',lastexampercent=85.7
... WHERE rollno=3;
cqlsh:students> SELECT rollno,stdname,lastexampercent
... FROM student_info
... WHERE rollno=3;

rollno | stdname | lastexampercent
-----|-----|-----
3 | Samaira | 85.7

(1 rows)
cqlsh:students> DELETE lastexampercent FROM student_info WHERE rollno=4;
cqlsh:students> SELECT * FROM student_info where rollno=4;

rollno | dateofjoining | lastexampercent | stdname
-----|-----|-----|-----
4 | 2013-02-26 18:30:00.000000+0000 | null | Stephen Fox

(1 rows)
cqlsh:students> DELETE FROM student_info WHERE rollno=4;
cqlsh:students> SELECT * FROM student_info where rollno=4;

rollno | dateofjoining | lastexampercent | stdname
-----|-----|-----|-----

(0 rows)
cqlsh:students> SELECT * FROM student_info
... ;

rollno | dateofjoining | lastexampercent | stdname
-----|-----|-----|-----
1 | 2012-03-28 18:30:00.000000+0000 | 69.6 | Michael Storm
2 | 2013-02-26 18:30:00.000000+0000 | 72.5 | David Sheen
3 | 2013-02-26 18:30:00.000000+0000 | 85.7 | Samaira

(3 rows)
cqlsh:students> CREATE TABLE project_details(
... project_id int,
... project_name text,
... stdname text,
... rating double,
... duration int,
... PRIMARY KEY(project_id,project_name)
... );
cqlsh:students> BEGIN BATCH
... INSERT INTO project_details VALUES (1,'MS data migration', 'David Sheen',3.5, 720)
... INSERT INTO project_details VALUES (1,'MS data WarehouseSET stdname="Samaira" lastexampercent=85.7 WHERE rollno=3;', 'David Sheen',3.5, 720)
... APPLY BATCH;
SyntaxException: line 2:28 no viable alternative at input 'VALUES' (BEGIN BATCHINSERT INTO [project_details] VALUES...)
cqlsh:students> BEGIN BATCH
... INSERT INTO project_details VALUES (1,'MS data migration', 'David Sheen',3.5, 720)
... INSERT INTO project_details VALUES (1,'MS data Warehouse', 'David Sheen',3.9, 1440)
... INSERT INTO project_details VALUES (2,'SAP Reporting', 'Stephen Fox',4.2, 3000)
... INSERT INTO project_details VALUES (2,'SAP BI DW', 'Stephen Fox',4, 9000)
... APPLY BATCH;
SyntaxException: line 2:29 no viable alternative at input 'VALUES' (BEGIN BATCH INSERT INTO [project_details] VALUES...)
cqlsh:students> BEGIN BATCH INSERT INTO project_details(project_id, project_name, stdname, rating, duration) VALUES (1,'MS data migration', 'David Sheen',3.5, 720) INSERT INTO project_details(project_id, project_name, stdname, rating, duration) VALUES (1,'MS data Warehouse', 'David Sheen',3.9, 1440) INSERT INTO project_details(project_id, project_name, stdname, rating, duration) VALUES (2,'SAP Reporting', 'Stephen Fox',4.2, 3000) INSERT INTO project_details(project_id, project_name, stdname, rating, duration) VALUES (2,'SAP BI DW', 'Stephen Fox',4, 9000)
cqlsh:students> SELECT * FROM project_details;

project_id | project_name | duration | rating | stdname
-----|-----|-----|-----|-----
1 | MS data Warehouse | 1440 | 3.9 | David Sheen
1 | MS data migration | 720 | 3.5 | David Sheen
2 | SAP BI DW | 9000 | 4 | Stephen Fox
2 | SAP Reporting | 3000 | 4.2 | Stephen Fox

(4 rows)
cqlsh:students> SELECT * FROM project_details WHERE project_id=1;

project_id | project_name | duration | rating | stdname
-----|-----|-----|-----|-----
1 | MS data Warehouse | 1440 | 3.9 | David Sheen
1 | MS data migration | 720 | 3.5 | David Sheen

(2 rows)
cqlsh:students> SELECT * FROM project_details WHERE project_id IN (1,2)
... ORDER BY project_name DESC;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot page queries with both ORDER BY and a IN restriction on the partition key; you must either remove the ORDER BY or the IN and sort client side, or disable paging for this query"
cqlsh:students> PAGING OFF;
Disabled Query paging.
cqlsh:students> SELECT * FROM project_details WHERE project_id IN (1,2) ORDER BY project_name DESC;

project_id | project_name | duration | rating | stdname
-----|-----|-----|-----|-----
2 | SAP Reporting | 3000 | 4.2 | Stephen Fox
2 | SAP BI DW | 9000 | 4 | Stephen Fox
1 | MS data migration | 720 | 3.5 | David Sheen
1 | MS data Warehouse | 1440 | 3.9 | David Sheen

(4 rows)
cqlsh:students> PAGING ON;
Now Query paging is enabled
Page size: 100
cqlsh:students> exit
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ exit
exit
Script done, file is output.txt
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$

```

```

Precision-T1700:~$ typescript lab2.txt
typescript: command not found
bmce@bmce-Precision-T1700:~$ script lab2.txt
Script started, file is lab2.txt
bmce@bmce-Precision-T1700:~$ cd cassandra
bmce@bmce-Precision-T1700:~/cassandra$ cd apache-cassandra-3.11.0/
bmce@bmce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0$ ./cqqlsh
bash: ./cqqlsh: No such file or directory
bmce@bmce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0$ ls
bin          conf          interface  lib          NEWS.txt    pylib
CHANGES.txt doc          javadoc    LICENSE.txt  NOTICE.txt  tools
bmce@bmce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0$ cd bin
bmce@bmce-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.0 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqqlsh> SELECT * FROM system_schema.keyspaces
... ;

keyspace_name | durable_writes | replication
-----
student | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}
students | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}

(7 rows)
cqqlsh> CREATE KEYSPACE employee WITH REPLICATION={'class': 'SimpleStrategy', 'replication_factor': 1};
SyntaxException: line 1:48 no viable alternative at input '{' (... KEYSPACE employee WITH REPLICATION={[class]:...})
cqqlsh> CREATE KEYSPACE employee WITH REPLICATION={'class': 'SimpleStrategy', 'replication_factor': 1};
cqqlsh> USE employee;
cqqlsh> employee> CREATE TABLE employee_info (emp_id int PRIMARY KEY, emp_name text, designation text, DateofJoining timestamp, salary double, Dept_name text );
SyntaxException: line 1:21 no viable alternative at input '-' (CREATE TABLE [employee]-...)
cqqlsh> employee> CREATE TABLE employee_info (emp_id int PRIMARY KEY, emp_name text, designation text, DateofJoining timestamp, salary double, Dept_name text );
cqqlsh> employee> DESCRIBE TABLES;

employee_info

cqqlsh> employee> DESCRIBE TABLE employee_info;

CREATE TABLE employee.employee_info (
  emp_id int PRIMARY KEY,
  dateofjoining timestamp,
  dept_name text,
  designation text,
  emp_name text,
  salary double
) WITH bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND dclocal_read_repair_chance = 0.1
AND default_time_to_live = 0
AND gc_grace_seconds = 864000
AND max_index_interval = 2048
AND memtable_flush_period_in_ms = 0
AND min_index_interval = 128
AND read_repair_chance = 0.0
AND speculative_retry = '99PERCENTILE';

cqqlsh> employee> BEGIN BATCH
... ;
... ;
... APPLY BATCH;
SyntaxException: line 2:0 mismatched input ';' expecting K_APPLY (BEGIN BATCH[;]...)
cqqlsh> employee> BEGIN BATCH INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (100, 'Eva Smart', 'HOD', '2020-02-28', 50000.00, 'CSE' )
... INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (120, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' )
... INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (120, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' )
... INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (120, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' )
... INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (121, 'Horace Rice', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' )
... INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (123, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' )
... APPLY BATCH ;
cqqlsh> employee> SELECT * from employee_info
... ;

emp_id | dateofjoining | dept_name | designation | emp_name | salary
-----
120 | 2020-03-07 18:30:00.000000+0000 | CSE | Professor | Vince Poole | 48000
123 | 2020-03-09 18:30:00.000000+0000 | CSE | Assistant Professor | Phyllis Douglas | 47000
121 | 2020-03-07 18:30:00.000000+0000 | CSE | Associate Professor | Laurel Dittman | 48000
100 | 2020-02-27 18:30:00.000000+0000 | CSE | HOD | Eva Smart | 50000

(4 rows)
cqqlsh> employee> BEGIN BATCH INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (109, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (110, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (111, 'Horace Rice', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (112, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (113, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (114, 'Eva Smart', 'HOD', '2020-02-28', 50000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (115, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (116, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (117, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (118, 'Horace Rice', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (119, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (120, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (121, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (122, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (123, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (124, 'Eva Smart', 'HOD', '2020-02-28', 50000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (125, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (126, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (127, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (128, 'Horace Rice', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (129, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (130, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (131, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (132, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (133, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (134, 'Eva Smart', 'HOD', '2020-02-28', 50000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (135, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (136, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (137, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (138, 'Horace Rice', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (139, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (140, 'Kelsey Stephens', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (141, 'Vince Poole', 'Professor', '2020-03-08', 49000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (142, 'Laurel Dittman', 'Associate Professor', '2020-03-08', 48000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (143, 'Phyllis Douglas', 'Assistant Professor', '2020-03-08', 47000.00, 'CSE' ) INSERT INTO employee_info (emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (144, 'Eva Smart', 'HOD', '2020-02-28', 
```

Request: Error from server: code=2200 [Invalid query] message="Cannot execute this query as it might involve data filtering and thus may have unpredictable performance. If you want to execute this query despite the performance unpredictability, use ALLOW FILTERING"

```
qqlsh:employee> SELECT * FROM employee_info WHERE salary > 0, emp_id IN 8 ORDER BY salary ASC;
SyntaxException: line 1:44 mismatched input ',', expecting EOF (... employee_info WHERE salary > 0[,,...)
qqlsh:employee> SELECT * FROM employee_info WHERE salary > 0, emp_id IN * ORDER BY salary ASC;
SyntaxException: line 1:44 mismatched input ',', expecting EOF (... employee_info WHERE salary > 0[,,...)
qqlsh:employee> SELECT * FROM employee_info WHERE salary > 0, emp_id IN * ORDER BY salary ASC;
SyntaxException: line 1:44 no viable alternative at input '*' (SELECT * FROM employee_info WHERE (emp_id IN...))
qqlsh:employee> SELECT * FROM employee_info WHERE emp_id IN (100, 1000) ORDER BY salary ASC;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Order by is currently only supported on the clustered columns of the PRIMARY KEY, got salary"
qqlsh:employee> SELECT * FROM employee_info WHERE salary>0 ORDER BY salary ASC ALLOW FILTERING;
InvalidRequest: Error from server: code=2200 [Invalid query] message="ORDER BY is only supported when the partition key is restricted by an EQ or an IN."
```

```
qqlsh:employee> ALTER TABLE employee_info ADD projects set<text>
...
qqlsh:employee> SELECT * from employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	null	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	null	47000
122	2020-03-07 18:30:00.000000+0000	CSE	Associate Professor	Laurel Dittman	null	48000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	null	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	null	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	null	49000

```
(6 rows)
qqlsh:employee> CREATE INDEX ON employee_info(salary);
qqlsh:employee> SELECT * FROM employee_info ORDER BY salary
...
InvalidRequest: Error from server: code=2200 [Invalid query] message="ORDER BY is only supported when the partition key is restricted by an EQ or an IN."
```

```
qqlsh:employee> DESC INDEX employee.employee_info_salary_idx
```

```
CREATE INDEX employee_info_salary_idx ON employee.employee_info (salary);
```

```
qqlsh:employee> DESC INDEX employee.employee_info_salary_idx;
```

```
CREATE INDEX employee_info_salary_idx ON employee.employee_info (salary);
```

```
qqlsh:employee> DROP INDEX IF EXISTS employee.employee_info_salary_idx
```

```
...
qqlsh:employee> UPDATE employee_info SET projects=projects+(Project1) WHERE emp_id=100;
```

```
SyntaxException: line 1:52 no viable alternative at input '(' (UPDATE employee_info SET projects=projects+({'Project1'}))
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+(Project1) WHERE emp_id=100;
```

```
SyntaxException: line 1:52 no viable alternative at input '(' (UPDATE employee_info SET projects=projects+({'Project1'}))
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+({'Project1'}) WHERE emp_id=100;
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+({'Project1','Project2'}) WHERE emp_id=120;
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+({'Project2'}) WHERE emp_id=123;
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+({'Project2','Project4'}) WHERE emp_id=122;
```

```
qqlsh:employee> UPDATE employee_info SET projects=projects+({'Project4'}) WHERE emp_id=121;
```

```
qqlsh:employee> INSERT INTO employee_info(emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (122, 'Conrad Menzie', 'Intern', '2020-03-28',10000.00,'CSE') USING TTL 30 ;
```

```
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	{'Project2', 'Project4'}	10000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000

```
(6 rows)
qqlsh:employee> INSERT INTO employee_info(emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (101, 'Conrad Menzie', 'Intern', '2020-03-28',10000.00,'CSE') USING TTL 30 ;
```

```
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	{'Project2', 'Project4'}	10000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000
101	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	null	10000

```
(7 rows)
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	{'Project2', 'Project4'}	10000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000

```
(6 rows)
qqlsh:employee> INSERT INTO employee_info(emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (122, 'Laurel Dittman', 'Associate Professor', '2020-03-08',48000.00,'CSE' ) ;
```

```
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-07 18:30:00.000000+0000	CSE	Associate Professor	Laurel Dittman	{'Project2', 'Project4'}	48000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000

```
(6 rows)
qqlsh:employee> INSERT INTO employee_info(emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (101, 'Conrad Menzie', 'Intern', '2020-03-28',10000.00,'CSE') USING TTL 30 ;
```

```
qqlsh:employee> INSERT INTO employee_info(emp_id, emp_name, designation, DateofJoining, salary, Dept_name) VALUES (101, 'Conrad Menzie', 'Intern', '2020-03-28',10000.00,'CSE') USING TTL 30 ;
```

```
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-07 18:30:00.000000+0000	CSE	Associate Professor	Laurel Dittman	{'Project2', 'Project4'}	48000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000
101	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	null	10000

```
(7 rows)
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-07 18:30:00.000000+0000	CSE	Associate Professor	Laurel Dittman	{'Project2', 'Project4'}	48000
121	2020-03-07 18:30:00.000000+0000	ISE	Associate Professor	Edwin Mendoza	{'Project4'}	48000
100	2020-02-27 18:30:00.000000+0000	CSE	HOD	Eva Smart	{'Project1'}	50000
109	2020-03-07 18:30:00.000000+0000	CSE	Professor	Kelsey Stephens	{'Project1'}	49000
101	2020-03-27 18:30:00.000000+0000	CSE	Intern	Conrad Menzie	null	10000

```
(7 rows)
qqlsh:employee> SELECT * FROM employee_info ;
```

emp_id	dateofjoining	dept_name	designation	emp_name	projects	salary
120	2020-03-07 18:30:00.000000+0000	CSE	Professor	Vince Poole	{'Project1', 'Project2'}	48000
123	2020-03-09 18:30:00.000000+0000	CSE	Assistant Professor	Phyllis Douglas	{'Project2'}	47000
122	2020-03-07 18:30:00.000000+0000	CSE	Associate Professor	Laurel Dittman	{'Project2', 'Project4'}	48000

121		2020-03-07 18:30:00.000000+0000		ISE		Associate Professor		Edwin Mendoza		{'Project4'}		48000
100		2020-02-27 18:30:00.000000+0000		CSE		BOO		Eva Smart		{'Project1'}		50000
109		2020-03-07 18:30:00.000000+0000		CSE		Professor		Kelsey Stephens		{'Project1'}		49000

```
(6 rows)
cqlsh:employee> exit
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ ./cqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.5 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh> CREATE KEYSPACE library WITH REPLICATION=[{'class':'SimpleStrategy'},{'replication_factor':1}];
SyntaxException: line 1:41 no viable alternative at input '{' (CREATE KEYSPACE library WITH [REPLICATION]=[...])
cqlsh> CREATE KEYSPACE library WITH REPLICATION=[{'class':'SimpleStrategy'},{'replication_factor':1}];
cqlsh> USE library;
cqlsh:library> CREATE TABLE library_info(
...
SyntaxException: line 2:0 no viable alternative at input '(' (CREATE TABLE library_info[...])
cqlsh:library> CREATE TABLE library_info( stud_id int PRIMARY KEY, counter_value counter, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp);
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot mix counter and non counter columns in the same table"
cqlsh:library>
cqlsh:library> CREATE TABLE library_info( stud_id int PRIMARY KEY, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp);
cqlsh:library> ALTER TABLE library_info ADD counter value counter;
ConfigurationException: Cannot add a counter column (counter_value) in a non counter column family
cqlsh:library> DROP TABLE library_info
...
cqlsh:library> DESCRIBE TABLES;

<empty>

cqlsh:library> CREATE TABLE library_info( stud_id int, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY (stud_id));
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot mix counter and non counter columns in the same table"
cqlsh:library> CREATE TABLE library_info( stud_id int PRIMARY KEY, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp, counter_value counter);
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot mix counter and non counter columns in the same table"
cqlsh:library>
cqlsh:library> CREATE TABLE library_info( stud_id int PRIMARY KEY, counter_value counter);
cqlsh:library> ALTER TABLE library_info stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp ;
SyntaxException: line 1:25 no viable alternative at input 'stud_name' (ALTER TABLE [library_info] stud_name...)
cqlsh:library> ALTER TABLE library_info ADD stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp ;
SyntaxException: line 1:43 mismatched input ',' expecting EOF (... TABLE library_info ADD stud_name text[,] book_name...)
cqlsh:library> ALTER TABLE library_info stud_name text
...
SyntaxException: line 1:25 no viable alternative at input 'stud_name' (ALTER TABLE [library_info] stud_name...)
cqlsh:library> DROP TABLE library_info ;
cqlsh:library> CREATE TABLE library_info( stud_id int, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY (stud_id,stud_name,timestamp), book_idbook_name,);
SyntaxException: line 1:206 no viable alternative at input ',', (... (stud_id,stud_name,timestamp), book_idbook_name[,]...)
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY (stud_id,stud_name), book_id,book_name,DateofIssue);
SyntaxException: line 1:186 no viable alternative at input ',', (... KEY (stud_id,stud_name), book_id[,]...)
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, bookname text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY (stud_id,stud_name),book_id,book_name,DateofIssue);
SyntaxException: line 1:185 no viable alternative at input ',', (... KEY (stud_id,stud_name),book_id[,]...)
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY (stud_id,stud_name),book_id,book_name,DateofIssue);
SyntaxException: line 1:170 no viable alternative at input ',', (... KEY (stud_id,stud_name),book_id[,]...)
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY ((stud_id,stud_name),book_id,book_name,DateofIssue);
SyntaxException: line 1:194 mismatched input ',' expecting ')' (...stud_name),book_id,book_name,DateofIssue[)])
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY ((stud_id,stud_name),book_id,book_name,DateofIssue);
SyntaxException: line 1:194 mismatched input ':' expecting ')' (...stud_name),book_id,book_name,DateofIssue[)])
cqlsh:library> CREATE TABLE library_info(stud_id int, stud_name text, book_name text, book_id int, DateofIssue timestamp, counter_value counter , PRIMARY KEY ((stud_id,stud_name),book_id,book_name,DateofIssue));
cqlsh:library> exit
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ stop
Command 'stop' not found, but there are 19 similar ones.

bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ script
Script started, file is typescript
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ script stop
Script started, file is stop
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ exit
exit
Script done, file is stop
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ exit
exit
Script done, file is typescript
bmace@bmace-Precision-T1700:~/cassandra/apache-cassandra-3.11.0/bin$ exit
exit
Script done, file is lab2.txt
bmace@bmace-Precision-T1700:~$
```

```
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.10 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh> CREATE KEYSPACE Library WITH REPLICATION={
... 'class':'SimpleStrategy',
... 'replication_factor':1};
cqlsh> DESCRIBE KEYSPACES

system_schema  system_auth  system  library  system_distributed  system_traces

cqlsh> SELECT * FROM sytem.schema_keyspaces ;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Keyspace sytem does not exist"
cqlsh> SELECT * FROM system.schema_keyspaces ;
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table schema_keyspaces"
cqlsh> SELECT * FROM system_schema.keyspaces ;

keyspace_name | durable_writes | replication
-----
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
library | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}

(6 rows)
cqlsh> USE Library;
cqlsh:library> create table library_info(
... studid int PRIMARY KEY,
... countval counter,
;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot mix counter and non counter columns in the same table"
cqlsh:library> create table library_info(
... studid int PRIMARY KEY,
... countval counter);
cqlsh:library> DEscribe table library_info

CREATE TABLE library.library_info (
    studid int PRIMARY KEY,
    countval counter
) WITH bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:library> SELECT * FROM Library_info
... ;

studid | countval
-----+-----
(0 rows)
1';
SyntaxException: Only expressions of the form X = X +<value> are supported.
';
InvalidRequest: Error from server: code=2200 [Invalid query] message="Invalid STRING constant (001) for "studid" of type int"
;
cqlsh:library> SELECT * FROM Library_info;

studid | countval
-----+-----
111 | 1

(1 rows)
;
cqlsh:library> SELECT * FROM Library_info;

studid | countval
-----+-----
111 | 2

(1 rows)
cqlsh:library> ALTER library_info
... DROP countval
... ;
SyntaxException: line 1:6 no viable alternative at input 'library_info' ([ALTER] library_info...)
cqlsh:library> ALTER table library_info
... DROP countval;
cqlsh:library> SELECT * FROM Library_info;
```

```
-----
studid
(0 rows)
cqlsh:library> ALTER TABLE library_info ADD studname text;
ConfigurationException: Cannot add a non counter column (studname) in a counter column family
cqlsh:library> DROP tablelibrary_info;
SyntaxException: line 1:5 no viable alternative at input 'tablelibrary_info' ([DROP] tablelibrary_info...)
cqlsh:library> DROP table library_info;
cqlsh:library> DESCRIBE COLUMNFAMILIES;
```

<empty>

```
cqlsh:library> create table library_info(
... studid int PRIMARY KEY,
... studname text,
... bookname text,
... bookid int,
... dateofissuse timestamp) ;
cqlsh:library> SELECT * FROM Library_info;

studid | bookid | bookname | dateofissuse | studname
-----+-----+-----+-----+-----
(0 rows)
```

```
cqlsh:library> BEGIN BATCH
... INSERT INTO
... library_info(
... studid,studname,bookname ,bookid,dateofissuse)
... VALUES
... (1,'Michael Storm','BDA Beginner',10000,'2012-03-29')
issue) VALUES
... (2,'Stephen Fox','Cassandra 3.1.11',10001,'2012-03-30')
... APPLY BATCH;
cqlsh:library> SELECT * FROM Library_info;

studid | bookid | bookname | dateofissuse | studname
-----+-----+-----+-----+-----
1 | 10000 | BDA Beginner | 2012-03-29 00:00:00.000000+0000 | Michael Storm
2 | 10001 | Cassandra 3.1.11 | 2012-03-30 00:00:00.000000+0000 | Stephen Fox
```

```
(2 rows)
cqlsh:library> ALTER TABLE library_info add counter int
... ;
cqlsh:library> ;
SyntaxException: line 1:0 no viable alternative at input ';' ([;])
cqlsh:library> SELECT * FROM Library_info;

studid | bookid | bookname | counter | dateofissuse | studname
-----+-----+-----+-----+-----+-----
1 | 10000 | BDA Beginner | null | 2012-03-29 00:00:00.000000+0000 | Michael Storm
2 | 10001 | Cassandra 3.1.11 | null | 2012-03-30 00:00:00.000000+0000 | Stephen Fox
```

```
(2 rows)
cqlsh:library> ;
SyntaxException: line 1:0 no viable alternative at input ';' ([;])
cqlsh:library> UPDATE library_info SET
... counter=2 WHERE studid=1
... ;
cqlsh:library> UPDATE library_info SET
... counter=2 WHERE studid=1
... ;
cqlsh:library> UPDATE library_info SET
... counter=1 WHERE studid=2;
cqlsh:library> SELECT * FROM Library_info;

studid | bookid | bookname | counter | dateofissuse | studname
-----+-----+-----+-----+-----+-----
1 | 10000 | BDA Beginner | 2 | 2012-03-29 00:00:00.000000+0000 | Michael Storm
2 | 10001 | Cassandra 3.1.11 | 1 | 2012-03-30 00:00:00.000000+0000 | Stephen Fox
```

```
(2 rows)
cqlsh:library> SELECT bookname, counter FROM Library_info where studid=1;

bookname | counter
-----+-----
BDA Beginner | 2
```

```
(1 rows)
cqlsh:library> SELECT studid,bookname, counter FROM Library_info where studid=1
... ;

studid | bookname | counter
-----+-----+-----
1 | BDA Beginner | 2
```

```
(1 rows)
cqlsh:library> COPY library_info(studid,studname,bookname ,bookid,dateofissuse)
... TO '/content/libinfo.csv' WITH HEADER = TRUE ;
Using 1 child processes
```



```
Starting copy of library.library_info with columns [studid, studname, bookname, bookid, dateofissue].
Processed: 2 rows; Rate:      3 rows/s; Avg. rate:      3 rows/s
2 rows exported to 1 files in 0.689 seconds.
cqlsh:library> TRUNCATE library_info ;
cqlsh:library> SELECT * FROM library_info;

studid | bookid | bookname | counter | dateofissue | studname
-----+-----+-----+-----+-----+-----
(0 rows)
cqlsh:library> COPY library_info(studid,studname,bookname ,bookid,dateofissue)
... FROM '/content/libinfo.csv' WITH HEADER = TRUE ;
Invalid syntax at line 2, char 5
FROM '/content/libinfo.csv' WITH HEADER = TRUE ;
^
cqlsh:library> FROM '/content/libinfo.csv' WITH HEADER = TRUE ;
SyntaxException: line 1:0 no viable alternative at input 'FROM' ([FROM]...)
cqlsh:library> COPY library_info(studid,studname,bookname ,bookid,dateofissue)
... FROM '/content/libinfo.csv' WITH HEADER = TRUE ;
Using 1 child processes

Starting copy of library.library_info with columns [studid, studname, bookname, bookid, dateofissue].
Processed: 2 rows; Rate:      4 rows/s; Avg. rate:      6 rows/s
2 rows imported from 1 files in 0.356 seconds (0 skipped).
cqlsh:library> SELECT * FROM library_info;

studid | bookid | bookname | counter | dateofissue | studname
-----+-----+-----+-----+-----+-----
1 | 10000 | BDA Beginner | null | 2012-03-29 00:00:00.000000+0000 | Michael Storm
2 | 10001 | Cassandra 3.1.11 | null | 2012-03-30 00:00:00.000000+0000 | Stephen Fox

(2 rows)
cqlsh:library> exit
```

```
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.10 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
ation_factor':1});
cqlsh> describe keyspaces;

system_schema  system_auth  system  system_distributed  wmetro  system_traces

cqlsh> select * from system_schema.keyspaces;

keyspace_name | durable_writes | replication
-----+-----+-----
system_auth | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_schema | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
system_distributed | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '3'}
system | True | {'class': 'org.apache.cassandra.locator.LocalStrategy'}
wmetro | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '1'}
system_traces | True | {'class': 'org.apache.cassandra.locator.SimpleStrategy', 'replication_factor': '2'}

(6 rows)
cqlsh> use wmetro
... ;
ile bigint,current_position text,skill set<text>);

cqlsh:wmetro> select * from drivers;
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table drivers"
cqlsh:wmetro> select * from driver;

driver_name | current_position | mobile | password | skill
-----+-----+-----+-----+-----
(0 rows)
cqlsh:wmetro> begin batch
ill) values('Swen','123abc',9000000001,'Wellington',{'Passenger'})
ill) values('Fred','234bcd',9000000002,'Upper Hutt',{'Passenger'})
ill) values('Jane','345cde',9000000003,'Lower Hutt',{'Goods'})
... apply batch;
cqlsh:wmetro> select * from driver;

driver_name | current_position | mobile | password | skill
-----+-----+-----+-----+-----
Fred | Upper Hutt | 9000000002 | 234bcd | {'Passenger'}
Swen | Wellington | 9000000001 | 123abc | {'Passenger'}
Jane | Lower Hutt | 9000000003 | 345cde | {'Goods'}

(3 rows)
text);
cqlsh:wmetro> begin batch
tenance','Gulliver');
Hutt','Gulliver');
r Hutt','Kiwi Rail');
ington','Kiwi Rail');
... apply batch;
cqlsh:wmetro> select * from vehicles;

vehicle_id | status | type
-----+-----+-----
WR1236 | Upper Hutt | Kiwi Rail
WR1234 | Maintenance | Gulliver
WR1235 | Lowe Hutt | Gulliver
WR1237 | Wellington | Kiwi Rail

(4 rows)
ine_name, station_name));
cqlsh:wmetro> begin batch
,longitude,time,distance) values('LINE1',2,'Wellington',-40.28,174.77,0605,0.0)

,longitude,time,distance) values('LINE2',2,'Upper Hutt',-41.12,175.07,1550,0.0)
... apply batch;
cqlsh:wmetro> select * from time_table;

line_name | station_name | distance | latitude | longitude | service_num | time
-----+-----+-----+-----+-----+-----+-----
LINE2 | Upper Hutt | 0 | -41.12 | 175.07 | 2 | 1550
LINE2 | Wellington | 34.3 | -40.28 | 174.77 | 2 | 1130
LINE1 | Upper Hutt | 34.3 | -41.12 | 175.07 | 2 | 1025
LINE1 | Wellington | 0 | -40.28 | 174.77 | 2 | 605

(4 rows)
nce counter);
ere vehicle_id=1234 ;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Invalid INTEGER constant (1234) for "vehicle_id" of type text"
ere vehicle_id="WR1234" ;
SyntaxException: line 1:90 no viable alternative at input ',' (...total_distance + 3000 where vehicle_id=["WR123]4" );
ere vehicle_id='WR1234';
ere vehicle_id='WR1235';
ere vehicle_id='WR1236';
ere vehicle_id='WR1237';
```

```
qlsh:wmetro> select * from VEHICLE_USAGE;
```

vehicle_id	total_distance
WR1236	3500
WR1234	3000
WR1235	5000
WR1237	5300

```
(4 rows)
```

```
itude double,longitude double,speed double);
```

```
cqlsh:wmetro> begin batch
```

```
es(14,'2020-03-10',-42.30,171.50,76)
```

```
es(14,'2020-03-10 10:07:40+1300',-42.50,171.90,75)
```

```
es(14,'2020-03-10 10:30:25+1300',-44.50,160.60,75)
```

```
... apply batch ;
```

```
cqlsh:wmetro> select * from data_point;
```

sequence	day	latitude	longitude	speed
2020-03-09 21:30:25.000000+0000	14	-44.5	160.6	75
2020-03-09 21:07:40.000000+0000	14	-42.5	171.9	75
2020-03-10 00:00:00.000000+0000	14	-42.3	171.5	76

```
(3 rows)
```

```
ill) values('William','678bcf',9000000004,'Wellington',{'Goods','Passenger'}})
```

```
... ;
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Wellington	9000000004	678bcf	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Goods'}

```
(4 rows)
```

```
cqlsh:wmetro> create index on driver(password);
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Wellington	9000000004	678bcf	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Goods'}

```
(4 rows)
```

```
cqlsh:wmetro> update driver set password='789gfh' where driver_name='William';
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Wellington	9000000004	789gfh	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Goods'}

```
(4 rows)
```

```
= 'William';
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Maintenance	9000000004	789gfh	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Goods'}

```
(4 rows)
```

```
cqlsh:wmetro> update driver set skill={'Passenger'} where driver_name='Jane';
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Maintenance	9000000004	789gfh	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Passenger'}

```
(4 rows)
```

```
Jane';
```

```
cqlsh:wmetro> select * from driver;
```

driver_name	current_position	mobile	password	skill
Fred	Upper Hutt	9000000002	234bcd	{'Passenger'}
Swen	Wellington	9000000001	123abc	{'Passenger'}
William	Maintenance	9000000004	789gfh	{'Goods', 'Passenger'}
Jane	Lower Hutt	9000000003	345cde	{'Goods', 'Passenger'}

```
(4 rows)
password='789gfh';

[applied]
-----
      True

cqsh:wmetro> select * from driver;

driver_name | current_position | mobile      | password | skill
-----+-----+-----+-----+-----
      Fred |      Upper Hutt | 9000000002 | 234bcd   | {'Passenger'}
      Swen |      Wellington | 9000000001 | 123abc   | {'Passenger'}
      William |      Maintenance | 9000000004 | 678bcf   | {'Goods', 'Passenger'}
      Jane |      Lower Hutt | 9000000003 | 345cde   | {'Goods', 'Passenger'}

(4 rows)
cqsh:wmetro> alter table driver add workdays int ;
cqsh:wmetro> update driver set workdays=22 where driver_name='William'
... update driver set workdays=22 where driver_name='Fred';
SyntaxException: line 2:0 mismatched input 'update' expecting EOF (...workdays=22 where driver_name='William'[update]...)
cqsh:wmetro> update driver set workdays=22 where driver_name='Fred';
cqsh:wmetro> update driver set workdays=22 where driver_name='William';
cqsh:wmetro> update driver set workdays=21 where driver_name='Jane';
cqsh:wmetro> update driver set workdays=22 where driver_name='Swen';
cqsh:wmetro> select * from driver;
```

```
driver_name | current_position | mobile      | password | skill                                     | workdays
-----+-----+-----+-----+-----+-----
      Fred |      Upper Hutt | 9000000002 | 234bcd   | {'Passenger'} | 22
      Swen |      Wellington | 9000000001 | 123abc   | {'Passenger'} | 22
      William |      Maintenance | 9000000004 | 678bcf   | {'Goods', 'Passenger'} | 22
      Jane |      Lower Hutt | 9000000003 | 345cde   | {'Goods', 'Passenger'} | 21

(4 rows)
```

```
ington','Diesel');
cqsh:wmetro> select * from vehicles;
```

```
vehicle_id | status      | type
-----+-----+-----
      WR1236 |      Upper Hutt | Kiwi Rail
      WR1234 |      Maintenance | Gulliver
      WR1238 |      Wellington | Diesel
      WR1235 |      Lowe Hutt | Gulliver
      WR1237 |      Wellington | Kiwi Rail
```

```
(5 rows)
;
cqsh:wmetro> select * from vehicles;
```

```
vehicle_id | status      | type
-----+-----+-----
      WR1236 |      Upper Hutt | Kiwi Rail
      WR1234 |      Upper Hutt | Gulliver
      WR1238 |      Wellington | Diesel
      WR1235 |      Lowe Hutt | Gulliver
      WR1237 |      Wellington | Kiwi Rail
```

```
(5 rows)
cqsh:wmetro> alter table vehicle add daily_distance ;
SyntaxException: line 1:39 no viable alternative at input ';' (alter table vehicle add daily_distance [;])
cqsh:wmetro> alter table vehicles add daily_distance;
SyntaxException: line 1:39 no viable alternative at input ';' (alter table vehicles add daily_distance[;])
cqsh:wmetro> alter table vehicles add daily_distance int;
cqsh:wmetro> update vehicles set daily_distance=180 where vehicle_id="WR1236";
SyntaxException: line 1:64 no viable alternative at input ';' (...set daily_distance=180 where vehicle_id=["WR123]6");
cqsh:wmetro> select* from veicles;
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table veicles"
cqsh:wmetro> select * from vehicles;
```

```
vehicle_id | daily_distance | status      | type
-----+-----+-----+-----
      WR1236 |      null |      Upper Hutt | Kiwi Rail
      WR1234 |      null |      Upper Hutt | Gulliver
      WR1238 |      null |      Wellington | Diesel
      WR1235 |      null |      Lowe Hutt | Gulliver
      WR1237 |      null |      Wellington | Kiwi Rail
```

```
(5 rows)
;
;
;
;
;
cqsh:wmetro> select * from vehicles;
```

```
vehicle_id | daily_distance | status      | type
-----+-----+-----+-----
      WR1236 |      180 |      Upper Hutt | Kiwi Rail
```

WR1234		200		Upper Hutt		Gulliver
WR1238		300		Wellington		Diesel
WR1235		50		Lowe Hutt		Gulliver
WR1237		300		Wellington		Kiwi Rail

```
(5 rows)
HICLE_ID='WR1235';
cqsh:wmetro> SELECT * FROM VEHICLE_USAGE;
```

vehicle_id	total_distance
WR1236	3500
WR1234	3000
WR1235	5050
WR1237	5300

```
(4 rows)
```

```
cqsh:wmetro> begin batch
,longitude,time,distance) values('LINE3',2,'Melling',-43.20,171.60,1540,330)
,longitude,time,distance) values('LINE3',2,'Waterloo',-53.50,165.70,0940,40,0)
,longitude,time,distance) values('LINE4',2,'Melling',-43.20,171.60,1540,0)
)
... apply batch ;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Unmatched column names/values"
,longitude,time,distance) values('LINE3',2,'Melling',-43.20,171.60,1540,330.0)
... ;
cqsh:wmetro> begin batch
)
,longitude,time,distance) values('LINE4',2,'Melling',-43.20,171.60,1540,0.0)
... apply batch ;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Unmatched column names/values"
;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Unmatched column names/values"
,longitude,time,distance) values('LINE3',2,'Waterloo',-53.50,165.70,0940,0.0);
,longitude,time,distance) values('LINE4',2,'Melling',-43.20,171.60,1540,0.0)
... ;
0);
InvalidRequest: Error from server: code=2200 [Invalid query] message="Unmatched column names/values"
,longitude,time,distance) values('LINE4',2,'Waterloo',-53.50,165.70,0940,330.0)
... ;
cqsh:wmetro> SELECT * FROM TIME_TABLE;
```

line_name	station_name	distance	latitude	longitude	service_num	time
LINE2	Upper Hutt	0	-41.12	175.07	2	1550
LINE2	Wellington	34.3	-40.28	174.77	2	1130
LINE3	Melling	330	-43.2	171.6	2	1540
LINE3	Waterloo	0	-53.5	165.7	2	940
LINE4	Melling	0	-43.2	171.6	2	1540
LINE4	Waterloo	330	-53.5	165.7	2	940
LINE1	Upper Hutt	34.3	-41.12	175.07	2	1025
LINE1	Wellington	0	-40.28	174.77	2	605

```
(8 rows)
' and station_name='Waterloo';
SyntaxException: line 1:7 no viable alternative at input 'table' (update [table]...)
station_name='Waterloo';
station_name='Melling';
cqsh:wmetro> begin batch
station_name='Waterloo'
station_name='Melling'
... apply batch ;
es(15,'2020-03-04',-52.10,168.90,67);
cqsh:wmetro> select * from time_table;
```

line_name	station_name	distance	latitude	longitude	service_num	time
LINE2	Upper Hutt	0	-41.12	175.07	2	1550
LINE2	Wellington	34.3	-40.28	174.77	2	1130
LINE3	Melling	330	-43.2	171.6	1	1540
LINE3	Waterloo	0	-53.5	165.7	1	940
LINE4	Melling	0	-43.2	171.6	1	1540
LINE4	Waterloo	330	-53.5	165.7	1	940
LINE1	Upper Hutt	34.3	-41.12	175.07	2	1025
LINE1	Wellington	0	-40.28	174.77	2	605

```
(8 rows)
cqsh:wmetro> SELECT * FROM DATA_POINT;
```

sequence	day	latitude	longitude	speed
2020-03-04 00:00:00.000000+0000	15	-52.1	168.9	67
2020-03-09 21:30:25.000000+0000	14	-44.5	160.6	75
2020-03-09 21:07:40.000000+0000	14	-42.5	171.9	75
2020-03-10 00:00:00.000000+0000	14	-42.3	171.5	76

```
(4 rows)
cqsh:wmetro> exit
```

COMMANDS EXECUTED

```
create keyspace wmetro with replication={'class':'SimpleStrategy','replication_factor':1};
describe system_schema.keyspaces;
use wmetro;
```

```
create table driver(driver_name text primary key,password text,mobile bigint,current_position text,skill set<text>);
begin batch
insert into driver(driver_name,password,mobile,current_position,skill) values('Sven','123abc',9000000001,'Wellington',{'Passenger'})
insert into driver(driver_name,password,mobile,current_position,skill) values('Fred','234bcd',9000000002,'Upper Hutt',{'Passenger'})
insert into driver(driver_name,password,mobile,current_position,skill) values('Jane','345cde',9000000003,'Lower Hutt',{'Goods'})
apply batch;
select * from driver;
```

```
create table vehicles(vehicle_id text primary key,status text,type text);
begin batch
insert into vehicles(vehicle_id,status,type) values('WR1234','Maintenance','Gulliver');
insert into vehicles(vehicle_id,status,type) values('WR1235','Lowe Hutt','Gulliver');
insert into vehicles(vehicle_id,status,type) values('WR1236','Upper Hutt','Kiwi Rail');
insert into vehicles(vehicle_id,status,type) values('WR1237','Wellington','Kiwi Rail');
apply batch;
select * from vehicles;
```

```
create table time_table(line_name text, service_num int,station_name text,latitude double,longitude double,time int,distance double, primary key(line_name, station_name));
begin batch
insert into
time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE1',2,'Wellington',-40.28,174.77,0605,0.0)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE1',2,'Upper Hutt',-41.12,175.07,1025,34.3)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE2',2,'Wellington',-40.28,174.77,1130,34.3)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE2',2,'Upper Hutt',-41.12,175.07,1550,0.0)
apply batch;
select * from time_table;
```

```
create table vehicle_usage(vehicle_id text primary key,total_distance counter);
update vehicle_usage set total_distance = total_distance + 3000 where vehicle_id='WR1234';
update vehicle_usage set total_distance = total_distance + 5000 where vehicle_id='WR1235';
update vehicle_usage set total_distance = total_distance + 3500 where vehicle_id='WR1236';
update vehicle_usage set total_distance = total_distance + 5300 where vehicle_id='WR1237';
select * from VEHICLE_USAGE;
```

```
CREATE table data_point(day int,sequence timestamp primary key,latitude double,longitude double,speed double);
begin batch
insert into data_point(day,sequence,latitude,longitude,speed) values(14,'2020-03-10',-42.30,171.50,76)
insert into data_point(day,sequence,latitude,longitude,speed) values(14,'2020-03-10 10:07:40+1300',-42.50,171.90,75)
insert into data_point(day,sequence,latitude,longitude,speed) values(14,'2020-03-10 10:30:25+1300',-44.50,160.60,75)
apply batch;
select * from data_point;
```

```
insert into driver(driver_name,password,mobile,current_position,skill) values('William','678bcf',9000000004,'Wellington',{'Goods','Passenger'})
select * from driver;
```

```
update driver set password='678bcf' where driver_name='William' if password='789gfh';
select * from driver;
```

```
update driver set current_position='Maintenance' where driver_name='William';
select * from driver;
```

```
update driver set skill={'Passenger','Goods'} where driver_name='Jane';
select * from driver;
```

```
alter table driver add workdays int ;
update driver set workdays=22 where driver_name='William';
update driver set workdays=22 where driver_name='Fred';
update driver set workdays=21 where driver_name='Jane';
update driver set workdays=22 where driver_name='Sven';
```

```
insert into vehicles(vehicle_id,status,type) values('WR1238','Wellington','Diesel');
select * from vehicles;
```

```
update vehicles set status='Upper Hutt' where vehicle_id='WR1234';
select * from vehicles;
```

```
alter table vehicles add daily_distance int;
update vehicles set daily_distance = 200 where vehicle_id='WR1234';
```

```
update vehicles set daily_distance = 180 where vehicle_id='WR1236';
update vehicles set daily_distance = 300 where vehicle_id='WR1237';
update vehicles set daily_distance = 50 where vehicle_id='WR1235';
update vehicles set daily_distance = 300 where vehicle_id='WR1238';
select * from vehicles;
```

```
UPDATE VEHICLE_USAGE SET TOTAL_DISTANCE=TOTAL_DISTANCE+50 WHERE VEHICLE_ID='WR1235';
SELECT * FROM VEHICLE_USAGE;
```

```
begin batch
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE3',2,'Melling',-43.20,171.60,1540,330.0)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE3',2,'Waterloo',-53.50,165.70,0940,0.0)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE4',2,'Melling',-43.20,171.60,1540,0.0)
insert into time_table(line_name,service_num,station_name,latitude,longitude,time,distance) values('LINE4',2,'Waterloo',-53.50,165.70,0940,330.0)
apply batch ;
SELECT * FROM TIME_TABLE;
```

```
update time_table set service_num = 1 where line_name='LINE4' and station_name='Waterloo';
update time_table set service_num = 1 where line_name='LINE4' and station_name='Melling';
update time_table set service_num = 1 where line_name='LINE3' and station_name='Waterloo';
update time_table set service_num = 1 where line_name='LINE3' and station_name='Melling';
select * from time_table;
```

```
insert into data_point(day,sequence,latitude,longitude,speed) values(15,'2020-03-04',-52.10,168.90,67);
SELECT * FROM DATA_POINT;
```

```
EXIT
```

```
1. Create a new collection

use student

2. Insert a value

db.student.insert({
  "Name" : "abc",
  "RollNo:" : 1,
  "Age" : 21,
  "ContactNo" : "9000000001",
  "EmailId": "abc@example.com"
})

3. Insert multiple values at once

var Mystudents = [
  {
    "Name" : "def",
    "RollNo:" : 2,
    "Age" : 21,
    "ContactNo" : "9000000002",
    "EmailId": "def@example.com"
  },
  {
    "Name" : "ghi",
    "RollNo:" : 3,
    "Age" : 22,
    "ContactNo" : "9000000003",
    "EmailId": "ghi@example.com"
  },
  {
    "Name" : "jkl",
    "RollNo:" : 4,
    "Age" : 21,
    "ContactNo" : "9000000004",
    "EmailId": "jkl@example.com"
  },
  {
    "Name" : "mno",
    "RollNo:" : 5,
    "Age" : 22,
    "ContactNo" : "9000000005",
    "EmailId": "mno@example.com"
  },
]

db.student.insert(Mystudents);

4. Print all current values

db.getCollection('student').find({}).forEach(printjson)

{
  " _id" : ObjectId("60aaca0014c26c4c599fc88e"),
  "Name" : "abc",
  "RollNo:" : 1,
  "Age" : 21,
  "ContactNo" : "90000000001",
  "EmailId" : "abc@example.com"
}
{
  " _id" : ObjectId("60aacb7214c26c4c599fc893"),
  "Name" : "def",
  "RollNo:" : 3,
  "Age" : 21,
  "ContactNo" : "90000000002",
  "EmailId" : "def@example.com"
}
{
  " _id" : ObjectId("60aacb7214c26c4c599fc894"),
  "Name" : "ghi",
  "RollNo:" : 3,
  "Age" : 22,
  "ContactNo" : "90000000003",
  "EmailId" : "ghi@example.com"
}
{
  " _id" : ObjectId("60aacb7214c26c4c599fc895"),
  "Name" : "jkl",
  "RollNo:" : 4,
  "Age" : 21,
  "ContactNo" : "90000000004",
  "EmailId" : "jkl@example.com"
}
{
  " _id" : ObjectId("60aacb7214c26c4c599fc896"),
  "Name" : "mno",
  "RollNo:" : 5,
```



```
"Age" : 22,
"ContactNo" : "9000000005",
"EmailId" : "mno@example.com"
}

5. Update RollNo of a student

db.student.update({"Name" : "abc"},{$set: { "RollNo" : 10}})

db.getCollection('student').find({"RollNo":10}).forEach(printjson)

{
  "_id" : ObjectId("60aaca0014c26c4c599fc88e"),
  "Name" : "abc",
  "RollNo:" : 10,
  "Age" : 21,
  "ContactNo" : "90000000001",
  "EmailId" : "abc@example.com"
}

6. Update Name of a student

db.student.update({"Name" : "abc"},{$set: { "Name" : "FEM"}})

db.getCollection('student').find({"Name" : "FEM"}).forEach(printjson)

{
  "_id" : ObjectId("60aaca0014c26c4c599fc88e"),
  "Name" : "FEM",
  "RollNo:" : 1,
  "Age" : 21,
  "ContactNo" : "90000000001",
  "EmailId" : "abc@example.com"
}

7. Export to json

mongoexport --db testdb --collection student --out C:\Users\Desktop\student.json

{"_id":{"_id":"60aaca0014c26c4c599fc88e"},"Name":"FEM","age":21.0,"ContactNo":"9000000001","email":"abc@example.com","RollNo":10.0}

{"_id":{"_id":"60aacb7214c26c4c599fc893"},"Name":"def","RollNo":2.0,"Age":21.0,"ContactNo":"9000000002","EmailId":"def@lab.com"}

{"_id":{"_id":"60aacb7214c26c4c599fc894"},"Name":"ghi","RollNo":3.0,"Age":22.0,"ContactNo":"9000000003","EmailId":"ghi@lab.com"}

{"_id":{"_id":"60aacb7214c26c4c599fc895"},"Name":"jkl","RollNo":4.0,"Age":21.0,"ContactNo":"9000000004","EmailId":"jkl@lab.com"}

{"_id":{"_id":"60aacb7214c26c4c599fc896"},"Name":"mno","RollNo":5.0,"Age":22.0,"ContactNo":"9000000005","EmailId":"mno@lab.com"}

8. Drop student

db.getCollection('student').drop()

9. Import from exported file

mongoimport --db stud --collection stud C:\Users\Desktop\student.json

10. Print values
use stud
db.getCollection('stud').find({}).forEach(printjson)

{
  "_id" : ObjectId("60aaca0014c26c4c599fc88e"),
  "Name" : "abc",
  "RollNo:" : 1,
  "Age" : 21,
  "ContactNo" : "90000000001",
  "EmailId" : "abc@example.com"
}
{
  "_id" : ObjectId("60aacb7214c26c4c599fc893"),
  "Name" : "def",
  "RollNo:" : 3,
  "Age" : 21,
  "ContactNo" : "9000000002",
  "EmailId" : "def@example.com"
}
{
  "_id" : ObjectId("60aacb7214c26c4c599fc894"),
  "Name" : "ghi",
  "RollNo:" : 3,
  "Age" : 22,
  "ContactNo" : "9000000003",
  "EmailId" : "ghi@example.com"
}
{
  "_id" : ObjectId("60aacb7214c26c4c599fc895"),
  "Name" : "jkl",
  "RollNo:" : 4,
  "Age" : 21,
```

$$\left. \begin{array}{l} \} \\ \{ \end{array} \right\}$$