

## Cassandra Program - 2

### 1 Create a key space by name Library

```
bmsce@bmsce-Precision-T1700:~$ Cassandra/apache-cassandra-3.11.0/bin
bash: Cassandra/apache-cassandra-3.11.0/bin: Is a directory
bmsce@bmsce-Precision-T1700:~$ Cassandra/apache-cassandra-3.11.0/bin/
bash: Cassandra/apache-cassandra-3.11.0/bin/: Is a directory
bmsce@bmsce-Precision-T1700:~$ cd Cassandra/apache-cassandra-3.11.0/bin/
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 library with replication = {
... 'class':'SimpleStrategy', 'replication_factor':1
... };
cqlsh> describe keyspaces

system_schema system student      system_traces
system_auth  library system_distributed
```

### 2. Create a column family by name Library-Info with attributes Stud\_Id Primary Key, Counter\_value of type Counter, Stud\_Name, Book-Name, Book-Id, Date\_of\_issue

```
cqlsh:library> create table library_info(stud_id int, counter_value counter, stud_name text, book_name text,
book_id int, date_of_issue date, primary key(stud_id, stud_name, book_name, book_id, date_of_issue));
```

```
cqlsh:library> describe library_info
```

```
CREATE TABLE library.library_info (
  stud_id int,
  stud_name text,
  book_name text,
  book_id int,
  date_of_issue date,
  counter_value counter,
  PRIMARY KEY (stud_id, stud_name, book_name, book_id, date_of_issue)
) WITH CLUSTERING ORDER BY (stud_name ASC, book_name ASC, book_id ASC, date_of_issue ASC)
  AND 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';

```

### 3. Insert the values into the table in batch

### 4. Display the details of the table created and increase the value of the counter

```

cqlsh:library> update library_info set counter_value = counter_value + 1 where stud_id = 1 and stud_name
= 'Bruce' and book_name = 'Game of Thrones' and book_id = 1 and date_of_issue = '2022-04-20';
cqlsh:library> select * from library_info;

```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
1	Bruce	Game of Thrones	1	2022-04-20	1

(1 rows)

```

cqlsh:library> update library_info set counter_value = counter_value + 1 where stud_id = 2 and stud_name
= 'Clark' and book_name = 'Song of Ice and Fire' and book_id = 2 and date_of_issue = '2022-04-21';
cqlsh:library> select * from library_info;

```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
1	Bruce	Game of Thrones	1	2022-04-20	1
2	Clark	Song of Ice and Fire	2	2022-04-21	1

(2 rows)

```

cqlsh:library> update library_info set counter_value = counter_value + 1 where stud_id = 112 and
stud_name = 'Diana' and book_name = 'BDA' and book_id = 3 and date_of_issue = '2022-05-04';
cqlsh:library> select * from library_info;

```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
1	Bruce	Game of Thrones	1	2022-04-20	1
2	Clark	Song of Ice and Fire	2	2022-04-21	1
112	Diana	BDA	3	2022-05-04	1

(3 rows)

5. Write a query to show that a student with id 112 has taken a book "BDA" 2 times.

```
cqlsh:library> update library_info set counter_value = counter_value + 1 where stud_id = 112 and  
stud_name = 'Diana' and book_name = 'BDA' and book_id = 3 and date_of_issue = '2022-05-04';  
cqlsh:library> select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
1	Bruce	Game of Thrones	1	2022-04-20	1
2	Clark	Song of Ice and Fire	2	2022-04-21	1
112	Diana	BDA	3	2022-05-04	2

(3 rows)

```
cqlsh:library> select * from library_info where stud_id = 112;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
112	Diana	BDA	3	2022-05-04	2

(1 rows)

## 6. Export the created column to a csv file

```
cqlsh:library> copy library_info (stud_id, stud_name, book_name, book_id, date_of_issue, counter_value) to  
'/home/bmsce/Desktop/data.csv';  
Using 11 child processes
```

Starting copy of library.library\_info with columns [stud\_id, stud\_name, book\_name, book\_id, date\_of\_issue, counter\_value].

Processed: 4 rows; Rate: 21 rows/s; Avg. rate: 21 rows/s

4 rows exported to 1 files in 0.200 seconds.

## 7. Import a given csv dataset from local file system into Cassandra column family

```
cqlsh:library> copy library_info (stud_id, stud_name, book_name, book_id, date_of_issue, counter_value)  
from '/home/bmsce/Desktop/data1.csv';  
Using 11 child processes
```

Starting copy of library.library\_info with columns [stud\_id, stud\_name, book\_name, book\_id, date\_of\_issue, counter\_value].

Processed: 4 rows; Rate: 7 rows/s; Avg. rate: 11 rows/s

4 rows imported from 1 files in 0.381 seconds (0 skipped).

```
cqlsh:library> select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
1	Bruce	Game of Thrones	1	2022-04-20	1
2	Clark	Song of Ice and Fire	2	2022-04-21	1
112	Diana	BDA	3	2022-05-04	2
1	Bruce	Game of Thrones	1	2022-04-20	1
2	Clark	Song of Ice and Fire	2	2022-04-21	1
112	Diana	BDA	3	2022-05-04	2