

## LIBRARY SYSTEM

```
cqlsh> CREATE KEYSPACE Library
...   WITH replication = {
...     'class': 'SimpleStrategy',
...     'replication_factor': 1
...   };
cqlsh> USE Library;
cqlsh:library> CREATE TABLE Library_Info (
...   Stud_Id int,
...   Book_Id int,
...   Stud_Name text,
...   Book_Name text,
...   Date_of_issue date,
...   PRIMARY KEY (Stud_Id, Book_Id)
... );
cqlsh:library> CREATE TABLE Library_Counter (
...   Stud_Id int,
...   Book_Name text,
...   Counter_value counter,
...   PRIMARY KEY (Stud_Id, Book_Name)
... );
cqlsh:library> BEGIN BATCH
...
...   INSERT INTO Library_Info (Stud_Id, Book_Id, Stud_Name, Book_Name, Date_of_issue)
...   VALUES (112, 101, 'Rahul', 'BDA', '2026-02-10');
...
...   INSERT INTO Library_Info (Stud_Id, Book_Id, Stud_Name, Book_Name, Date_of_issue)
...   VALUES (113, 102, 'Amit', 'ML', '2026-02-12');
...
...   APPLY BATCH;
cqlsh:library> UPDATE Library_Counter
...   SET Counter_value = Counter_value + 1
...   WHERE Stud_Id = 112 AND Book_Name = 'BDA';
cqlsh:library> UPDATE Library_Counter
...   SET Counter_value = Counter_value + 1
...   WHERE Stud_Id = 112 AND Book_Name = 'BDA';
...
...   DESCRIBE TABLE Library_Info;
```

```
cqlsh:library> DESCRIBE TABLE Library_Info;
CREATE TABLE library.library_info (
  stud_id int,
  book_id int,
  book_name text,
  date_of_issue date,
  stud_name text,
  PRIMARY KEY (stud_id, book_id)
) WITH CLUSTERING ORDER BY (book_id ASC)
  AND additional_write_policy = '99p'
  AND bloom_filter_fp_chance = 0.01
  AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
  AND cdc = false
  AND comment = ''
  AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
  AND compression = {'chunk_length_in_kb': '16', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
  AND memtable = 'default'
  AND crc_check_chance = 1.0
  AND default_time_to_live = 0
  AND extensions = {}
  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 = 'BLOCKING'
  AND speculative_retry = '99p';
cqlsh:library> SELECT * FROM Library_Info;
stud_id | book_id | book_name | date_of_issue | stud_name
-----+-----+-----+-----+-----+
  113 |    102 |      ML | 2026-02-12 |      Amit
  112 |    101 |      BDA | 2026-02-10 |      Rahul
(2 rows)
cqlsh:library> UPDATE Library_Counter
...   SET Counter_value = Counter_value + 1
...   WHERE Stud_Id = 112 AND Book_Name = 'BDA';
cqlsh:library> SELECT Counter_value
...   FROM Library_Counter
...   WHERE Stud_Id = 112 AND Book_Name = 'BDA';
counter_value
-----
  3
```

```
cqlsh:library> COPY Library_Info TO 'library_info.csv' WITH HEADER = TRUE;
Using 16 child processes

Starting copy of library.library_info with columns [stud_id, book_id, book_name, date_of_issue, stud_name].
Processed: 2 rows; Rate: 22 rows/s; Avg. rate: 22 rows/s
2 rows exported to 1 files in 0.107 seconds.
```