1 Create a key space by name Library

```
create keyspace library with replication={
  ... 'class':'SimpleStrategy','replication_factor':1
  ... };
```

```
cqlsh> describe keyspace library;

CREATE KEYSPACE library WITH replication = {'class': 'SimpleStrategy', 'replication_factor': '1'}  AND durable_writes = true;
```

```
use library;
```

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

```
create table library_info(
        ... stud_id int ,
        ... counter_value counter,
        ... stud_name text,
        ... book_name text,
        ... book_id int,
        ... date_of_issue timestamp,
        ... primary key(stud_id,stud_name,book_name,book_id,date_of_issue));
```

```
cqlsh:library> describe table library_info;

CREATE TABLE library.library_info (
    stud_id int,
    stud_name text,
    book_name text,
    book_id int,
    date_of_issue timestamp,
    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 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 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';
```

3. Insert the values into the table in batch

```
cqlsh:library> update library_info set counter_value=counter_value+1 where stud_id=1 and stud_name = 'Raj' and book_name='BDA' and book_id=200 and date_of_issue='2022-04-30';
cqlsh:library> update library_info set counter_value=counter_value+1 where stud_id=2 and stud_name = 'Ravi' and book_name='ADA' and book_id=100 and date_of_issue='2022-04-30';
cqlsh:library> update library_info set counter_value=counter_value+1 where stud_id=1 and stud_name = 'Raj' and book_name='BDA' and book_id=200 and date_of_issue='2022-05-30';
```

cqlsh:library> select * from library_info;

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

 stud_id | stud_name | book_name | book_id | date_of_issue                     | counter_value
---------+-----------+-----------+---------+-----------------------------------+---------------
       1 |       Raj |       BDA |     200 | 2022-04-29 18:30:00.000000+0000 |             1
       1 |       Raj |       BDA |     200 | 2022-05-29 18:30:00.000000+0000 |             1
       2 |      Ravi |       ADA |     100 | 2022-04-29 18:30:00.000000+0000 |             1

(3 rows)
```

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 = 'Raj' and book_name='BDA' and book_id=200 and date_of_issue='2022-04-30';
cqlsh:library> select * from library_info;

```
 stud_id | stud_name | book_name | book_id | date_of_issue                     | counter_value
---------+-----------+-----------+---------+-----------------------------------+---------------
       1 |       Raj |       BDA |     200 | 2022-04-29 18:30:00.000000+0000 |             2
       1 |       Raj |       BDA |     200 | 2022-05-29 18:30:00.000000+0000 |             1
       2 |      Ravi |       ADA |     100 | 2022-04-29 18:30:00.000000+0000 |             1
```

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

 stud_id | stud_name | book_name | book_id | date_of_issue                     | counter_value
---------+-----------+-----------+---------+-----------------------------------+---------------
       1 |       Raj |       BDA |     200 | 2022-04-29 18:30:00.000000+0000 |             2
       1 |       Raj |       BDA |     200 | 2022-05-29 18:30:00.000000+0000 |             1
       2 |      Ravi |       ADA |     100 | 2022-04-29 18:30:00.000000+0000 |             1

(3 rows)
```

5. Write a query to show that a student with id 1 has taken a book “BDA” 2 times.
cqlsh:library> select counter_value from library_info where stud_id = 1;

```
 counter_value
---------------
             2
             1
```

```
cqlsh:library> select counter_value from library_info where stud_id = 1;

 counter_value
---------------
             2
             1

(2 rows)
```

6. Export the created column to a csv file

```
cqlsh:lab2_library> copy library_info(stud_id,stud_name,book_id,date_of_issue,counter_value)to 'lib.csv';
Using 7 child processes

Starting copy of lab2_library.library_info with columns [stud_id, stud_name, book_id, date_of_issue, counter_v
alue].
Processed: 2 rows; Rate:       9 rows/s; Avg. rate:       9 rows/s
2 rows exported to 1 files in 0.250 seconds.
```

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

cqlsh:library>truncate library_info;

cqlsh:library>copy library_info(stud_id,stud_name,book_id,date_of_issue,counter_value) from ‘lib.csv’;