BDA LAB 4

1. Create a key space by name Library

```
cqlsh> create keyspace Library2 with replication = {'class':'SimpleStrategy','replication_factor':1};
cqlsh> describe Library2

CREATE KEYSPACE library2 WITH replication = {'class': 'SimpleStrategy', 'replication_factor': '1'}  AND durable_
writes = true;
```

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:library2> create table library_info(Stud_id int,Counter_value counter,Stud_Name text,Book_N
ame text,Book_id text,Date_of_issue timestamp,Primary key(Stud_id,Stud_Name,Book_Name,Book_id,Dat
e_of_issue));
```

3. Insert the values into the table in batch

```
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Roy' and S
tud_id=1 and Book_Name='BDA' and Book_id='101' and Date_of_issue='2022-04-22';
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Tony' and
Stud_id=2 and Book_Name='CNS' and Book_id='102' and Date_of_issue='2022-04-16';
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Prem' and
Stud_id=3 and Book_Name='BDA' and Book_id='103' and Date_of_issue='2022-02-15';
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Prem' and
Stud_id=3 and Book_Name='BDA' and Book_id='106' and Date_of_issue='2022-02-20';
cqlsh:library2> select * from library_info
            ...
cqlsh:library2> select * from library_info;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |       Roy |       BDA |     101 | 2022-04-21 18:30:00.000000+0000 |             1
       2 |      Tony |       CNS |     102 | 2022-04-15 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     103 | 2022-02-14 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     106 | 2022-02-19 18:30:00.000000+0000 |             1

(4 rows)
```

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

```
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Roy' and S
tud_id=1 and Book_Name='BDA' and Book_id='101' and Date_of_issue='2022-04-22';
cqlsh:library2> select * from library_info;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |       Roy |       BDA |     101 | 2022-04-21 18:30:00.000000+0000 |             2
       2 |      Tony |       CNS |     102 | 2022-04-15 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     103 | 2022-02-14 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     106 | 2022-02-19 18:30:00.000000+0000 |             1

(4 rows)
cqlsh:library2> update library_info set Counter_value=Counter_value+1 where Stud_Name='Prem' and
Stud_id=3 and Book_Name='BDA' and Book_id='106' and Date_of_issue='2022-02-20';
cqlsh:library2> select * from library_info;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |       Roy |       BDA |     101 | 2022-04-21 18:30:00.000000+0000 |             2
       2 |      Tony |       CNS |     102 | 2022-04-15 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     103 | 2022-02-14 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     106 | 2022-02-19 18:30:00.000000+0000 |             2

(4 rows)
```

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

```
cqlsh:library2> select * from library_info;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |       Roy |       BDA |     101 | 2022-04-21 18:30:00.000000+0000 |             2
       2 |      Tony |       CNS |     102 | 2022-04-15 18:30:00.000000+0000 |             1
       4 |     Arjun |       BDA |     201 | 2022-02-28 18:30:00.000000+0000 |             2
       4 |     Arjun |       BDA |     201 | 2022-03-14 18:30:00.000000+0000 |             1
     112 |       raj |       BDA |     521 | 2022-03-22 18:30:00.000000+0000 |             2
       3 |      Prem |       BDA |     103 | 2022-02-14 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     106 | 2022-02-19 18:30:00.000000+0000 |             2

(7 rows)
cqlsh:library2> select * from library_info where Stud_id=112;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
     112 |       raj |       BDA |     521 | 2022-03-22 18:30:00.000000+0000 |             2

(1 rows)
```

6. Export the created column to a csv file

```
cqlsh:library2> copy library_info(stud_id,stud_name,book_name,book_id,date_of_issue,counter_value
) to '/home/bmsce/Desktop/bda/lib.csv';
Using 11 child processes

Starting copy of library2.library_info with columns [stud_id, stud_name, book_name, book_id, date
_of_issue, counter_value].
Processed: 7 rows; Rate:      45 rows/s; Avg. rate:      45 rows/s
7 rows exported to 1 files in 0.165 seconds.
cqlsh:library2> copy library_info1(stud_id,stud_name,book_name,book_id,date_of_issue,counter_valu
e) from '/home/bmsce/Desktop/bda/lib.csv';
```

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

```
cqlsh:library2> create table library_info1(Stud_id int,Counter_value counter,Stud_Name text,Book_
Name text,Book_id text,Date_of_issue timestamp,Primary key(Stud_id,Stud_Name,Book_Name,Book_id,Da
te_of_issue));
cqlsh:library2> copy library_info1(stud_id,stud_name,book_name,book_id,date_of_issue,counter_valu
e) from '/home/bmsce/Desktop/bda/lib.csv';
Using 11 child processes

Starting copy of library2.library_info1 with columns [stud_id, stud_name, book_name, book_id, dat
e_of_issue, counter_value].
Processed: 7 rows; Rate:      13 rows/s; Avg. rate:      18 rows/s
7 rows imported from 1 files in 0.384 seconds (0 skipped).
cqlsh:library2> select * from library_info1;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |       Roy |       BDA |     101 | 2022-04-21 18:30:00.000000+0000 |             2
       2 |      Tony |       CNS |     102 | 2022-04-15 18:30:00.000000+0000 |             1
       4 |     Arjun |       BDA |     201 | 2022-02-28 18:30:00.000000+0000 |             2
       4 |     Arjun |       BDA |     201 | 2022-03-14 18:30:00.000000+0000 |             1
     112 |       raj |       BDA |     521 | 2022-03-22 18:30:00.000000+0000 |             2
       3 |      Prem |       BDA |     103 | 2022-02-14 18:30:00.000000+0000 |             1
       3 |      Prem |       BDA |     106 | 2022-02-19 18:30:00.000000+0000 |             2

(7 rows)
```