

LAB -3

3. Perform the following DB operations using Cassandra.

1. Create a keyspace by name Library

```
CREATE KEYSPACE LIBRARY1 WITH REPLICATION = {  
  ... 'class':'SimpleStrategy',  
  ... 'replication_factor':1};
```

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));
```

3. Insert the values into the table in batch

```
update library_info
```

```
    ... set counter_value = counter_value +1 where stud_id=121 and  
stud_name='Prema' and book_name='cns' and book_id=113 and  
date_of_issue='2022-06-29';  
select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
121	Prema	cns	113	2022-06-28 18:30:00.000000+0000	1

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

```
update library_info set counter_value = counter_value +1 where stud_id=121 and  
stud_name='Prema' and book_name='cns' and book_id=113 and  
date_of_issue='2022-06-29';  
cqlsh:library1> select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
121	Prema	cns	113	2022-06-28 18:30:00.000000+0000	2

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

```
cqlsh:library1> update library_info set counter_value = counter_value +2 where
stud_id=111 and stud_name='Pooja' and book_name='bda' and book_id=112 and
date_of_issue='202
2-06-29';
select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
111	Pooja	bda	112	2022-06-28 18:30:00.000000+0000	2
121	Prema	cns	113	2022-06-28 18:30:00.000000+0000	2

6. Export the created column to a csv file

COPY

```
library_info(stud_id,counter_value,stud_name,book_name,book_id,date_of_issue)
TO 'lib1.csv'
```

... ;

Using 7 child processes

Starting copy of library1.library_info with columns [stud_id, counter_value, stud_name, book_name, book_id, date_of_issue].

Processed: 2 rows; Rate: 17 rows/s; Avg. rate: 17 rows/s

2 rows exported to 1 files in 0.143 seconds.

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

```
TRUNCATE library_info;
```

```
cqlsh:library1> select * from library_info;
```

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
---------	-----------	-----------	---------	---------------	---------------

(0 rows)

cqlsh:library1> COPY

library_info(stud_id,counter_value,stud_name,book_name,book_id,date_of_issue)
FROM 'lib1.csv' ;

Using 7 child processes

Starting copy of library1.library_info with columns [stud_id, counter_value,
stud_name, book_name, book_id, date_of_issue].

Processed: 2 rows; Rate: 4 rows/s; Avg. rate: 6 rows/s

2 rows imported from 1 files in 0.364 seconds (0 skipped).

cqlsh:library1> select * from library_info;

stud_id	stud_name	book_name	book_id	date_of_issue	counter_value
111	Pooja	bda	112	2022-06-28 18:30:00.000000+0000	2
121	Prema	cns	113	2022-06-28 18:30:00.000000+0000	2

Output screenshots:

```
prema@LAPTOP-OT0B8C9E: /mnt/c/Users/prema
Microsoft Windows [Version 10.0.19044.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prema>WSL
-bash: export: 'Files/Java/jdk1.8.0_261': not a valid identifier
prema@LAPTOP-OT0B8C9E: /mnt/c/Users/prema$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.0.0 | Cassandra 4.0.4 | CQL spec 3.4.5 | Native protocol v5]
Use HELP for help.
cqlsh> CREATE KEYSPACE LIBRARY1 WITH REPLICATION = {
... 'class':'SimpleStrategy',
... 'replication_factor':1};
cqlsh> use LIBRARY1;
cqlsh:library1> create table library_info(
... stud_id int,
... counter_value counter,
... stud_name text,
... book_name text,
... book_id int,
... date_of_issue timestamp);
InvalidRequest: Error from server: code=2200 [Invalid query] message="No PRIMARY KEY specified for table 'library_info' (exactly one required)"
cqlsh:library1> create table library_info( stud_id int, counter_value counter, stud_name text, book_name text, book_id int, date_of_issue timestamp);
InvalidRequest: Error from server: code=2200 [Invalid query] message="No PRIMARY KEY specified for table 'library_info' (exactly one required)"
cqlsh:library1> 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,stu
d_name,book_name,book_id,date_of_joining));
InvalidRequest: Error from server: code=2200 [Invalid query] message="Unknown column 'date_of_joining' referenced in PRIMARY KEY for table 'library_info'"
cqlsh:library1> 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,stu
d_name,book_name,book_id,date_of_issue));
cqlsh:library1> update library_info
... set counter_value = counter_value +1 where stud_id=121 and stud_name='Prema' and book_name='cns' and book_id=113 and date_of_issue='2022-06-29';
cqlsh:library1> select * from library_info;

stud_id | stud_name | book_name | book_id | date_of_issue | counter_value
-----+-----+-----+-----+-----+-----
121 | Prema | dns | 113 | 2022-06-28 18:30:00.000000+0000 | 1

(1 rows)
cqlsh:library1> update library_info set counter_value = counter_value +1 where stud_id=121 and stud_name='Prema' and book_name='cns' and book_id=113 and date_of_issue='202
2-06-29';
cqlsh:library1> select * from library_info;
```

```
prema@LAPTOP-OTO8BC9E: /mnt/c/Users/prema
cqlsh:library1> select * from library_info;

  stud_id | stud_name | book_name | book_id | date_of_issue | counter_value
-----+-----+-----+-----+-----+-----
    121 |   Prema   |    cns    |   113   | 2022-06-28 18:30:00.000000+0000 |          2
(1 rows)

cqlsh:library1> update library_info set counter_value = counter_value +2 where stud_id=121 and stud_name='Pooja' and book_name='bda' and book_id=112 and date_of_issue='2022-06-29';
cqlsh:library1> update library_info set counter_value = counter_value +2 where stud_id=111 and stud_name='Pooja' and book_name='bda' and book_id=112 and date_of_issue='2022-06-29';
cqlsh:library1> select * from library_info;

  stud_id | stud_name | book_name | book_id | date_of_issue | counter_value
-----+-----+-----+-----+-----+-----
    111 |   Pooja   |    bda    |   112   | 2022-06-28 18:30:00.000000+0000 |          2
    121 |   Pooja   |    bda    |   112   | 2022-06-28 18:30:00.000000+0000 |          2
    121 |   Prema   |    cns    |   113   | 2022-06-28 18:30:00.000000+0000 |          2
(3 rows)

cqlsh:library1> delete from library_info where stud_id = 121 and stud_name = 'Pooja';
cqlsh:library1> select * from library_info;

  stud_id | stud_name | book_name | book_id | date_of_issue | counter_value
-----+-----+-----+-----+-----+-----
    111 |   Pooja   |    bda    |   112   | 2022-06-28 18:30:00.000000+0000 |          2
    121 |   Prema   |    cns    |   113   | 2022-06-28 18:30:00.000000+0000 |          2
(2 rows)

cqlsh:library1>
```