1BM18CS089
SAHANA L

LIBRARY

1. Create a keyspace by name Library.

```
CREATE KEYSPACE library WITH REPLICATION={ 'class' : 'SimpleStrategy',
'replication_factor' : 1};
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, date_of_issue timestamp, book_id int, PRIMARY
KEY(stud_id,stud_name,book_name,date_of_issue,book_id));
```

3. Insert the values into the table in batch.

```
UPDATE library_info SET counter_value = counter_value + 1 WHERE stud_id
= 111 and stud_name = 'SAM' and book_name = 'ML' and date_of_issue =
'2020-10-11'and book_id = 200;
UPDATE library_info SET counter_value = counter_value + 1 WHERE stud_id
= 112 and stud_name = 'SHAAN' and book_name = 'BDA' and date_of_issue =
'2020-09-21'and book_id = 300;
UPDATE library_info SET counter_value = counter_value + 1 WHERE
stud_id = 113 and stud_name = 'AYMAN' and book_name = 'OOMD' and
date_of_issue = '2020-04-01'and book_id = 400;
SELECT * FROM library_info;
```

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```
cqlsh> CREATE KEYSPACE library WITH REPLICATION={ 'class' : 'SimpleStrategy','replication_factor' : 1};
cqlsh> USE library;
cqlsh:library> create table library_info(stud_id int, counter_value Counter, stud_name
           ... text,book_name text, date_of_issue timestamp, book_id int, PRIMARY
           ... KEY(stud_id,stud_name,book_name,date_of_issue,book_id));
cqlsh:library> UPDATE library_info SET counter_value = counter_value + 1 WHERE stud_id
           ... = 111 and stud_name = 'SAM' and book_name = 'ML' and date_of_issue =
           ... '2020-10-11'and book_id = 200;
cqlsh:library> UPDATE library_info SET counter_value = counter_value + 1 WHERE stud_id
           ... = 112 and stud_name = 'SHAAN' and book_name = 'BDA' and date_of_issue =
           ... '2020-09-21'and book_id = 300;
cqlsh:library> UPDATE library_info SET counter_value = counter_value + 1 WHERE
           ... stud_id = 113 and stud_name = 'AYMAN' and book_name = 'OOMD' and
           ... date_of_issue = '2020-04-01'and book_id = 400;
cqlsh:library> SELECT * FROM library_info;

 stud_id | stud_name | book_name | date_of_issue                   | book_id | counter_value
---------+-----------+-----------+---------------------------------+---------+---------------
     111 |       SAM |        ML | 2020-10-10 18:30:00.000000+0000 |     200 |             1
     113 |     AYMAN |      OOMD | 2020-03-31 18:30:00.000000+0000 |     400 |             1
     112 |     SHAAN |       BDA | 2020-09-20 18:30:00.000000+0000 |     300 |             1

(3 rows)
cqlsh:library>
```

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 = 112 and stud_name = 'SHAAN' and book_name = 'BDA' and date_of_issue = '2020-09-21'and book_id = 300;

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

SELECT * FROM library_info WHERE stud_id = 112;

```
cqlsh:library> UPDATE library_info SET counter_value = counter_value + 1 WHERE stud_id
           ... = 112 and stud_name = 'SHAAN' and book_name = 'BDA' and date_of_issue =
           ... '2020-09-21'and book_id = 300;
cqlsh:library>
cqlsh:library> SELECT * FROM library_info WHERE stud_id = 112;

 stud_id | stud_name | book_name | date_of_issue                   | book_id | counter_value
---------+-----------+-----------+---------------------------------+---------+---------------
     112 |     SHAAN |       BDA | 2020-09-20 18:30:00.000000+0000 |     300 |             2

(1 rows)
cqlsh:library>
```

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6. Export the created column to a csv file.

COPY Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id, Date_Of_Issue, Counter_value) TO '/home/sahana/Desktop/library_info.csv';

```
cqlsh:library> COPY Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id, Date_Of_Issue,
           ... Counter_value) TO '/home/sahana/Desktop/library_info.csv';
Using 7 child processes

Starting copy of library.library_info with columns [stud_id, stud_name, book_name, book_id,
counter_value].
Processed: 3 rows; Rate:      13 rows/s; Avg. rate:      13 rows/s
3 rows exported to 1 files in 0.264 seconds.
cqlsh:library>
```

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

create table library_info2(stud_id int, counter_value Counter, stud_name text,book_name text, date_of_issue timestamp, book_id int, PRIMARY KEY(stud_id,stud_name,book_name,date_of_issue,book_id));

```
cqlsh:library> create table library_info2(stud_id int, counter_value Counter, stud_name
           ... text,book_name text, date_of_issue timestamp, book_id int, PRIMARY KEY
           ... (stud_id,stud_name,book_name,date_of_issue,book_id));
```

COPY library_info2 (stud_id, stud_name, book_name, book_id, date_of_issue, counter_value) FROM '/home/sahana/Desktop/library_info.csv';

SELECT * FROM library_info2;

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```
cqlsh:library> COPY library_info2 (stud_id, stud_name, book_name, book_id, date_of_issue,
           ... counter_value) FROM '/home/sahana/Desktop/library_info.csv';
Using 7 child processes

Starting copy of library.library_info2 with columns [stud_id, stud_name, book_name, book_id, date_of_issue,
 counter_value].
Processed: 3 rows; Rate:       6 rows/s; Avg. rate:       8 rows/s
3 rows imported from 1 files in 0.376 seconds (0 skipped).
cqlsh:library> SELECT * FROM library_info2;

 stud_id | stud_name | book_name | date_of_issue                   | book_id | counter_value
---------+-----------+-----------+---------------------------------+---------+---------------
     111 |       SAM |        ML | 2020-10-10 18:30:00.000000+0000 |     200 |             1
     113 |     AYMAN |      OOMD | 2020-03-31 18:30:00.000000+0000 |     400 |             1
     112 |     SHAAN |       BDA | 2020-09-20 18:30:00.000000+0000 |     300 |             1

(3 rows)
cqlsh:library>
```