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BDA LAB WEEK 4 CASSANDRA ASSIGNMENT WITH SCREENSHOTS:

1. Create a key space by name Library

```
cqlsh> describe keyspaces;

system_schema  system         system_distributed  system_traces
system_auth    test_keyspace  employee

cqlsh> 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;

cqlsh> 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

```
cqlsh> use library;
cqlsh:library> 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 bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    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_chance = 0.0
    AND speculative_retry = '99PERCENTILE';
```

3. Insert the values into the table in batch

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='Vamshi' and book_name='OOMD' and book_id=100 and date_of_issue='2022-
18';
cqlsh:library> update Library_info set counter_value=counter_value+1 where stud_id=2 and stud_name='Ravi' and book_name='CNS' and book_id=101 and date_of_issue='2022-03-
;
cqlsh:library> update Library_info set counter_value=counter_value+1 where stud_id=112 and stud_name='Ramesh' and book_name='BDA' and book_id=102 and date_of_issue='2022
-19';
cqlsh:library> select*from Library_Info;

 stud_id | stud_name | book_name | book_id | date_of_issue                | counter_value
---------+-----------+-----------+---------+------------------------------+---------------
       1 |    Vamshi |      OOMD |     100 | 2022-04-17 18:30:00.000000+0000 |             1
       2 |      Ravi |       CNS |     101 | 2022-03-14 18:30:00.000000+0000 |             1
     112 |    Ramesh |       BDA |     102 | 2022-03-18 18:30:00.000000+0000 |             1

(3 rows)
```

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

```
cqlsh:library> update Library_info set counter_value=counter_value+1 where stud_id=112 and stud_name='Ramesh' and book_name='BDA' and book_id=102 and date_
-19';
cqlsh:library> select*from Library_Info;

 stud_id | stud_name | book_name | book_id | date_of_issue                | counter_value
---------+-----------+-----------+---------+------------------------------+---------------
       1 |    Vamshi |      OOMD |     100 | 2022-04-17 18:30:00.000000+0000 |             1
       2 |      Ravi |       CNS |     101 | 2022-03-14 18:30:00.000000+0000 |             1
     112 |    Ramesh |       BDA |     102 | 2022-03-18 18:30:00.000000+0000 |             2

(3 rows)
```

6. Export the created column to a csv file

```
cqlsh:library> copy Library_Info (stud_id,stud_name,book_name,book_id,date_of_issue,counter_value) to 'C:\Users\shara\OneDrive\Documents\Library_Info.csv' with header=true

Using 7 child processes

Starting copy of library.library_info with columns [stud_id, stud_name, book_name, book_id, date_of_issue, counter_value].
Processed: 3 rows; Rate:       2 rows/s; Avg. rate:       1 rows/s
3 rows exported to 1 files in 3.164 seconds.
```

	A	B	C	D	E	F	G	H
1	stud_id	stud_nam	book_nan	book_id	date_of_is	counter_value		
2	112	Ramesh	BDA	102	2022-03-1	2		
3	1	Vamshi	OOMD	100	2022-04-1	1		
4	2	Ravi	CNS	101	2022-03-1	1		
5								

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

```
cqlsh:library> create table Library_test(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,b
ook_name,book_id,date_of_issue));
cqlsh:library> COPY Library_test(stud_id,stud_name,book_name,book_id,date_of_issue,counter_value) FROM 'C:\Users\shara\OneDrive\Documents\Library_Info.csv' with header=true
;
Using 7 child processes

Starting copy of library.library_test with columns [stud_id, stud_name, book_name, book_id, date_of_issue, counter_value].
Process ImportProcess-8:      1 rows/s; Avg. rate:      1 rows/s
```

```
AttributeError: 'NoneType' object has no attribute 'add_timer'
Processed: 3 rows; Rate:       1 rows/s; Avg. rate:       0 rows/s
3 rows imported from 1 files in 6.260 seconds (0 skipped).
cqlsh:library> select*from Library_test;

 stud_id | stud_name | book_name | book_id | date_of_issue                   | counter_value
---------+-----------+-----------+---------+---------------------------------+---------------
       1 |    Vamshi |      OOMD |     100 | 2022-04-17 18:30:00.000000+0000 |             1
       2 |      Ravi |       CNS |     101 | 2022-03-14 18:30:00.000000+0000 |             1
     112 |    Ramesh |       BDA |     102 | 2022-03-18 18:30:00.000000+0000 |             2

(3 rows)
cqlsh:library>
```