

NEHA CATHRIN A
1BM19CS099
6B

Program 2:

1 Create a key space by name Library

```
use HELP for help.  
cqlsh> create keyspace library with replication = { 'class' : 'SimpleStrategy' , 'replication_factor' : 1 };  
cqlsh> describe library  
  
CREATE KEYSPACE library WITH replication = { 'class': 'SimpleStrategy', 'replication_factor': '1' } AND durable_writes = true;  
cqlsh> █
```

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> create table library.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> select * from library.library_info;  
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table library_info"  
cqlsh> select * from library.library_info;  
  
stud_id | stud_name | book_name | date_of_issue | book_id | counter_value  
-----+-----+-----+-----+-----+-----  
(0 rows)  
cqlsh> █
```

3. Insert the values into the table in batch

```
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 1 and stud_name = 'rohan' and book_name = 'ML' and  
date_of_issue = '2020-10-11' and book_id = 100;  
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 2 and stud_name = 'lisha' and book_name = 'DBMS' and  
date_of_issue = '2020-11-11' and book_id = 200;  
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 3 and stud_name = 'sameer' and book_name = 'JAVA' and  
date_of_issue = '2021-11-21' and book_id = 300;  
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 4 and stud_name = 'zoye' and book_name = 'AI' and  
date_of_issue = '2021-05-21' and book_id = 400;  
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 5 and stud_name = 'aryan' and book_name = 'ADA' and  
date_of_issue = '2020-01-01' and book_id = 500;  
cqlsh> select * from library.library_info;  
  
stud_id | stud_name | book_name | date_of_issue | book_id | counter_value  
-----+-----+-----+-----+-----+-----  
5 | aryan | ADA | 2019-12-31 18:30:00.000000+0000 | 500 | 1  
1 | rohan | ML | 2020-10-10 18:30:00.000000+0000 | 100 | 1  
2 | lisha | DBMS | 2020-11-10 18:30:00.000000+0000 | 200 | 1  
4 | zoye | AI | 2021-05-20 18:30:00.000000+0000 | 400 | 1  
3 | sameer | JAVA | 2021-11-20 18:30:00.000000+0000 | 300 | 1  
(5 rows)
```

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

```
stud_id | stud_name | book_name | date_of_issue | book_id | counter_value  
-----+-----+-----+-----+-----+-----  
5 | aryan | ADA | 2019-12-31 18:30:00.000000+0000 | 500 | 1  
1 | rohan | ML | 2020-10-10 18:30:00.000000+0000 | 100 | 1  
2 | lisha | DBMS | 2020-11-10 18:30:00.000000+0000 | 200 | 1  
4 | zoye | AI | 2021-05-20 18:30:00.000000+0000 | 400 | 1  
3 | sameer | JAVA | 2021-11-20 18:30:00.000000+0000 | 300 | 1  
(5 rows)  
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 4 and stud_name = 'zoye' and book_name = 'AI' and  
date_of_issue = '2021-05-21' and book_id = 400;  
cqlsh> select * from library.library_info;  
  
stud_id | stud_name | book_name | date_of_issue | book_id | counter_value  
-----+-----+-----+-----+-----+-----  
5 | aryan | ADA | 2019-12-31 18:30:00.000000+0000 | 500 | 1  
1 | rohan | ML | 2020-10-10 18:30:00.000000+0000 | 100 | 1  
2 | lisha | DBMS | 2020-11-10 18:30:00.000000+0000 | 200 | 1  
4 | zoye | AI | 2021-05-20 18:30:00.000000+0000 | 400 | 2  
3 | sameer | JAVA | 2021-11-20 18:30:00.000000+0000 | 300 | 1  
(5 rows)
```

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

```
cqlsh> UPDATE library.library_info SET counter_value = counter_value + 1 WHERE stud_id = 2 and stud_name = 'lisha' and book_name = 'DBMS' and date_of_issue = '2020-11-11' and book_id = 200;
cqlsh> select * from library.library_info where stud_id=2;
```

stud_id	stud_name	book_name	date_of_issue	book_id	counter_value
2	lisha	DBMS	2020-11-10 18:30:00.000000+0000	200	2

(1 rows)

6. Export the created column to a csv file

```
cqlsh> COPY
... library.library_info(stud_id,stud_name,book_name,book_id,date_of_issue,counter_value) TO '\libraryInfo.csv' ;
Using 11 child processes

Starting copy of library.library_info with columns [stud_id, stud_name, book_name, book_id, date_of_issue, counter_value].
Processed: 5 rows; Rate: 35 rows/s; Avg. rate: 35 rows/s
5 rows exported to 1 files in 0.153 seconds.
cqlsh>
```

Text Import - [%5ClibraryInfo.csv]

Import

Character set: Western Europe (Apple Macintosh/Icelandic)

Language: Default - English (India)

From row: 1

Separator Options

☐ Fixed width ☒ Separated by

☒ Tab ☒ Comma ☒ Semicolon ☐ Space ☐ Other

☐ Merge delimiters ☐ Trim spaces String delimiter: "

Other Options

☐ Format quoted field as text ☐ Detect special numbers

Fields

Column type:

	Standard	Standard	Standard	Standard	Standard	Standard
1	3	sameer	JAVA	300	2021-11-20 18:30:00.000+0000	1
2	1	rohan	ML	100	2020-10-10 18:30:00.000+0000	1
3	4	zoye	AI	400	2021-05-20 18:30:00.000+0000	2
4	5	aryan	ADA	500	2019-12-31 18:30:00.000+0000	1
5	2	lisha	DBMS	200	2020-11-10 18:30:00.000+0000	2

Help OK Cancel

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

```
cqlsh> create table library.library_copy(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> COPY
... library.library_copy(stud_id,stud_name,book_name,book_id,date_of_issue,counter_value) FROM '\libraryInfo.csv';
Using 11 child processes

Starting copy of library.library_copy with columns [stud_id, stud_name, book_name, book_id, date_of_issue, counter_value].
Processed: 5 rows; Rate: 9 rows/s; Avg. rate: 13 rows/s
5 rows imported from 1 files in 0.377 seconds (0 skipped).
cqlsh> select * from library.library_copy;
```

stud_id	stud_name	book_name	date_of_issue	book_id	counter_value
5	aryan	ADA	2019-12-31 18:30:00.000000+0000	500	1
1	rohan	ML	2020-10-10 18:30:00.000000+0000	100	1
2	lisha	DBMS	2020-11-10 18:30:00.000000+0000	200	2
4	zoye	AI	2021-05-20 18:30:00.000000+0000	400	2
3	sameer	JAVA	2021-11-20 18:30:00.000000+0000	300	1

(5 rows)