Step 1: Create Keyspace Library

```
CREATE KEYSPACE Library WITH replication = {
  'class': 'SimpleStrategy',
  'replication_factor': 1
};
```

Step 2: Create Column Family Library_Info

```
CREATE TABLE Library.Counter_Table (
        Stud_Id int PRIMARY KEY,
        Counter_value counter
);

CREATE TABLE Library.Library_Info (
        Stud_Id int,
        Stud_Name text,
        Book_Name text,
        Book_Id text,
        Date_of_issue date,
        PRIMARY KEY (Stud_Id, Book_Name)
);
```

```
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.0.0 | Cassandra 4.0.5 | CQL spec 3.4.5 | Native protocol v5]
Use HELP for help.
cqlsh> CREATE KEYSPACE Library WITH replication = {
   ...   'class': 'SimpleStrategy',
   ...   'replication_factor': 1
   ... };

cqlsh>
cqlsh> CREATE TABLE Library.Counter_Table (
   ...     Stud_Id int PRIMARY KEY,
   ...     Counter_value counter
   ... );
cqlsh> CREATE TABLE Library.Library_Info (
   ...     Stud_Id int,
   ...     Stud_Name text,
   ...     Book_Name text,
   ...     Book_Id text,
   ...     Date_of_issue date,
   ...     PRIMARY KEY (Stud_Id, Book_Name)
   ... );
```

Step 3: Insert Values into the Table in Batch

BEGIN BATCH
INSERT INTO Library.Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id, Date_of_issue)
VALUES (112, 'Alice', 'BDA', 'B101', '2025-04-01');

INSERT INTO Library.Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id, Date_of_issue)
VALUES (113, 'Bob', 'DBMS', 'B102', '2025-04-02');
APPLY BATCH;

```
cqlsh> BEGIN BATCH
   ... INSERT INTO Library.Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id,
 Date_of_issue)
   ... VALUES (112, 'Alice', 'BDA', 'B101', '2025-04-01');
   ...
   ... INSERT INTO Library.Library_Info (Stud_Id, Stud_Name, Book_Name, Book_Id,
 Date_of_issue)
   ... VALUES (113, 'Bob', 'DBMS', 'B102', '2025-04-02');
   ... APPLY BATCH;
```

UPDATE Library.Counter_Table SET Counter_value = Counter_value + 1 WHERE Stud_Id = 112;

```
cqlsh> UPDATE Library.Counter_Table SET Counter_value = Counter_value + 1 WHERE
Stud_Id = 112;
```

Step 4: Display Table Details and Update Counter

SELECT * FROM Library.Library_Info;
SELECT * FROM Library.Counter_Table;

```
cqlsh> SELECT * FROM Library.Library_Info;

 stud_id | book_name | book_id | date_of_issue | stud_name
---------+-----------+---------+---------------+-----------
     113 |      DBMS |    B102 |    2025-04-02 |       Bob
     112 |       BDA |    B101 |    2025-04-01 |     Alice

(2 rows)
cqlsh> SELECT * FROM Library.Counter_Table;

 stud_id | counter_value
---------+---------------
     112 |             1

(1 rows)
```

To increase counter value

UPDATE Library.Counter_Table SET Counter_value = Counter_value + 1 WHERE Stud_Id = 112;

```
(1 rows)
cqlsh> UPDATE Library.Counter_Table SET Counter_value = Counter_value + 1 WHERE
Stud_Id = 112;
cqlsh> SELECT * FROM Library.Counter_Table;
```

Step 5: Show a Student with ID 112 has Taken Book "BDA" 2 Times

SELECT * FROM Library.Counter_Table WHERE Stud_Id = 112;

```
cqlsh> SELECT * FROM Library.Counter_Table WHERE Stud_Id = 112;

 stud_id | counter_value
---------+---------------
     112 |             2
```

Step 6: Export Table to CSV and Import the CSV

1. Exit cqlsh:
   cqlsh> exit
2. **Then in your system terminal run:**
3. Export data to CSV:
   cqlsh -e "COPY Library.Library_Info TO 'Library_Info.csv' WITH HEADER = true;"
4. Import data from CSV:
   cqlsh -e "COPY Library.Library_Info FROM 'Library_Info.csv' WITH HEADER = true;"

```
cqlsh> exit
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh -e "COPY Library.Lib
rary_Info TO 'Library_Info.csv' WITH HEADER = true;"
Using 16 child processes

Starting copy of library.library_info with columns [stud_id, book_name, book_id,
 date_of_issue, stud_name].
Processed: 2 rows; Rate:      24 rows/s; Avg. rate:      24 rows/s
2 rows exported to 1 files in 0.092 seconds.
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh -e "COPY Library.Lib
rary_Info FROM 'Library_Info.csv' WITH HEADER = true;"
Using 16 child processes

Starting copy of library.library_info with columns [stud_id, book_name, book_id,
 date_of_issue, stud_name].
Processed: 2 rows; Rate:       4 rows/s; Avg. rate:       5 rows/s
2 rows imported from 1 files in 0.380 seconds (0 skipped).
```

Step 7: Show Imported Data

1. Open cqlsh:
   cqlsh

```
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.0.0 | Cassandra 4.0.5 | CQL spec 3.4.5 | Native protocol v5]
Use HELP for help.
```

2. Use your keyspace:
   USE Library;
3. Run a SELECT query to view the data:
   SELECT * FROM Library_Info;

```
cqlsh> USE Library;
cqlsh:library> SELECT * FROM Library_Info;

 stud_id | book_name | book_id | date_of_issue | stud_name
---------+-----------+---------+---------------+-----------
     113 |      DBMS |    B102 |    2025-04-02 |       Bob
     112 |       BDA |    B101 |    2025-04-01 |     Alice

(2 rows)
cqlsh:library>
```