

LAB-05

Perform the following DB operations using Cassandra

1) Create a Keyspace by name Library

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

2) Create a Column family by name Library-Info with attributes Snd-Id Primary key, Counter value of type Counter,

```
Snd-Name, Book-Name, Book-Id, Date-of-issue
-> CREATE TABLE Library, Library-Info (
Snd-Id INT PRIMARY KEY,
Counter value COUNTER,
Snd-Name TEXT,
Book-Name TEXT,
Book-Id TEXT,
Date-of-issue TIMESTAMP
);
```

3) Insert the values into the table in Batch  
(Counter table)

```
CREATE TABLE Book-Counter (
Snd-Id int,
Book-Name text,
Counter value counter,
PRIMARY KEY (Snd-Id, Book-Name)
);
```

3) Insert the values into the table in batch



BEGIN BATCH

INSERT INTO Library\_Info (Std\_Id, Std\_Name, Book\_Name, Book\_Id, Date\_of\_Issue)

VALUES (112, 'John Doe', 'BDA', 'BK101', '2025-04-01');

INSERT INTO Library\_Info (Std\_Id, Std\_Name, Book\_Name, Book\_Id, Date\_of\_Issue)

VALUES (113, 'Alice Smith', 'ML', 'BK102', '2025-04-02');

VALUES (114, 'Bob Lee', 'AS', 'BK103', '2025-04-03');

VALUES (115, 'Charlie Brown', 'BDA', 'BK101', '2025-04-04');

VALUES (116, 'Daisy Ray', 'DS', 'BK104', '2025-04-06');

APPLY BATCH;

4) Display the details of the table created & increase the value of the counter

2) BEGIN BATCH

Update Book\_Counter SET Counter = value =

Counter\_value + 1 WHERE Std\_Id = 112 & Book\_Name = 'BDA';

— 1 — = 112 AND 'BDA';

— 1 — = 113 AND 'BDA';

— 1 — = 114 AND 'ML';

— 1 — = 115 AND 'BDA';

— 1 — = 116 AND 'DS';

5) Write a query to show that student with id 112 has taken a book "BDA" 2 times



7) SELECT \* FROM Book - Counter  
WHERE Stud\_Id = 112 AND Book\_Name = 'BDA';

| Output<br>Stud_id | book_name | Counter value |
|-------------------|-----------|---------------|
| 112               | BDA       | 2             |

8) Export the created column to a CSV file  
⇒ cqlsh -e "COPY Library.Library\_Info TO  
'Library\_Info-export.csv' WITH HEADER=TRUE";

SELECT \* FROM Library\_Info;

| Stud_id | book_id | book_name | date of issue | Stud name |
|---------|---------|-----------|---------------|-----------|
| 114     | B15103  | AI        | 2025-04-03    | Boblie    |
| 113     | 102     | ML        | 2025-04-02    | Alice     |
| 116     | 104     | DS        | 2025-04-06    | Daisy Ray |
| 112     | 101     | BDA       | 2025-04-03    | John      |
| 115     | 101     | BDA       | 2025-04-04    | Charlie   |

~~Ambya 8/4/25~~