Program 2

Perform the following DB operations using Cassandra.

1. **Create a keyspace by name Library**

```
CREATE KEYSPACE Library WITH replication =  { 'class' : 'SimpleStrategy',
'replication_factor' : 3 };
```

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**

```
USE Library;

CREATE TABLE Library_Info (
  Stud_Id int PRIMARY KEY,
  Counter_value counter,
  Stud_Name text,
  Book_Name text,
  Book_Id text,
  Date_of_issue
  timestamp
);
```

3. **Insert the values into the table in batch**

```
BEGIN BATCH;

INSERT INTO Library_Info (Stud_Id, Counter_value, Stud_Name, Book_Name, Book_Id,
Date_of_issue)
VALUES (1, 101, 'Alice Smith', 'Introduction to Algorithms', 'B001', '2024-05-01');

INSERT INTO Library_Info (Stud_Id, Counter_value, Stud_Name, Book_Name, Book_Id,
Date_of_issue)
VALUES (2, 102, 'Bob Johnson', 'Clean Code', 'B002', '2024-05-02');

INSERT INTO Library_Info (Stud_Id, Counter_value, Stud_Name, Book_Name, Book_Id,
Date_of_issue)
```

```
VALUES (3, 103, 'Charlie Brown', 'Design Patterns', 'B003', '2024-05-03');

INSERT INTO Library_Info (Stud_Id, Counter_value, Stud_Name, Book_Name, Book_Id,
Date_of_issue)
VALUES (4, 104, 'Diana Prince', 'The Pragmatic Programmer', 'B004', '2024-05-04');

INSERT INTO Library_Info (Stud_Id, Counter_value, Stud_Name, Book_Name, Book_Id,
Date_of_issue)
VALUES (5, 105, 'Ethan Hunt', 'Effective Java', 'B005', '2024-05-05');

APPLY BATCH;
```

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

```
SELECT * FROM Library_Info;
UPDATE Library_Info SET Counter_value = Counter_value + 1 WHERE Stud_Id = 111;
SELECT * FROM Library_Info;
```

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

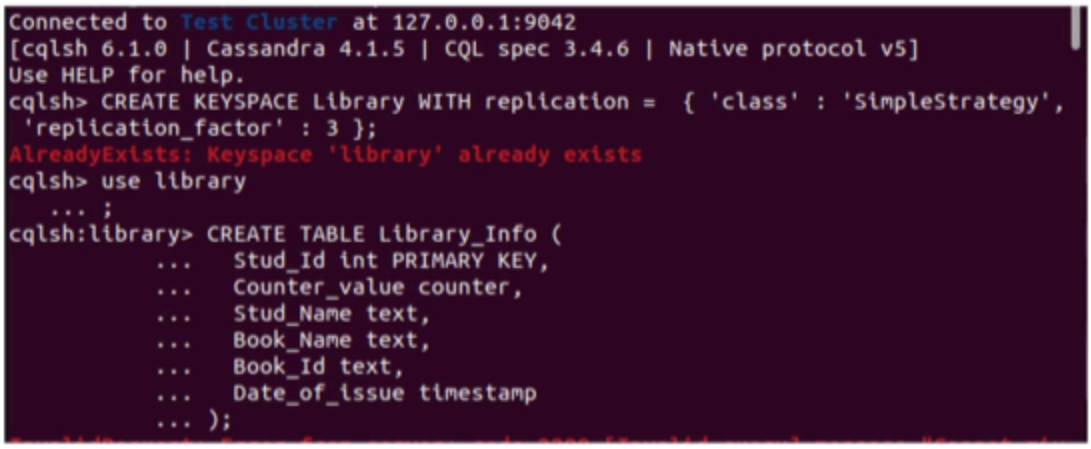
```
SELECT Stud_Name, Book_Name, Counter_value FROM Library_Info
WHERE Stud_Id = 112 AND Book_Name = 'BDA';
```

6. **Export the created column to a csv file**

```
COPY Library_Info TO '/path/to/<lib_info>.csv' WITH DELIMITER = ',' QUOTE = '"'
HEADER = TRUE;
```

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

```
COPY Library_Info FROM '/path/to/<filename>.csv' WITH DELIMITER = ',' QUOTE =
'"' HEADER = TRUE;
```


Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.1.0 | Cassandra 4.1.5 | CQL spec 3.4.6 | Native protocol v5]
Use HELP for help.
cqlsh> CREATE KEYSPACE Library WITH replication = { 'class' : 'SimpleStrategy',
'replication_factor' : 3 };
AlreadyExists: Keyspace 'library' already exists
cqlsh> use library
... ;
cqlsh:library> CREATE TABLE Library_Info (
... Stud_Id int PRIMARY KEY,
... Counter_value counter,
... Stud_Name text,
... Book_Name text,
... Book_Id text,
... Date_of_issue timestamp
...);