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BDA LAB 3

Program 1. Perform the following DB operations using Cassandra.

Create a key space by name Employee

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

```
cqlsh> describe Employeee;

CREATE KEYSPACE employeee WITH replication = {'class': 'SimpleStrategy', 'replication_factor': '1'}  AND durable_writes = true;
```

Create a column family by name Employee-Info with attributes Emp_Id Primary Key, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name

```
cqlsh> create table Employeee.Employee_info(Emp_id int Primary Key,Emp_name text,Designation text,Date_of_joining timestamp,Salary double,Dept_name text);
```

```
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining | dept_name | designation | emp_name | salary
--------+-----------------+-----------+-------------+----------+--------

(0 rows)
```

Insert the values into the table in batch

```
cqlsh> begin batch insert into Employeee.Employee_info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(1,'2021-06-03','Deployment','Manager','Niharika',1500000.50);apply batch;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name  | designation | emp_name | salary
--------+---------------------------------+------------+-------------+----------+--------
      1 | 2021-06-02 18:30:00.000000+0000 | Deployment |     Manager | Niharika | 1.5e+06
```

```
cqlsh> begin batch insert into Employeee.Employee_info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(2,'2022-07-03','Development','Web Developer','Arun',1700000.50);apply batc
h;
cqlsh> begin batch insert into Employeee.Employee_info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(3,'2020-08-09','R&D','Intern','Karan',1800000.50);apply batch;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | salary
--------+---------------------------------+-------------+---------------+----------+--------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |         R&D |        Intern |    Karan | 1.8e+06

(3 rows)
```

Update Employee name and Department of Emp-Id 121

```
cqlsh> update Employeee.Employee_info SET emp_name='Kushi',dept_name='Testing' where emp_id=3;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | salary
--------+---------------------------------+-------------+---------------+----------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi | 1.8e+06

(3 rows)
```

Alter the schema of the table Employee_Info to add a column Projects which stores a set of Projects done by the corresponding Employee.

```
cqlsh> alter table Employeee.Employee_info add Projects set<text>;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects | salary
--------+---------------------------------+-------------+---------------+----------+----------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika |     null | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun |     null | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |     null | 1.8e+06

(3 rows)
```

Update the altered table to add project names.

```
cqlsh> update Employeee.Employee_info set projects=projects+{'abc','xyz'} where emp_id=1;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects       | salary
--------+---------------------------------+-------------+---------------+----------+----------------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika | {'abc', 'xyz'} | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun |           null | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |           null | 1.8e+06

(3 rows)
```

```
cqlsh> update Employeee.Employee_info set projects=projects+{'lmn','def'} where emp_id=2;
cqlsh> update Employeee.Employee_info set projects=projects+{'pqu','tvr'} where emp_id=2;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects                       | salary
--------+---------------------------------+-------------+---------------+----------+--------------------------------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika |             {'abc', 'xyz'} | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | {'def', 'lmn', 'pqu', 'tvr'} | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |                           null | 1.8e+06

(3 rows)
```

```
cqlsh> update Employeee.Employee_info set projects=projects+{'lab','jqk'} where emp_id=3;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects                       | salary
--------+---------------------------------+-------------+---------------+----------+--------------------------------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika |             {'abc', 'xyz'} | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | {'def', 'lmn', 'pqu', 'tvr'} | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |             {'jqk', 'lab'} | 1.8e+06

(3 rows)
```

Create a TTL of 15 seconds to display the values of Employees.

```
cqlsh> insert into Employeee.Employee_info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(11,'2019-07-03','Testing','Intern','Kajal',1000000.50) using TTL 15;
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects                    | salary
--------+---------------------------------+-------------+---------------+----------+-----------------------------+---------
     11 | 2019-07-02 18:30:00.000000+0000 |     Testing |        Intern |    Kajal |                        null |   1e+06
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika |              {'abc', 'xyz'} | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | {'def', 'lmn', 'pqu', 'tvr'} | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |              {'jqk', 'lab'} | 1.8e+06

(4 rows)
cqlsh> select * from Employeee.Employee_info;

 emp_id | date_of_joining                 | dept_name   | designation   | emp_name | projects                    | salary
--------+---------------------------------+-------------+---------------+----------+-----------------------------+---------
      1 | 2021-06-02 18:30:00.000000+0000 |  Deployment |       Manager | Niharika |              {'abc', 'xyz'} | 1.5e+06
      2 | 2022-07-02 18:30:00.000000+0000 | Development | Web Developer |     Arun | {'def', 'lmn', 'pqu', 'tvr'} | 1.7e+06
      3 | 2020-08-08 18:30:00.000000+0000 |     Testing |        Intern |    Kushi |              {'jqk', 'lab'} | 1.8e+06

(3 rows)
```