

1BM19CS097 NEEHAL

LAB-3

Program 1. Perform the following DB operations using Cassandra.

1. Create a key space by name Employee

```
cqlsh> CREATE KEYSPACE Employee WITH replication = ('class': 'SimpleStrategy', 'replication_factor': 1);
cqlsh> describe keyspace
No keyspace specified and no current keyspace
cqlsh> describe Employee;
```

2. 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 Employee.Employee_Info(Emp_Id int Primary Key,Emp_Name text,Designation text,Date_of_Joining timestamp,Salary double,Dept_Name text);
```

```
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	salary
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(0 rows)

3. Insert the values into the table in batch

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

emp_id	date_of_joining	dept_name	designation	emp_name	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	1.5e+06

(1 rows)

```
cqlsh> begin batch
... insert into Employee.Employee_Info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(2,'2020-09-03','Development','Web developer','Karan',1700000.50);
... insert into Employee.Employee_Info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(121,'2019-05-03','R&D','Intern','Kia',2000000.50);
... apply batch;
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	1.7e+06
121	2019-05-03 00:00:00.000000+0000	R&D	Intern	Kia	2e+06

(3 rows)

4. Update Employee name and Department of Emp-Id 121

```
cqlsh> update Employee.Employee_Info SET emp_name='Kushi',dept_name='Testing' where emp_id=121;
```

```
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	2e+06

(3 rows)

5. Sort the details of Employee records based on salary

```
cqlsh> create table Employee.emp(Emp_Id int,Emp_name text,Designation text,Date_Of_Joining timestamp,Salary double,Dept_Name text,primary key(Emp_Id,Salary));
```

```
cqlsh> begin batch
... insert into Employee.emp(emp_id,salary,date_of_joining,dept_name,designation,emp_name)values(1,1500000.50,'2021-06-03','Deployment','Manager','Kusum');
... insert into Employee.emp(emp_id,salary,date_of_joining,dept_name,designation,emp_name)values(2,1100000.50,'2022-05-03','Development','Web Developer','Karan');
... insert into Employee.emp(emp_id,salary,date_of_joining,dept_name,designation,emp_name)values(121,1900000.50,'2022-05-03','R&D','Intern','Kia');
... apply batch;
cqlsh> select * from Employee.emp;
```

emp_id	salary	date_of_joining	dept_name	designation	emp_name
1	1.5e+06	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum
2	1.1e+06	2022-05-03 00:00:00.000000+0000	Development	Web Developer	Karan
121	1.9e+06	2022-05-03 00:00:00.000000+0000	R&D	Intern	Kia

(3 rows)

```
cqlsh> paging off;
```

Disabled Query paging.

```
cqlsh> select * from Employee.emp where emp_id in (1,2,121) order by salary;
```

emp_id	salary	date_of_joining	dept_name	designation	emp_name
2	1.1e+06	2022-05-03 00:00:00.000000+0000	Development	Web Developer	Karan
1	1.5e+06	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum
121	1.9e+06	2022-05-03 00:00:00.000000+0000	R&D	Intern	Kia

```

(3 rows)
cqlsh> paging off;
Disabled Query paging.
cqlsh> select * from Employee.emp where emp_id in (1,2,121) order by salary;

```

emp_id	salary	date of joining	dept name	designation	emp name
2	1.1e+06	2022-05-03 00:00:00.000000+0000	Development	Web Developer	Karan
1	1.5e+06	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum
121	1.9e+06	2022-05-03 00:00:00.000000+0000	R&D	Intern	Kia

```

(3 rows)
cqlsh>

```

6. 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 Employee.Employee_Info add Projects set<text>;
cqlsh> select * from Employee.Employee_Info;

```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	null	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	null	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	null	2e+06

```

(3 rows)

```

7. Update the altered table to add project names.

```
cqlsh> update Employee.Employee_Info set projects=projects+('abc','xyz') where emp_id=1;
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	('abc', 'xyz')	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	null	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	null	2e+06

(3 rows)

```
cqlsh> update Employee.Employee_Info set projects=projects+('pqr','lmn') where emp_id=2;
cqlsh> update Employee.Employee_Info set projects=projects+('tuv','def') where emp_id=2;
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	('abc', 'xyz')	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	('def', 'lmn', 'pqr', 'tuv')	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	null	2e+06

(3 rows)

```
cqlsh> update Employee.Employee_Info set projects=projects+('lab','jkl') where emp_id=121;
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	('abc', 'xyz')	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	('def', 'lmn', 'pqr', 'tuv')	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	('lab', 'jkl')	2e+06

(3 rows)

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

```
cqlsh> insert into Employee.Employee_Info(emp_id,date_of_joining,dept_name,designation,emp_name,salary)values(11,'2019-05-05','R&D','Intern','Kajal',1000000.50) using TTL 15;
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
11	2019-05-05 00:00:00.000000+0000	R&D	Intern	Kajal	null	1e+06
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	('abc', 'xyz')	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	('def', 'lmn', 'pqr', 'tuv')	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	('lab', 'jkl')	2e+06

(4 rows)

```
cqlsh> select * from Employee.Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
1	2021-06-03 00:00:00.000000+0000	Deployment	Manager	Kusum	('abc', 'xyz')	1.5e+06
2	2020-09-03 00:00:00.000000+0000	Development	Web developer	Karan	('def', 'lmn', 'pqr', 'tuv')	1.7e+06
121	2019-05-03 00:00:00.000000+0000	Testing	Intern	Kushi	('lab', 'jkl')	2e+06

(3 rows)

```
cqlsh>
```