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BDA LAB WEEK3 CASSANDRA ASSIGNMENT WITH SCREENSHOTS:

1. Create a key space by name Employee

```
cqlsh> describe keyspaces;

system_schema  system          system_distributed
system_auth    test_keyspace  system_traces

cqlsh> create keyspace Employee with replication={'class':'SimpleStrategy','replication_factor':2};
cqlsh> describe keyspace Employee;

CREATE KEYSPACE employee WITH replication = {'class': 'SimpleStrategy', 'replication_factor': '2'} AND durable_writes = true;

cqlsh> use 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:employee> CREATE TABLE Employee_Info(cluster_col text,Emp_id int,Emp_Name text,Designation text,Date_of_Joining timestamp,Salary int,Dept_Name text,primary key(cluster_col,Salary)) WITH CLUSTERING ORDER BY(Salary DESC);
cqlsh:employee> select*from employee;
InvalidRequest: Error from server: code=2200 [Invalid query] message="unconfigured table employee"
cqlsh:employee> select*from employee_info;

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

3. Insert the values into the table in batch

```
(0 rows)
cqlsh:employee> BEGIN BATCH
... INSERT INTO Employee_Info(cluster_col,emp_id,emp_name,designation,Date_of_Joining,Salary,Dept_Name) VALUES ('xyz',1,'Ravi','MTS','2020-08-24',12000,'TESTING');
... INSERT INTO Employee_Info(cluster_col,emp_id,emp_name,designation,Date_of_Joining,Salary,Dept_Name) VALUES ('xyz',2,'Vamshi','MANAGER','2021-03-20',50000,'DEVELOPEMENT');
... INSERT INTO Employee_Info(cluster_col,emp_id,emp_name,designation,Date_of_Joining,Salary,Dept_Name) VALUES ('xyz',121,'Kiran','SDE','2019-04-21',10000,'PRODUCTION');
... INSERT INTO Employee_Info(cluster_col,emp_id,emp_name,designation,Date_of_Joining,Salary,Dept_Name) VALUES ('xyz',3,'Ramesh','ANALYST','2020-05-07',20000,'QUALITY');
... APPLY BATCH;
cqlsh:employee> SELECT*FROM Employee_Info;

cluster_col | salary | date_of_joining | dept_name | designation | emp_id | emp_name
-----+-----+-----+-----+-----+-----+-----
xyz | 50000 | 2021-03-19 18:30:00.000000+0000 | DEVELOPEMENT | MANAGER | 2 | Vamshi
xyz | 20000 | 2020-05-06 18:30:00.000000+0000 | QUALITY | ANALYST | 3 | Ramesh
xyz | 12000 | 2020-08-23 18:30:00.000000+0000 | TESTING | MTS | 1 | Ravi
xyz | 10000 | 2019-04-20 18:30:00.000000+0000 | PRODUCTION | SDE | 121 | Kiran

(4 rows)
```

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

```
cqlsh:employee> update Employee_Info SET emp_name='karthik',dept_name='Compliance' where cluster_col='xyz' and salary=10000 IF emp_id=121;
```

```
[applied]
```

```
True
```

```
cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	{'AI', 'DS'}
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	{'DEVOPS'}
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	{'ML'}
xyz	10000	2019-04-20 18:30:00.000000+0000	Compliance	SDE	121	karthik	{'QUANTUM COMPUTING'}

5. Sort the details of Employee records based on salary

```
cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	null
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	null
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	null
xyz	10000	2019-04-20 18:30:00.000000+0000	Finance	SDE	121	Jignesh	null

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:employee> alter table Employee_Info add Projects set<text>;
```

```
cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	null
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	null
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	null
xyz	10000	2019-04-20 18:30:00.000000+0000	Finance	SDE	121	Jignesh	null

```
(4 rows)
```

7. Update the altered table to add project names.

```
cqlsh:employee> update Employee_Info SET projects=projects+{'ML'} where cluster_col='xyz' and salary=12000 IF emp_id=1;
[applied]
-----
True

cqlsh:employee> update Employee_Info SET projects=projects+{'AI','DS'} where cluster_col='xyz' and salary=50000 IF emp_id=2;
[applied]
-----
True

cqlsh:employee> update Employee_Info SET projects=projects+{'DEVOPS'} where cluster_col='xyz' and salary=20000 IF emp_id=3;
[applied]
-----
True

cqlsh:employee> update Employee_Info SET projects=projects+{'QUANTUM COMPUTING'} where cluster_col='xyz' and salary=10000 IF emp_id=121;
[applied]
-----
True

cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	{'AI', 'DS'}
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	{'DEVOPS'}
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	{'ML'}
xyz	10000	2019-04-20 18:30:00.000000+0000	Finance	SDE	121	Jignesh	{'QUANTUM COMPUTING'}

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

```
(4 rows)
cqlsh:employee> INSERT INTO Employee_Info(cluster_col,emp_id,emp_name,designation,Date_of_Joining,Salary,Dept_Name) VALUES ('xyz',121,'Modi','SDE','2022-04-TION') using TTL 15;
cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	{'AI', 'DS'}
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	{'DEVOPS'}
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	{'ML'}
xyz	10000	2019-04-20 18:30:00.000000+0000	Finance	SDE	121	Jignesh	{'QUANTUM COMPUTING'}
xyz	1000	2022-04-20 18:30:00.000000+0000	PRODUCTION	SDE	121	Modi	null

```
(5 rows)
cqlsh:employee> SELECT*FROM Employee_Info;
```

cluster_col	salary	date_of_joining	dept_name	designation	emp_id	emp_name	projects
xyz	50000	2021-03-19 18:30:00.000000+0000	DEVELOPEMENT	MANAGER	2	Vamshi	{'AI', 'DS'}
xyz	20000	2020-05-06 18:30:00.000000+0000	QUALITY	ANALYST	3	Ramesh	{'DEVOPS'}
xyz	12000	2020-08-23 18:30:00.000000+0000	TESTING	MTS	1	Ravi	{'ML'}
xyz	10000	2019-04-20 18:30:00.000000+0000	Finance	SDE	121	Jignesh	{'QUANTUM COMPUTING'}

```
(4 rows)
```