

## WEEK 3 (25-04-2022) CASSANDRA QUERIES

1. Create a key space by name 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
3. Insert the values into the table in batch

```

cqlsh:test> create keyspace employee1 with replication = {'class': 'SimpleStrategy', 'replication_factor': 2};
cqlsh:test> use employee1
... ;
cqlsh:employee1> create table Employee_Info (Emp_Id int PRIMARY KEY, Emp_Name text, Designation text, Date_of_joining timestamp, Salary int, Dept_Name text)
... ;
SyntaxException: line 1:21 no viable alternative at input '.' (create table [Employee]....)
cqlsh:employee1> create table Employee_Info (Emp_Id int PRIMARY KEY, Emp_Name text, Designation text, Date_of_joining timestamp, Salary int, Dept_Name text) ;
cqlsh:employee1> describe table Employee1
... ;
SyntaxException: line 1:0 no viable alternative at input 'describe' ([describe]...)
cqlsh:employee1> describe table Employee_Info;
... ;
CREATE TABLE employee1.employee_info (
  emp_id int PRIMARY KEY,
  date_of_joining timestamp,
  dept_name text,
  designation text,
  emp_name text,
  salary int
) WITH bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND dclocal_read_repair_chance = 0.1
AND default_time_to_live = 0
AND gc_grace_seconds = 864000
AND max_index_interval = 2048
AND memtable_flush_period_in_ms = 0
AND min_index_interval = 128
AND read_repair_chance = 0.0
AND speculative_retry = '99PERCENTILE';

cqlsh:employee1> insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1123, 'Rohit','Manager','2022-03-04','2000000','cse');
InvalidRequest: Error from server: code=2209 [Invalid query] message="Invalid STRING constant (2000000) for "salary" of type int"
cqlsh:employee1> insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1123, 'Rohit','Manager','2022-03-04',2000000,'cse');
cqlsh:employee1> begin batch
... ;
... ;
... ;

```

```
InvalidRequest: Error from server: codes=2200 [Invalid query] message="Invalid STRING constant (2000000) for "salary" of type int"
cqlsh:employee1> insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1123, 'Rohit','Manager','2022-03-04',2000000,'cse');
cqlsh:employee1> begin batch
...
cqlsh:employee1> begin batch
... insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1124, 'Vamshi','softwareEngineer','2022-05-06',1500000,'ise');
... insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (2222, 'Sharat','Intern','2020-03-12',500000,'cse');
... insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (3333, 'Jeevan','softwareDeveloper','2019-02-02',1500000,'ece');
... insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (4444, 'Khushil','DataScientist','2018-05-17',250000,'cse');
... apply batch;
cqlsh:employee1> select * from Employee_Info;

emp_id | date_of_joining | dept_name | designation | emp_name | salary
-----|-----|-----|-----|-----|-----
3333 | 2019-02-01 18:30:00.000000+0000 | ece | softwareDeveloper | Jeevan | 1500000
1123 | 2022-03-03 18:30:00.000000+0000 | cse | Manager | Rohit | 2000000
1124 | 2022-05-05 18:30:00.000000+0000 | ise | softwareEngineer | Vamshi | 1000000
2222 | 2020-03-11 18:30:00.000000+0000 | cse | Intern | Sharat | 500000
4444 | 2018-05-16 18:30:00.000000+0000 | cse | DataScientist | Khushil | 25000

(5 rows)
cqlsh:employee1> update Employee_Info set Emp_name='Pikachu' where emp_id=2222;
cqlsh:employee1> select * from Employee_Info;

emp_id | date_of_joining | dept_name | designation | emp_name | salary
-----|-----|-----|-----|-----|-----
3333 | 2019-02-01 18:30:00.000000+0000 | ece | softwareDeveloper | Jeevan | 1500000
1123 | 2022-03-03 18:30:00.000000+0000 | cse | Manager | Rohit | 2000000
1124 | 2022-05-05 18:30:00.000000+0000 | ise | softwareEngineer | Vamshi | 1000000
2222 | 2020-03-11 18:30:00.000000+0000 | cse | Intern | Pikachu | 500000
4444 | 2018-05-16 18:30:00.000000+0000 | cse | DataScientist | Khushil | 25000

(5 rows)
```

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

```
3333 | 2019-02-01 18:30:00.000000+0000 | ece | softwareDeveloper | Jeevan | 1500000
1123 | 2022-03-03 18:30:00.000000+0000 | cse | Manager | Rohit | 2000000
1124 | 2022-05-05 18:30:00.000000+0000 | ise | softwareEngineer | Vamshi | 1000000
2222 | 2020-03-11 18:30:00.000000+0000 | cse | Intern | Pikachu | 500000
4444 | 2018-05-16 18:30:00.000000+0000 | cse | DataScientist | Khushil | 25000

(5 rows)
cqlsh:employee1> update Employee_Info set dept_name='ece' where emp_id=2222;
cqlsh:employee1> select * from Employee_Info;

emp_id | date_of_joining | dept_name | designation | emp_name | salary
-----|-----|-----|-----|-----|-----
3333 | 2019-02-01 18:30:00.000000+0000 | ece | softwareDeveloper | Jeevan | 1500000
1123 | 2022-03-03 18:30:00.000000+0000 | cse | Manager | Rohit | 2000000
1124 | 2022-05-05 18:30:00.000000+0000 | ise | softwareEngineer | Vamshi | 1000000
2222 | 2020-03-11 18:30:00.000000+0000 | ece | Intern | Pikachu | 500000
4444 | 2018-05-16 18:30:00.000000+0000 | cse | DataScientist | Khushil | 25000

(5 rows)
cqlsh:employee1> create index employee_sorted on Employee_Info(salary);
cqlsh:employee1> select * from employee_sorted;
```

- 5. Sort the details of Employee records based on salary
- 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.
- 7. Update the altered table to add project names.

```
Activities Terminal Apr 25 15:26 bmsc@bmsc-Precision-T1700:~  
InvalidRequest: Error from server: code=2200 (Invalid Query): message="Order by is currently only supported on the clustered columns of the PRIMARY KEY, got emp_id"  
cqlsh:employee1> alter table Employee_Info ADD Projects set<text>;  
cqlsh:employee1> select * from Employee_Info  
... ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects | salary  |
|--------|---------------------------------|-----------|-------------------|----------|----------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | null     | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | null     | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | ise       | softwareEngineer  | Vamshi   | null     | 1000000 |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | null     | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | null     | 25000   |

  
(5 rows)  
cqlsh:employee1> update Employee_Info set projects={'ml project','recommendation system'} where emp_id=2222;  
cqlsh:employee1> update Employee_Info set projects={'ml project'} where emp_id=3333;  
cqlsh:employee1> update Employee_Info set projects={'app project'} where emp_id=1123;  
cqlsh:employee1> select * from Employee_Info ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | ise       | softwareEngineer  | Vamshi   | null                                    | 1000000 |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | null                                    | 25000   |

  
(5 rows)  
cqlsh:employee1> update Employee_Info set projects={'mob'} where emp_id=1124;  
cqlsh:employee1> update Employee_Info set projects={'ai'} where emp_id=4444;  
cqlsh:employee1> select * from Employee_Info ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | ise       | softwareEngineer  | Vamshi   | {'mob'}                                 | 1000000 |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | {'ai'}                                  | 25000   |

  
(5 rows)  
cqlsh:employee1> insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1124, 'Vamshi','HOB0','2022-05-06',1000000,'ise') USING TTL 15;  
cqlsh:employee1> select * from Employee_Info ;
```

```
Activities Terminal Apr 25 15:27 bmsc@bmsc-Precision-T1700:~  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | ise       | softwareEngineer  | Vamshi   | {'mob'}                                 | 1000000 |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | {'ai'}                                  | 25000   |

  
(5 rows)  
cqlsh:employee1> insert into Employee_Info(Emp_id, Emp_Name, Designation, Date_of_joining, Salary, Dept_Name) values (1124, 'Vamshi','HOB0','2022-05-06',1000000,'ise') USING TTL 15;  
cqlsh:employee1> select * from Employee_Info ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | ise       | HOB0              | Vamshi   | {'mob'}                                 | 1000000 |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | {'ai'}                                  | 25000   |

  
(5 rows)  
cqlsh:employee1> select * from Employee_Info ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | null      | null              | null     | {'mob'}                                 | null    |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | {'ai'}                                  | 25000   |

  
(5 rows)  
cqlsh:employee1> select * from Employee_Info ;  


| emp_id | date_of_joining                 | dept_name | designation       | emp_name | projects                                | salary  |
|--------|---------------------------------|-----------|-------------------|----------|-----------------------------------------|---------|
| 3333   | 2019-02-01 18:30:00.000000+0000 | ece       | softwareDeveloper | Jeevan   | {'ml project'}                          | 1500000 |
| 1123   | 2022-03-03 18:30:00.000000+0000 | cse       | Manager           | Rohit    | {'app project'}                         | 2000000 |
| 1124   | 2022-05-05 18:30:00.000000+0000 | null      | null              | null     | {'mob'}                                 | null    |
| 2222   | 2020-03-11 18:30:00.000000+0000 | ece       | Intern            | Pikachu  | {'ml project', 'recommendation system'} | 500000  |
| 4444   | 2018-05-16 18:30:00.000000+0000 | cse       | DataScientist     | Khushil  | {'ai'}                                  | 25000   |

  
(5 rows)  
cqlsh:employee1> 
```