Program 1

Perform the following DB operations using Cassandra.

1. Create a keyspace 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

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

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.

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

1. Create a keyspace by name Employee

    CREATE KEYSPACE Employee WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};

2. Create a column family by name
    Employee-Info CREATE TABLE
    Employee.Employee_Info (
       Emp_Id int PRIMARY KEY,
       Emp_Name text,
       Designation text,
       Date_of_Joining date,
       Salary decimal,
       Dept_Name text
    );

3. Insert the values into the table in
    batch BEGIN BATCH
    INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (121, 'John Doe', 'Software Engineer', '2022-01-15', 70000.00, 'IT');

INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (122, 'Jane Smith', 'Data Scientist', '2021- 05-20', 80000.00, 'Data Science');

INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (123, 'Alice Johnson', 'Project Manager', '2020-07-18', 90000.00, 'Management');

APPLY BATCH;

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

UPDATE Employee.Employee_Info SET Emp_Name = 'Johnathon Doe', Dept_Name = 'Software Development' WHERE Emp_Id = 121;

5. Sort the details of Employee records based on salary

CREATE INDEX ON Employee.Employee_Info (Salary);

6. Alter the schema of the table Employee_Info to add a column

Projects ALTER TABLE Employee.Employee_Info ADD Projects set<text>;

7. Update the altered table to add project names

UPDATE Employee.Employee_Info SET Projects = {'Project A', 'Project B'} WHERE Emp_Id = 121;

UPDATE Employee.Employee_Info SET Projects = {'Project C'} WHERE Emp_Id = 122; UPDATE Employee.Employee_Info SET Projects = {'Project D', 'Project E'} WHERE Emp_Id = 123;

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

INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (124, 'Bob Brown', 'Analyst', '2023-01-10', 60000.00, 'Finance') USING TTL 15;

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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 Employee WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};
cqlsh> CREATE TABLE Employee.Employee_Info (
   ...     Emp_Id int PRIMARY KEY,
   ...     Emp_Name text,
   ...     Designation text,
   ...     Date_of_Joining date,
   ...     Salary decimal,
   ...     Dept_Name text
   ... );
cqlsh> BEGIN BATCH
   ... INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (121, 'John Doe', '
Software Engineer', '2022-01-15', 70000.00, 'IT');
   ... INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (122, 'Jane Smith',
 'Data Scientist', '2021-05-20', 80000.00, 'Data Science');
   ... INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (123, 'Alice Johnso
n', 'Project Manager', '2020-07-10', 90000.00, 'Management');
   ... APPLY BATCH;
cqlsh> UPDATE Employee.Employee_Info SET Emp_Name = 'Johnathon Doe', Dept_Name =
   ... 'Software Development' WHERE Emp_Id = 121;
cqlsh> CREATE INDEX ON Employee.Employee_Info (Salary);
cqlsh> ALTER TABLE Employee.Employee_Info ADD Projects set<text>;
cqlsh> UPDATE Employee.Employee_Info SET Projects = {'Project A', 'Project B'} WHERE Emp_Id = 121;
cqlsh> UPDATE Employee.Employee_Info SET Projects = {'Project C'} WHERE Emp_Id = 122;
cqlsh> INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (124, 'Bob Brown',
'Analyst', '2023-01-10', 60000.00, 'Finance') USING TTL 15;
cqlsh> SELECT * FROM Employee_Infooooo
   ... SELECT * FROM Employee_Info;
cqlsh> INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Decqlcqlcqlccqlsh>cqlscqlscqlscqlsh>c
cqlsh> INSERT INTO Employee.Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary, Dept_Name) VALUES (124, 'Bob Brown',
'Analyst', '2023-01-10', 60000.00, 'Finance') USING TTL 15;S
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