

EMPLOYEE KEYSPACE

```
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ java -version
openjdk version "11.0.21" 2023-10-17
OpenJDK Runtime Environment (build 11.0.21+9-post-Ubuntu-0ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.21+9-post-Ubuntu-0ubuntu122.04, mixed mode, sharing)
bmscecse@bmscecse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.0.0 | Cassandra 4.0.5 | CQL spec 3.4.5 | Native protocol v5]
Use HELP for help.
cqlsh> CREATE KEYSPACE Employee WITH replication =
... { 'class' : 'SimpleStrategy',
... 'replication_factor':1};
AlreadyExists: Keyspace 'employee' already exists
cqlsh> DESCRIBE KEYSPACES;

bemployee  cycling  my_keyspace  system_auth      system_views
bstudents  employee  students    system_distributed system_virtual_schema
btech      han      students1   system_schema    vehicle
company    library  system     system_traces

cqlsh> CREATE KEYSPACE P_Employee WITH replication = { 'class' : 'SimpleStrategy', 'replication_factor':1};
cqlsh> DESCRIBE KEYSPACES;

bemployee  cycling  my_keyspace  system     system_traces
bstudents  employee  p_employee   system_auth system_views
btech      han      students    system_distributed system_virtual_schema
company    library  students1   system_schema vehicle

cqlsh> USE P_EMPLOYEE;
```

```
cqlsh:p_employee> CREATE TABLE Employee_Info (
... Emp_Id INT PRIMARY KEY,
... Emp_Name TEXT,
... Designation TEXT,
... Date_of_Joining DATE,
... Salary FLOAT,
... Dept_Name TEXT
... );
cqlsh:p_employee> DESCRIBE TABLE Employee_Info;

CREATE TABLE p_employee.employee_info (
  emp_id int PRIMARY KEY,
  date_of_joining date,
  dept_name text,
  designation text,
  emp_name text,
  salary float
) WITH additional_write_policy = '99p'
AND bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND cdc = false
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '16', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND default_time_to_live = 0
AND extensions = {}
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 = 'BLOCKING'
AND speculative_retry = '99p';
cqlsh:p_employee> BEGIN BATCH
... INSERT INTO Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary,
... Dept_Name)
... VALUES (120, 'Priyanka GH', 'Developer', '2024-05-06', 100000, 'Engineering');
... INSERT INTO Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary,
... Dept_Name)
... VALUES (121, 'Shreya', 'Developer', '2024-05-06', 90000, 'Management');
... INSERT INTO Employee_Info (Emp_Id, Emp_Name, Designation, Date_of_Joining, Salary,
... Dept_Name)
... VALUES (122, 'Sadhana', 'Engineer', '2024-05-07', 120000, 'Engineering');
... APPLY BATCH;
```

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

emp_id	date_of_joining	dept_name	designation	emp_name	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	1.2e+05
121	2024-05-06	Management	Developer	Shreya	90000

(3 rows)

```
cqlsh:p_employee> UPDATE Employee_Info
... SET Emp_Name = 'Rachana', Dept_Name = 'HR'
... WHERE Emp_Id = 121;
```

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

emp_id	date_of_joining	dept_name	designation	emp_name	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	1.2e+05
121	2024-05-06	HR	Developer	Rachana	90000

(3 rows)

```
cqlsh:p_employee> SELECT * FROM Employee_Info
... ALLOW FILTERING;
```

emp_id	date_of_joining	dept_name	designation	emp_name	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	1.2e+05
121	2024-05-06	HR	Developer	Rachana	90000

(3 rows)

```
cqlsh:p_employee> ALTER TABLE Employee_Info
... ADD Projects SET<TEXT>;
```

```
cqlsh:p_employee> DESCRIBE TABLE Employee_Info;
```

```
CREATE TABLE p_employee.employee_info (
  emp_id int PRIMARY KEY,
  date_of_joining date,
  dept_name text,
  designation text,
  emp_name text,
  salary float,
  projects set<text>
) WITH additional_write_policy = '99p'
AND bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND cdc = false
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '16', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND crc_check_chance = 1.0
AND default_time_to_live = 0
AND extensions = {}
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 = 'BLOCKING'
AND speculative_retry = '99p';
```

```
CREATE TABLE p_employee.employee_info (
  emp_id int PRIMARY KEY,
  date_of_joining date,
  dept_name text,
  designation text,
  emp_name text,
  salary float,
  projects set<text>
) WITH additional_write_policy = '99p'
AND bloom_filter_fp_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND cdc = false
AND comment = ''
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AND crc_check_chance = 1.0
AND default_time_to_live = 0
AND extensions = {}
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 = 'BLOCKING'
AND speculative_retry = '99p';
```

```
cqlsh:p_employee> UPDATE Employee_Info
... SET Projects = {'Project A', 'Project B'}
... WHERE Emp_Id = 120;
```

```
cqlsh:p_employee> UPDATE Employee_Info
... SET Projects = {'Project C'}
... WHERE Emp_Id = 121;
```

```
cqlsh:p_employee> UPDATE Employee_Info
... SET Projects = {'Project A', 'Project D'}
... WHERE Emp_Id = 122;
```

```
cqlsh:p_employee> SELECT Emp_Id, Emp_Name, Projects FROM Employee_Info;
```

emp_id	emp_name	projects
120	Priyanka GH	({'Project A', 'Project B'})
122	Sadhana	({'Project A', 'Project D'})
121	Rachana	({'Project C'})

(3 rows)

```
cqlsh:p_employee>
```

```
cqlsh:p_employee> UPDATE Employee_Info
... USING TTL 15
... SET Salary = 0
... WHERE Emp_Id = 121;
cqlsh:p_employee> SELECT * FROM Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	{'Project A', 'Project B'}	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	{'Project A', 'Project D'}	1.2e+05
121	2024-05-06	HR	Developer	Rachana	{'Project C'}	0

(3 rows)
cqlsh:p_employee>

```
cqlsh:p_employee> UPDATE Employee_Info
... USING TTL 15
... SET Salary = 0
... WHERE Emp_Id = 121;
cqlsh:p_employee> SELECT * FROM Employee_Info;
```

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	{'Project A', 'Project B'}	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	{'Project A', 'Project D'}	1.2e+05
121	2024-05-06	HR	Developer	Rachana	{'Project C'}	0

(3 rows)
cqlsh:p_employee> SELECT * FROM Employee_Info;

emp_id	date_of_joining	dept_name	designation	emp_name	projects	salary
120	2024-05-06	Engineering	Developer	Priyanka GH	{'Project A', 'Project B'}	1e+05
122	2024-05-07	Engineering	Engineer	Sadhana	{'Project A', 'Project D'}	1.2e+05
121	2024-05-06	HR	Developer	Rachana	{'Project C'}	null

(3 rows)
cqlsh:p_employee>

STUDENTS KEYSPACE

```
cqlsh> CREATE KEYSPACE Students WITH REPLICATION =
... ('class': 'SimpleStrategy', 'replication_factor': 1);
Already exists: keyspace 'students' already exists
cqlsh> CREATE KEYSPACE P_Students WITH REPLICATION = {'class': 'SimpleStrategy', 'replication_factor': 1};
cqlsh> DESCRIBE KEYSPACES;

bemployee  employee  p_students  system_distributed  vehicle
bstudents  han        students    system_schema
btech      library   students1   system_traces
company    my_keyspace  system     system_views
cycling    p_employee  system_auth system_virtual_schema

cqlsh> SELECT * FROM system.schema_keyspaces;
InvalidRequest: Error from server: code=2200 [Invalid query] message="table schema_keyspaces does not exist"
cqlsh> USE Students;
cqlsh:students> EXIT
hmsccscse@hmsccscse-HP-Elite-Tower-600-G9-Desktop-PC:~$ CQLSH
CQLSH: command not found
hmsccscse@hmsccscse-HP-Elite-Tower-600-G9-Desktop-PC:~$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.0.0 | Cassandra 4.0.5 | CQL spec 3.4.5 | Native protocol v5]
Use HELP for help.
cqlsh> USE p_Students;
cqlsh:p_students> CREATE TABLE Students_Info (Roll_No int PRIMARY KEY, StudName text,
... DateOfJoining timestamp, last_exam_Percent double);
cqlsh:p_students> DESCRIBE TABLES;

students_info

cqlsh:p_students> DESCRIBE TABLE students_info;

CREATE TABLE p_students.students_info (
  roll_no int PRIMARY KEY,
  dateofjoining timestamp,
  last_exam_percent double,
  studname text
) WITH additional_write_policy = '99p'
  AND bloom_filter_fp_chance = 0.01
  AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
  AND cdc = false
  AND comment = ''
  AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
  AND compression = {'chunk_length_in_kb': '16', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
  AND crc_check_chance = 1.0
  AND default_time_to_live = 0
  AND extensions = {}
  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 = 'BLOCKING'
  AND speculative_retry = '99p';

cqlsh:p_students> BEGIN BATCH
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Asha','2012-03-12',79.9)
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Kritan','2012-03-12',89.9)
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Tarun','2012-03-12',78.9)
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Samrith','2012-03-12',90.9)
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Smitha','2012-03-12',67.9)
... INSERT INTO Students_Info(Roll_No, StudName, DateOfJoining, last_exam_Percent)
... VALUES (1,'Rohan','2012-03-12',56.9)
... APPLY BATCH;
cqlsh:p_students> SELECT * FROM Students_Info;

roll_no | dateofjoining | last_exam_percent | studname
-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | 90.9 | Tarun

(1 rows)
cqlsh:p_students> SELECT * FROM Students_Info WHERE Roll_No IN (1,2,3);

roll_no | dateofjoining | last_exam_percent | studname
-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | 90.9 | Tarun

(1 rows)
cqlsh:p_students> select * from students_info where Studname= &#39;Asha&#39;;
Invalid syntax at char 45
select * from students_info where Studname= &#39;Asha&#39;;
^
cqlsh:p_students> select * from students_info where Studname= 'Asha';
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot execute this query as it might involve data filtering and thus may have u
query despite the performance unpredictability, use ALLOW FILTERING"
cqlsh:p_students> CREATE INDEX ON Students_Info ( StudName);
cqlsh:p_students> select * from students_info where Studname= 'Asha';

roll_no | dateofjoining | last_exam_percent | studname
-----+-----+-----+-----

(0 rows)
cqlsh:p_students> select Roll_No, StudName from students_info LIMIT 2;

roll_no | studname
-----+-----
1 | Tarun

(1 rows)
```

```

cqlsh:p_students> UPDATE students_info SET StudName='David Sheen' WHERE Roll_No=2;
cqlsh:p_students> UPDATE students_info SET roll_no=6 WHERE roll_no=3;
InvalidRequest: Error from server: code=2200 [Invalid query] message="PRIMARY KEY part roll_no found in SET part"
cqlsh:p_students> select * from students_info;

roll_no | dateofjoining | last_exam_percent | studname
-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | 90.9 | Tarun
2 | null | null | David Sheen

(2 rows)
cqlsh:p_students> DELETE LastExamPercent FROM students_info WHERE Roll_No=2;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Undefined column name lastexampercent in table p_students.students_info"
cqlsh:p_students> DELETE Last_Exam_Percent FROM students_info WHERE Roll_No=2;
cqlsh:p_students> DELETE FROM student_info WHERE Roll_No=2;
InvalidRequest: Error from server: code=2200 [Invalid query] message="table student_info does not exist"
cqlsh:p_students> select * from students_info;

roll_no | dateofjoining | last_exam_percent | studname
-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | 90.9 | Tarun
2 | null | null | David Sheen

(2 rows)
cqlsh:p_students> DELETE FROM students_info WHERE Roll_No=2;
cqlsh:p_students> ALTER TABLE students_info ADD hobbies set<text>;
cqlsh:p_students> select * from students_info;

roll_no | dateofjoining | hobbies | last_exam_percent | studname
-----+-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | null | 90.9 | Tarun

(1 rows)
cqlsh:p_students> ALTER TABLE students_info ADD language list<text>;
cqlsh:p_students> UPDATE students_info
... SET hobbies=hobbies+{'Chess,Table Tennis'}
... WHERE RollNo=1;
InvalidRequest: Error from server: code=2200 [Invalid query] message="Undefined column name rollno in table p_students.students_info"
cqlsh:p_students> UPDATE students_info
... SET hobbies=hobbies+{'Chess,Table Tennis'}
... WHERE Roll_No=1;
cqlsh:p_students> select * from students_info;

roll_no | dateofjoining | hobbies | language | last_exam_percent | studname
-----+-----+-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | {'Chess,Table Tennis'} | null | 90.9 | Tarun

(1 rows)
cqlsh:p_students> SELECT * from students_info WHERE Roll_No=1;

roll_no | dateofjoining | hobbies | language | last_exam_percent | studname
-----+-----+-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | {'Chess,Table Tennis'} | null | 90.9 | Tarun

(1 rows)
cqlsh:p_students> UPDATE students_info
... SET language=language+['Hindi,English']
... WHERE Roll_No=1;
cqlsh:p_students> select * from students_info;

roll_no | dateofjoining | hobbies | language | last_exam_percent | studname
-----+-----+-----+-----+-----+-----
1 | 2012-03-11 18:30:00.000000+0000 | {'Chess,Table Tennis'} | ['Hindi,English'] | 90.9 | Tarun

(1 rows)
cqlsh:p_students> CREATE TABLE library_book(counter_value counter, book_name varchar, stud_name varchar,
... PRIMARY KEY(book_name,stud_name));
cqlsh:p_students> UPDATE library_book SET counetr value=counetr_vale+1 WHERE book_name='Big data Analytics'
... AND studname='jeet';
SyntaxException: line 1:32 no viable alternative at input 'value' (UPDATE library_book SET counetr [value]...)
cqlsh:p_students> UPDATE library_book SET counter value=counter_value+1 WHERE book_name='Big data Analytics' AND studname='jeet';
SyntaxException: line 1:32 no viable alternative at input 'value' (UPDATE library_book SET counter [value]...)
cqlsh:p_students> select * from library_book;

book_name | stud_name | counter_value
-----+-----+-----
(0 rows)
cqlsh:p_students> UPDATE library_book SET counter value=counter_value+1 WHERE book_name='Big data Analytics' AND stud_name='jeet';
SyntaxException: line 1:32 no viable alternative at input 'value' (UPDATE library_book SET counter [value]...)
cqlsh:p_students> UPDATE library_book SET counter_value=counter_value+1 WHERE book_name='Big data Analytics' AND stud_name='jeet';
cqlsh:p_students> CREATE TABLE userlogin(userid int PRIMARY KEY, password text);
cqlsh:p_students> INSERT INTO userlogin(userid, password) VALUES (1,&#39;infy&#39;) USING TTL 30;
Invalid syntax at char 51
INSERT INTO userlogin(userid, password) VALUES (1,&#39;infy&#39;) USING TTL 30;
^
cqlsh:p_students> INSERT INTO userlogin(userid, password) VALUES (1,'infy') USING TTL 30;
cqlsh:p_students> SELECT TTL(password) FROM userlogin WHERE userid=1;

ttl(password)
-----
19

(1 rows)
cqlsh:p_students>

```