Practical - 9

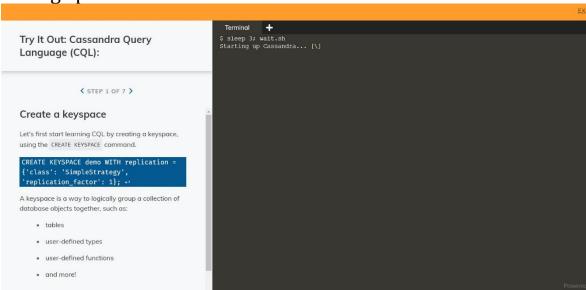
2CS702 – Big Data Analytics

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Aim:

Setup Cassandra environment in your system and apply Create, Update, Read and Delete operations.

Setting up Environment:



Setting Up Key Spaces:

```
Connected as 19bce059@nirmauni.ac.in.
Connected to cndb at cassandra.ingress:9042.
[cqlsh 6.8.0 | Cassandra 4.0.0.6816 | CQL spec 3.4.5 | Native protocol v4]
Use HELP for help.
token@cqlsh> help
Shell command help topics:
CAPTURE CLS COPY
                             EXIT HELP PAGING SHOW
                                                           TIMING UNICODE
        CONSISTENCY EXECUTE EXPAND LOGIN SERIAL SOURCE TRACING
CLEAR
Full documentation for shell commands:
 https://docs.datastax.com/en/dse/6.8/cql/cql/cql_reference/cqlsh_commands/cqlshCommandsTOC.html
Full documentation for CQL commands:
 https://docs.datastax.com/en/dse/6.8/cql/cql/cql_reference/cql_commands/cqlCommandsTOC.html
token@cqlsh> CREATE KEYSPACE prac9 WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};
token@cqlsh> describe keyspaces
                 system_schema bda system_traces
system_auth
                                                              system_views
data_endpoint_auth datastax_sla system_system_virtual_schema
token@cqlsh>
```

The command is used to describe all the keyspaces in the Cassandra cluster. Cassandra automatically creates keyspaces that have namesstarting with system and uses these as the data dictionary for the cluster.

Creating Tables and Inserting Data:

```
se nour for neap.
token@cqlsh> use bda
token@cqlsh:bda> CREATE TABLE emp(
       ... emp_id int PRIMARY KEY,
           emp_name text,
       ... emp_city text,
       ... emp_sal varint,
       ... emp_phone varint
token@cqlsh:bda> select * from emp;
 emp_id | emp_city | emp_name | emp_phone | emp_sal
(0 rows)
token@cqlsh:bda> ALTER TABLE emp
     ... ADD emp_email text;
axException: line 2:3 no viable alternative at input '..' (ALTER TABLE)
token@cqlsh:bda> ALTER TABLE emp ADD emp_email text;
token@cqlsh:bda> select * from emp;
emp_id | emp_city | emp_email | emp_name | emp_phone | emp_sal
(0 rows)
token@cqlsh:bda>
```

```
token@cqlsh:bda> describe users
CREATE TABLE bda.users (
   lastname text PRIMARY KEY,
    email text,
   firstname text
) WITH additional_write_policy = '99PERCENTILE'
   AND bloom_filter_fp_chance = 0.01
   AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
   AND comment =
   AND compaction = {'class': 'org.apache.cassandra.db.compaction.UnifiedCompactionStrategy'}
   AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
   AND crc check chance = 1.0
   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 = 'BLOCKING'
   AND speculative_retry = '99PERCENTILE';
```

```
token@cqlsh:bda> describe emp
CREATE TABLE bda.emp (
   emp_id int PRIMARY KEY,
   emp_city text,
   emp email text,
    emp_name text,
    emp phone varint,
    emp_sal varint
) WITH additional_write_policy = '99PERCENTILE'
    AND bloom_filter_fp_chance = 0.01
   AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
   AND compaction = {'class': 'org.apache.cassandra.db.compaction.UnifiedCompactionStrategy'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc check chance = 1.0
   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 = 'BLOCKING'
    AND speculative_retry = '99PERCENTILE';
```

Insert Data in emp table

Update city and salary of robin

```
token@cqlsh:bda> SELECT * FROM emp;
 emp_id | emp_city | emp_email | emp_name | emp_phone | emp_sal
                                  ram | 9848022338 |
                                   robin | 9848022339 |
                                 rahman | 9848022330 |
(3 rows)
token@cqlsh:bda> UPDATE emp SET emp_city='Delhi',emp_sal=50000
      ... WHERE emp_id=2;
token@cqlsh:bda> SELECT * FROM emp;
emp_id | emp_city | emp_email | emp_name | emp_phone | emp_sal
                                   ram | 9848022338 |
     2
           Delhi
                                   robin | 9848022339 |
     3 |
           Chennai
                                  rahman | 9848022330 |
                                                         45000
(3 rows)
```

Reading columns from table

Deleting data from table

```
token@cqlsh:bda> DELETE emp_sal FROM emp WHERE emp_id=3;
token@cqlsh:bda> SELECT * FROM emp;

emp_id | emp_city | emp_email | emp_name | emp_phone | emp_sal

1 | Hyderabad | null | ram | 9848022338 | 50000
2 | Delhi | null | robin | 9848022339 | 50000
3 | Chennai | null | rahman | 9848022330 | null

(3 rows)
```

```
token@cqlsh:bda> DELETE FROM emp WHERE emp_id=3;
token@cqlsh:bda> SELECT * FROM emp;

emp_id | emp_city | emp_email | emp_name | emp_phone | emp_sal

1 | Hyderabad | null | ram | 9848022338 | 50000
2 | Delhi | null | robin | 9848022339 | 50000

(2 rows)
```