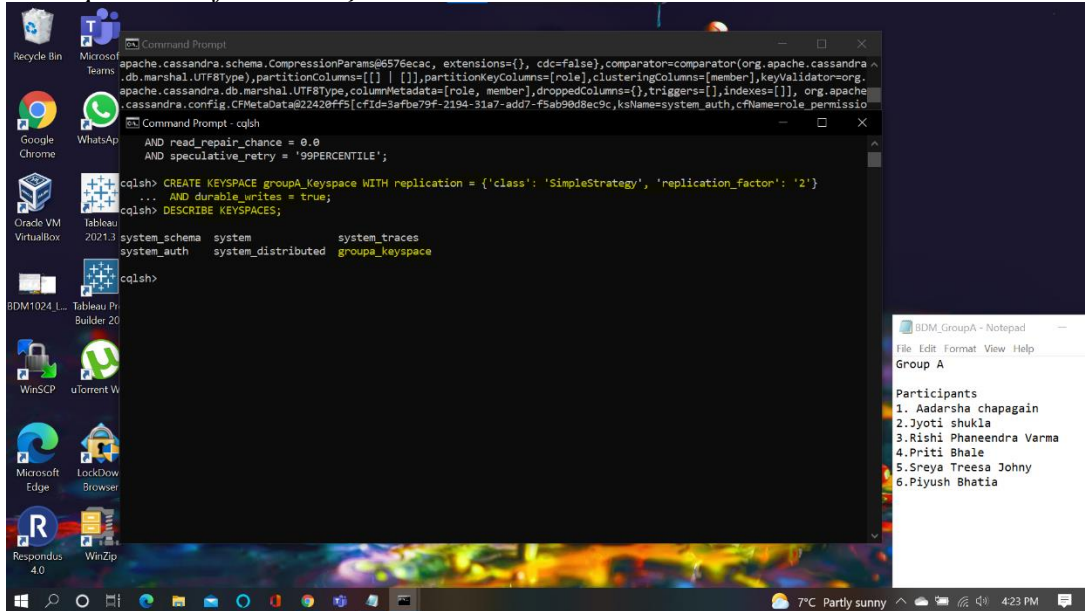
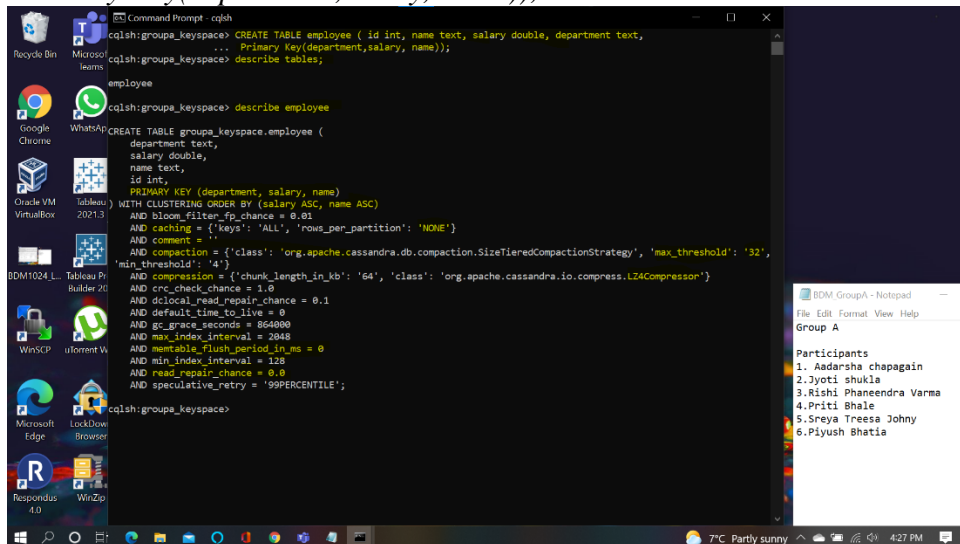


1. Starting Cassandra with 'cassandra' on the location containing bin directory.

3. *CREATE KEYSPACE groupA Keyspace WITH replication = {'class': 'SimpleStrategy', 'replication\_factor': '2'} AND durable\_writes = true;*



4. Create and describe table.  
*CREATE TABLE employee ( id int, name text, salary double, department text, Primary Key(department,salary, name));*



## 5. Insert and select

```
insert into employee (id, name, salary, department) values(2,'X', 4000 , 'HR');
insert into employee (id, name, salary, department) values(3,'Y', 4000 , 'IT');
insert into employee (id, name, salary, department) values(4,'Y', 4000 , 'IT');
insert into employee (id, name, salary, department) values(5,'Y', 4000 , 'IT');
insert into employee (id, name, salary, department) values(2,'X', 4000 , 'HR'
```

The screenshot shows a Windows desktop with various icons on the left. In the center, a Command Prompt window is open, displaying the following commands and output:

```
cqlsh:groupa_keyspace> insert into employee (id, name, salary, department) values(1,'groupa', 23000 , 'Human resource');
cqlsh:groupa_keyspace> select * from employee;
Invalid syntax at line 1, char 24
select * from employee;\
cqlsh:groupa_keyspace> select * from employee;
department | salary | name | id
-----
Human resource | 23000 | groupa | 1
(1 rows)
cqlsh:groupa_keyspace>
```

To the right of the Command Prompt, a Notepad window titled "BDM\_GroupA - Notepad" is open, showing a list of participants:

```
File Edit Format View Help
Group A

Participants
1. Aadarsha chapagain
2. Jyoti shukla
3. Rishi Phaneendra Varma
4. Priti Bhale
5. Sreya Treasa Johny
6. Piyush Bhatia
```

The taskbar at the bottom shows the system clock as 4:34 PM and the weather as 9°C Partly sunny.

## 6. Update

In Cassandra where clause must contain the partition key and all clustering key.  
Here clustering key are salary and name

The screenshot shows a Windows desktop with various icons on the left. In the center, a Command Prompt window is open, displaying the following commands and output:

```
cqlsh:groupa_keyspace> update employee set id=3 where department='IT' and salary=23000 and name='groupa';
cqlsh:groupa_keyspace> select * from employee;
department | salary | name | id
-----
Human resource | 4000 | X | 1
Human resource | 4000 | Y | 1
Human resource | 23000 | groupa | 1
IT | 4000 | X | 2
IT | 4000 | Y | 5
IT | 23000 | groupa | 3
(6 rows)
cqlsh:groupa_keyspace> update employee set id=3 where department='Human resource' and salary=23000 and name='groupa';
cqlsh:groupa_keyspace> select * from employee;
department | salary | name | id
-----
Human resource | 4000 | X | 1
Human resource | 4000 | Y | 1
Human resource | 23000 | groupa | 3
IT | 4000 | X | 2
IT | 4000 | Y | 5
IT | 23000 | groupa | 3
(6 rows)
cqlsh:groupa_keyspace>
```

To the right of the Command Prompt, a Notepad window titled "BDM\_GroupA - Notepad" is open, showing a list of participants:

```
File Edit Format View Help
Group A

Participants
1. Aadarsha chapagain
2. Jyoti shukla
3. Rishi Phaneendra Varma
4. Priti Bhale
5. Sreya Treasa Johny
6. Piyush Bhatia
```

The taskbar at the bottom shows the system clock as 5:11 PM and the weather as 7°C Partly sunny.

## 7. Create tweets table with counter.

*create table tweets\_count(user varchar PRIMARY KEY, tweets counter);*

The screenshot shows a Windows desktop with a terminal window (Command Prompt - cqlsh) and a Notepad window (BDM\_GroupA - Notepad). The terminal window displays the following commands and output:

```

cqlsh:groupa_keyspace> select * from employee;
(6 rows)
cqlsh:groupa_keyspace> update employee set id=3 where department='Human resource' and salary=23000 and name='groupa';
cqlsh:groupa_keyspace> describe tweets_count;
CREATE TABLE groupa_keyspace.tweets_count (
  user text PRIMARY KEY,
  tweets counter
) 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:groupa_keyspace>
  
```

The Notepad window displays the following text:

```

Group A

Participants
1. Aadarsha chapagain
2. Jyoti shukla
3. Rishi Phaneendra Varma
4. Priti Bhale
5. Sreya Treasa Johny
6. Piyush Bhatia
  
```

## 8. Only updates and read are allowed on counter tables. When you want to keep the sequence you use counter .Only in Cassandra not in SQL

*update tweets\_count set tweets=tweets+20 where user='abc';*

The screenshot shows a Windows desktop with a terminal window (Command Prompt - cqlsh) and a Notepad window (BDM\_GroupA - Notepad). The terminal window displays the following commands and output:

```

cqlsh:groupa_keyspace> describe tables;
employee tweets_count

cqlsh:groupa_keyspace> drop table tweets_count;
cqlsh:groupa_keyspace> describe tables;
employee

cqlsh:groupa_keyspace> create table tweets_count(user varchar PRIMARY KEY, tweets counter);
cqlsh:groupa_keyspace> describe tweets_count;
CREATE TABLE groupa_keyspace.tweets_count (
  user text PRIMARY KEY,
  tweets counter
) 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:groupa_keyspace> update tweets_count set tweets=tweets+20 where user='abc';
cqlsh:groupa_keyspace> select * from tweets_count;
(1 rows)
cqlsh:groupa_keyspace>
  
```

The Notepad window displays the following text:

```

Group A

Participants
1. Aadarsha chapagain
2. Jyoti shukla
3. Rishi Phaneendra Varma
4. Priti Bhale
5. Sreya Treasa Johny
6. Piyush Bhatia
  
```

## 9. User\_tweets\_table

*create table user\_tweets(user varchar PRIMARY KEY, tweet varchar);*  
*insert into user\_tweets(user, tweet) values('A', 'what a beautiful day');*

The screenshot shows a Windows desktop with a taskbar at the bottom. The desktop background is dark. On the left side, there are icons for Recycle Bin, Microsoft Teams, Google Chrome, WhatsApp, Oracle VM VirtualBox, Tableau 2021.3, BDM1024.L, Tableau Pr, Builder 20, WinSCP, uTorrent W, Microsoft Edge, LockDown Browser, Respondus 4.0, and WinZip. The Command Prompt window is open, showing a series of SQL queries and their results. The Notepad window is also open, showing the results of the queries. The queries are as follows:

```
qqlsh:groupa_keyspace> create table user_tweets(user varchar PRIMARY KEY, tweet varchar);
qqlsh:groupa_keyspace> insert into user_tweets(user, tweet) values('A', 'what a beautiful day');
qqlsh:groupa_keyspace> select * from user_tweets;
```

The results of the first query are shown in the Notepad window:

user	tweet
A	what a beautiful day

The second query is:

```
qqlsh:groupa_keyspace> insert into user_tweets(user, tweet) values('B', 'off to a long awaited vacation') using TTL 30;
qqlsh:groupa_keyspace> select * from user_tweets;
```

The results of the second query are shown in the Notepad window:

user	tweet
B	off to a long awaited vacation
A	what a beautiful day

The third query is:

```
qqlsh:groupa_keyspace> select * from user_tweets;
```

The results of the third query are shown in the Notepad window:

user	tweet
A	what a beautiful day

The fourth query is:

```
qqlsh:groupa_keyspace> insert into user_tweets(user, tweet) values('C', 'sweet as honey') using TTL 60;
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the fourth query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	60
A	what a beautiful day	null

The fifth query is:

```
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the fifth query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	52
A	what a beautiful day	null

The sixth query is:

```
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the sixth query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	50
A	what a beautiful day	null

The seventh query is:

```
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the seventh query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	48
A	what a beautiful day	null

The eighth query is:

```
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the eighth query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	46
A	what a beautiful day	null

The ninth query is:

```
qqlsh:groupa_keyspace> select user, tweet, TTL(tweet) from user_tweets;
```

The results of the ninth query are shown in the Notepad window:

user	tweet	tTL(tweet)
C	sweet as honey	44
A	what a beautiful day	null

The Notepad window also shows a list of participants:

Participants

1. Aadarsha chapagain
2. Jyoti shukla
3. Rishi Phaneendra Varma
4. Priti Bhale
5. Sreya Treasa Johny
6. Piyush Bhatia