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SUBJECT: BDA
LAB: 8

Aim :- To understand and implement the use of distributed NoSQL database Cassandra.

2) Insert records into the table account

```
token@cqlsh:mykeyspace> insert into account ( atype,accno,aod,astatus,balance,custid) values ('saving',1001,
'2023-02-03','active',5000,1);
token@cqlsh:mykeyspace> insert into account ( atype,accno,aod,astatus,balance,custid) values ('saving',1002,
'2023-03-03','active',10000,2);
token@cqlsh:mykeyspace> insert into account ( atype,accno,aod,astatus,balance,custid) values ('saving',1004,
'2021-12-01','notactive',100,4);
token@cqlsh:mykeyspace> insert into account ( atype,accno,aod,astatus,balance,custid) values ('current',1002
,'2020-01-01','active',1000,3);
token@cqlsh:mykeyspace> insert into account ( atype,accno,aod,astatus,balance,custid) values ('current',1003
,'2020-01-01','active',1000,3);
```

3)SELECT * FROM account WHERE accno = 1001;

```
 atype  | accno | aod        | astatus | balance | custid
--------+-------+------------+---------+---------+--------
 saving |  1001 | 2023-02-03 |  active |    5000 |      1

(1 rows)
```

4)select astatus,accno from account WHERE atype='saving';

```
token@cqlsh:mykeyspace> select astatus,accno from account WHERE atype='saving';

 astatus   | accno
-----------+-------
    active |  1001
    active |  1002
 notactive |  1004
```

5) select max(balance) from account where atype='saving';

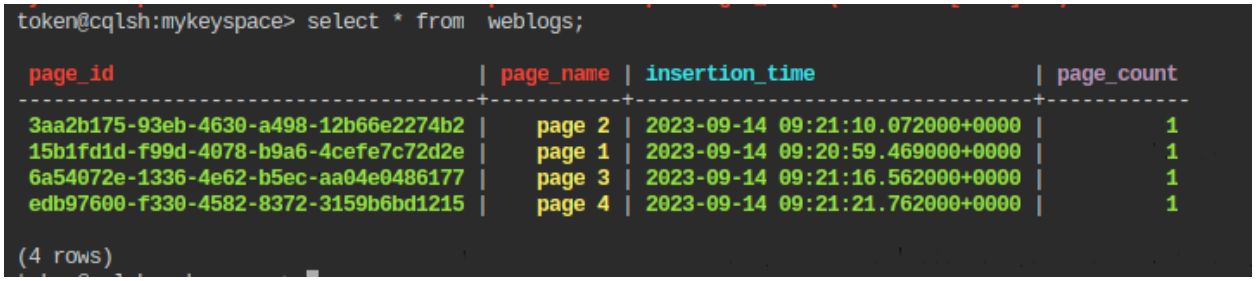
```
token@cqlsh:mykeyspace> select max(balance) from account where atype='saving';

 system.max(balance)
---------------------
               10000

(1 rows)
```

6) create table weblogs(page_id uuid, page_name text, insertion_time timestamp, page_count counter, PRIMARY KEY((page_id,page_name),insertion_time));\

7)
UPDATE weblogs SET page_count=page_count+1 WHERE page_id=uuid() AND page_name='page 1' AND insertion_time=toTimestamp(now());
UPDATE weblogs SET page_count=page_count+1 WHERE page_id=uuid() AND page_name='page 2' AND insertion_time=toTimestamp(now());
UPDATE weblogs SET page_count=page_count+1 WHERE page_id=uuid() AND page_name='page 3' AND insertion_time=toTimestamp(now());
UPDATE weblogs SET page_count=page_count+1 WHERE page_id=uuid() AND page_name='page 4' AND insertion_time=toTimestamp(now());

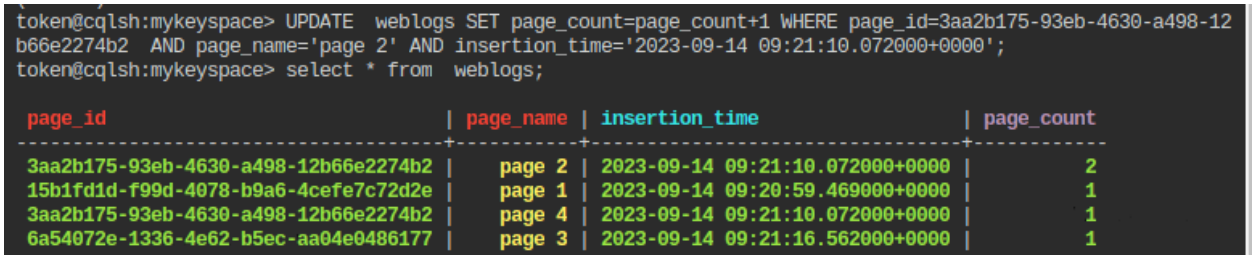


```
token@cqlsh:mykeyspace> select * from  weblogs;

 page_id                              | page_name | insertion_time                  | page_count
--------------------------------------+-----------+---------------------------------+------------
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 2 | 2023-09-14 09:21:10.072000+0000 |          1
 15b1fd1d-f99d-4078-b9a6-4cefe7c72d2e |    page 1 | 2023-09-14 09:20:59.469000+0000 |          1
 6a54072e-1336-4e62-b5ec-aa04e0486177 |    page 3 | 2023-09-14 09:21:16.562000+0000 |          1
 edb97600-f330-4582-8372-3159b6bd1215 |    page 4 | 2023-09-14 09:21:21.762000+0000 |          1

(4 rows)
```

8) UPDATE weblogs SET page_count=page_count+1 WHERE page_id=3aa2b175-93eb-4630-a498-12b66e2274b2 AND page_name='page 2' AND insertion_time='2023-09-14 09:21:10.072000+0000';



```
token@cqlsh:mykeyspace> UPDATE  weblogs SET page_count=page_count+1 WHERE page_id=3aa2b175-93eb-4630-a498-12
b66e2274b2  AND page_name='page 2' AND insertion_time='2023-09-14 09:21:10.072000+0000';
token@cqlsh:mykeyspace> select * from  weblogs;

 page_id                              | page_name | insertion_time                  | page_count
--------------------------------------+-----------+---------------------------------+------------
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 2 | 2023-09-14 09:21:10.072000+0000 |          2
 15b1fd1d-f99d-4078-b9a6-4cefe7c72d2e |    page 1 | 2023-09-14 09:20:59.469000+0000 |          1
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 4 | 2023-09-14 09:21:10.072000+0000 |          1
 6a54072e-1336-4e62-b5ec-aa04e0486177 |    page 3 | 2023-09-14 09:21:16.562000+0000 |          1
```

9) this is error occur because page_name is not a partition key

```
token@cqlsh:mykeyspace> select * from weblogs where page_name='page2';
InvalidRequest: Error from server: code=2200 [Invalid query] message="Cannot execute this query as it might
involve data filtering and thus may have unpredictable performance. If you want to execute this query despit
e the performance unpredictability, use ALLOW FILTERING"
token@cqlsh:mykeyspace>
```

To solve this use ALLOW FILTERING

```
token@cqlsh:mykeyspace> select * from weblogs where page_name='page 2' ALLOW FILTERING;

 page_id                              | page_name | insertion_time                  | page_count
--------------------------------------+-----------+---------------------------------+------------
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 2 | 2023-09-14 09:21:10.072000+0000 |          2
```

10) Delete one of the Page from the table

```
token@cqlsh:mykeyspace> select * from weblogs;

 page_id                              | page_name | insertion_time                  | page_count
--------------------------------------+-----------+---------------------------------+------------
 15b1fd1d-f99d-4078-b9a6-4cefe7c72d2e |    page 1 | 2023-09-14 09:20:59.469000+0000 |          1
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 4 | 2023-09-14 09:21:10.072000+0000 |          1
 6a54072e-1336-4e62-b5ec-aa04e0486177 |    page 3 | 2023-09-14 09:21:16.562000+0000 |          1
```

delete from weblogs where page_name='page 2' AND page_id = 3aa2b175-93eb-4630-a498-12b66e2274b2;

11) Insert a few page records and display them like the following figure. understand the purpose of partition key column, clustering key column.

```
 page_id                              | page_name | insertion_time                  | page_count
--------------------------------------+-----------+---------------------------------+------------
 15b1fd1d-f99d-4078-b9a6-4cefe7c72d2e |    page 1 | 2023-09-14 09:20:59.469000+0000 |          1
 3aa2b175-93eb-4630-a498-12b66e2274b2 |    page 4 | 2023-09-14 09:21:10.072000+0000 |          1
 6a54072e-1336-4e62-b5ec-aa04e0486177 |    page 3 | 2023-09-14 09:21:16.562000+0000 |          1
 edb97600-f330-4582-8372-3159b6bd1215 |    page 4 | 2023-09-14 09:21:21.762000+0000 |          1
```

12) Display the total of all page record count.

```
(4 rows)
token@cqlsh:mykeyspace> select SUM(page_count) from weblogs;

 system.sum(page_count)
------------------------
                      4
```

13)Display how many pages are stored in the table.

```
token@cqlsh:mykeyspace> select count(*) from weblogs;

 count
-------
     4

(1 rows)

Warnings :
Aggregation query used without partition key
```

14) Display the page which has the highest number of visitors(page_count).

```
token@cqlsh:mykeyspace> select max(page_count) from weblogs;

 system.max(page_count)
------------------------
                      2

(1 rows)

Warnings :
Aggregation query used without partition key
```