

AU 2021 - NoSQL Basics & Fundamentals

Assignment:

1. Import `travel-sample` bucket

The screenshot shows a web application interface for 'AssignmentNoSQL > Buckets'. The interface includes a sidebar with navigation links: Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Analytics, and Eventing. The main content area displays a table of buckets. The 'travel-sample' bucket is highlighted, showing details: 31,591 items, 100% resident, 0 ops/sec, 48.2MB / 100MB RAM used/quota, and 50.6MB disk used. Links for 'Documents' and 'Statistics' are provided. A warning message at the bottom states: 'Warning: At least two servers with the data service are required to provide replication.'

name	items	resident	ops/sec	RAM used/quota	disk used	
travel-sample	31,591	100%	0	48.2MB / 100MB	50.6MB	Documents Statistics

2. Write a query to get the sum of all distances where type="route" for each airline id.

select airlineid,sum(distance) from `travel-sample` where type="route" group by airlineid;

The screenshot shows the 'AccoliteCluster > Query' interface. The 'Query Editor' contains the query: `1 select airlineid,sum(distance) from `travel-sample` where type="route" group by airlineid;`. The 'Query Results' tab is selected, displaying a table with two columns: 'airlineid' and 'sum(distance)'. The table lists 20 rows of data. The 'Data Insights' panel on the right shows a 'Queryable Buckets' section for 'travel-sample' with a sample size of 1000 of 31591 (80.7%). It also displays a 'Data Insights' section with a tree view of the data structure, including fields like 'distance', 'airlineid', 'sourceairport', and 'type'.

airlineid	sum(distance)
4239.14522643578	airline_2218
196273.3095107058	airline_218
6400.345938790037	airline_3661
15373.23691702794	airline_4573
21282.39111628915	airline_3776
51171.536495346466	airline_1181
30994.3016868026	airline_3740
82822.07113211305	airline_356
430608.8215348117	airline_350
7232.838897956488	airline_4021
108298.9267556719	airline_130
168964.28317560966	airline_214
2570.13052669194	airline_4438
8259.3661259818	airline_1073
4471.3670795071093	airline_3788
14491.423377568525	airline_2293
4118778.5142756514	airline_5265
12350.262050761774	airline_2117
305193.45554586744	airline_2183
22910.52133180999	airline_3026
5081.30707799992	airline_3820

3. Write queries to join (LEFT, RIGHT, INNER) type="route" & "airline" and fetch the data whose sourceairport="SFO"

a) Left Join

```
select t1.airlineid,t2.otherid from (select airlineid,sourceairport from `travel-sample` where type="route") as t1 left join (select meta().id,id as otherid from `travel-sample` where type="airline") as t2 on t1.airlineid=t2.id where t1.sourceairport="SFO";
```

The screenshot shows the AccoliteCluster Query Editor interface. The query editor contains the following SQL query:

```
1 select t1.airlineid,t2.otherid from (select airlineid,sourceairport from `travel-sample` where type="route") as t1 left join (select meta().id,id as otherid from `travel-sample` where type="airline") as t2 on t1.airlineid=t2.id where t1.sourceairport="SFO";
```

The query results are displayed in a table format:

airlineid	otherid
airline_1355	1355
airline_1548	1548
airline_2297	2297
airline_2297	2297
airline_2297	2297
airline_2297	2297
airline_2461	2461
airline_2461	2461
airline_24	24
airline_137	137

b) Right Join

```
select t1.airlineid,t2.otherid from (select airlineid,sourceairport from `travel-sample` where type="route") as t1 right join (select meta().id,id as otherid from `travel-sample` where type="airline") as t2 on t1.airlineid=t2.id where t1.sourceairport="SFO";
```

The screenshot shows the AccoliteCluster Query Editor interface. The query editor contains the following SQL query:

```
1 select t1.airlineid,t2.otherid from (select airlineid,sourceairport from `travel-sample` where type="route") as t1 right join (select meta().id,id as otherid from `travel-sample` where type="airline") as t2 on t1.airlineid=t2.id where t1.sourceairport="SFO";
```

The query results are displayed in a table format:

airlineid	otherid
airline_1355	1355
airline_137	137
airline_2297	2297
airline_2297	2297
airline_2297	2297
airline_24	24

c) Inner Join

```
select t1.airlineid,t2.otherid from (select airlineid,sourceairport from `travel-sample` where type="route") as t1 inner join (select meta().id,id as otherid from `travel-sample` where type="airline") as t2 on t1.airlineid=t2.id where t1.sourceairport="SFO";
```

AccoliteCluster > Query

Query Workbench Query Monitor

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs
Documents
Query
Indexes
Search
Analytics
Eventing
Views

Query Editor

1 select t1.airlineid,t2.otherid from (select airlineid,sourceairport from "travel-sample" where type="route") as t1 inner join (select meta().id as otherid

Execute Explain Advise success just now | elapsed: 2.7s | execution: 2.7s | docs: 7 | size: 470 bytes

Query Results (7)

Table JSON Tree Plan Plan Text Advice

airline_1355	1355
airline_2297	2297
airline_2297	2297
airline_2297	2297
airline_2297	2297
airline_24	24
airline_137	137

4. Write a mapreduce to get the number of all documents based on entities (type).

Code in map

```
function (doc,meta){
    emit(doc.type,null);
}
```

// Tick group checkbox in results

Code in reduce

_count

Map

```
1 function (doc, meta) {
2   emit(doc.type,null);
3 }
4
```

Reduce (built inc_count_sum_stats)

```
1 _count
```

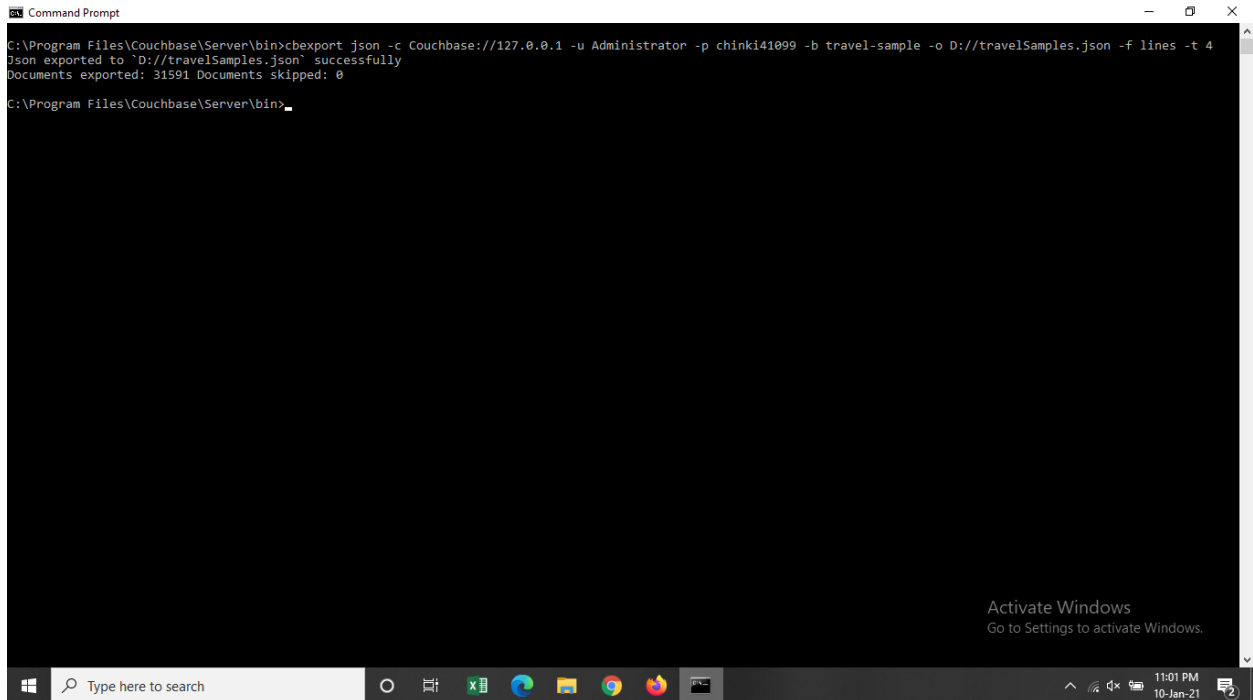
Results filter: ?limit=6&state=false&connection_timeout=60000&inclusive_end=true&skip=0&full_set=6group=true

Key	Value
"airline" undefined	187
"airport" undefined	1968
"hotel" undefined	917
"landmark" undefined	4495
"route" undefined	24824

```
{ "rows": [  
  { "key": "airline", "value": 187 },  
  { "key": "airport", "value": 1968 },  
  { "key": "hotel", "value": 917 },  
  { "key": "landmark", "value": 4495 },  
  { "key": "route", "value": 24024 }  
]  
}
```

5. Refer CLI interface & try to export the travel sample data. Below are the steps:

- a) Go to Couchbase Bin folder - C:\Program Files\Couchbase\Server\bin
- b) Open Command Prompt from the bin folder
- c) Run the below command to export the data from travel-sample bucket:
cbexport json -c couchbase://127.0.0.1 -u <USER NAME> -p <password>
-b travel-sample -o C:/travelSample.json -f lines -t 4



```
Command Prompt  
C:\Program Files\Couchbase\Server\bin>cbexport json -c Couchbase://127.0.0.1 -u Administrator -p chinki41099 -b travel-sample -o D://travelSamples.json -f lines -t 4  
Json exported to 'D://travelSamples.json' successfully  
Documents exported: 31591 Documents skipped: 0  
C:\Program Files\Couchbase\Server\bin>
```

Activate Windows
Go to Settings to activate Windows.

activity

help

Administrator

AccoliteCluster > Buckets

ADD BUCKET

Dashboard

Servers

Buckets

XDCR

Security

Settings

Logs

Documents

Query

Indexes

Search

Views

filter buckets...

name

items

resident

ops/sec

RAM used/quota

disk used

NewBucket

0

100%

0

30.5MB / 4.44GB

292KB

Documents

Statistics

travel-sample

31,591

99%

0

72.5MB / 100MB

33.9MB

Documents

Statistics

D) Create a new Bucket “NewBucket” & import the data to it:

```
cbimport json -c couchbase://127.0.0.1 -u <User Name> -p <password> -b
NewBucket -f lines -d file://C:/travelSample.json -t 4 -g %id%
```

E) Once the data is imported, please attach the screenshot.

```

C:\Program Files\Couchbase\Server\bin>cbimport json -c Couchbase://127.0.0.1 -u Administrator -p chink141099 -b NewBucket -f lines -d file://D:/travelSamples.json -t 4 -g %id%
JSON "file://D:/travelSamples.json" imported to "http://127.0.0.1:8091" successfully
Documents imported: 31591 Documents failed: 0
C:\Program Files\Couchbase\Server\bin>

```

