No SQL Basics and Fundamentals - Assignment

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Questions:

1. Import `travel-sample` bucket
2. Write a query to get the sum of all distances where type="route" for each airline id.
3. Write queries to join(LEFT,RIGHT,INNER) type="route"&"airline" and fetch the data whose sourceairport="SFO"
4. Write a mapreduce to get the number of all documents based on entities(type).
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
   d. Create a new Bucket "NewBucket" & import the data to it:
   e. 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%
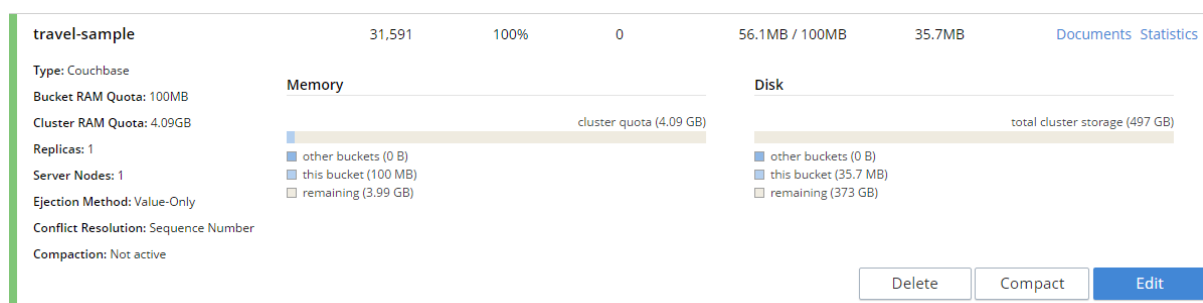   Once the data is imported, please attach the screenshot.

   <u>Note</u>:
   -u --> UserId which you've created
   -p --> password
   -b --> bucket name

Answers:

1.

travel-sample import into a bucket

2.

Sum of distances query grouped by airline id

Query Editor

```
1   select airlineid, sum(distance) as total_distance
2   from `travel-sample`
3   where type = "route"
4   group by airlineid;
```

Execute   Explain   Advise   ✔ success just now | elapsed: 7.6s | execution: 7.6s | docs:

Query Results   Table   JSON

```
 1 ▾   [
 2 ▾       {
 3             "airlineid": "airline_5013",
 4             "total_distance": 420573.88340573246
 5         },
 6 ▾       {
 7             "airlineid": "airline_10",
 8             "total_distance": 236.40367170215262
 9         },
10 ▾       {
11            "airlineid": "airline_3320",
12            "total_distance": 931702.2898796126
13        },
```

3.

Left Join:

Query Editor   < history (34/34) >

```
1   select * from `travel-sample` ROUTE
2   left join `travel-sample` AIRLINE
3   on ROUTE.airlineid = META(AIRLINE).id
4   where ROUTE.type = "route" and AIRLINE.type="airline"
5   and ROUTE.sourceairport = "SFO";
```

| Execute | Explain | Advise | ✔ success   just now | elapsed: 1.5s | execution: 1.5s | docs: 183 |

Query Results 🗐 Q   Table   JSON   Tree

```
1 ▾   [
2 ▾   {
3 ▾       "AIRLINE": {
4               "callsign": "UNITED",
5               "country": "United States",
6               "iata": "UA",
7               "icao": "UAL",
8               "id": 5209,
9               "name": "United Airlines",
10              "type": "airline"
11          },
12 ▾      "ROUTE": {
```

Right Join:

```
1  select * from `travel-sample` ROUTE
2  right join `travel-sample` AIRLINE
3  on ROUTE.airlineid = META(AIRLINE).id
4  where ROUTE.type = "route" and AIRLINE.type="airline"
5  and ROUTE.sourceairport = "SFO";
```

Execute   Explain   Advise   ✔ success   just now | elapsed: 23.8s | execution: 23.8s | docs: 183 |

Query Results 🗐 🔍   Table   JSON   Tree

```
 1 ▾   [
 2 ▾     {
 3 ▾       "AIRLINE": {
 4           "callsign": "CITRUS",
 5           "country": "United States",
 6           "iata": "FL",
 7           "icao": "TRS",
 8           "id": 1316,
 9           "name": "AirTran Airways",
10           "type": "airline"
11         },
12 ▾       "ROUTE": {
```

Inner Join:

```
1  select * from `travel-sample` ROUTE
2  inner join `travel-sample` AIRLINE
3  on ROUTE.airlineid = META(AIRLINE).id
4  where ROUTE.type = "route" and AIRLINE.type="airline"
5  and ROUTE.sourceairport = "SFO";
```

Execute   Explain   Advise   ✔ success   just now | elapsed: 276.8ms | execution: 276.8

Query Results 🗐 🔍   Table   JSON

```
 1 ▾   [
 2 ▾     {
 3 ▾       "AIRLINE": {
 4           "callsign": "UNITED",
 5           "country": "United States",
 6           "iata": "UA",
 7           "icao": "UAL",
 8           "id": 5209,
 9           "name": "United Airlines",
10           "type": "airline"
11         },
12 ▾       "ROUTE": {
```

4.

MapReduce

View Index Code

Map

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

Reduce (bui

```
1 _count
```

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

Development Time Subset   Full Cluster Data Set

Key
"airline_10" airline_10

null

5.

New Bucket Creation

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Export to json file and Import into new bucket

```
C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u Sreeram -p Sreeram -b
 travel-sample -o C:/travelSample.json -f lines -t 4
2021-01-12T23:40:52.497+05:30 WARN: (Couchbase) Unexpected error 'operation timed out after 5s' while
 trying to get sequence numbers, will retry in 5s -- couchbase.GetSequenceNumbers() at sequence_numbe
rs.go:38
Json exported to `C:/travelSample.json` successfully
Documents exported: 31591 Documents skipped: 0

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

C:\Program Files\Couchbase\Server\bin>
```

NewBucket filled with many items (28579)