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Assignment: NoSQL

Question 1: Import `travel-sample` bucket

The screenshot shows the Accolite Buckets dashboard. The left sidebar contains navigation links: Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Analytics, Eventing, and Views. The main area displays a table of buckets:

name	Items	resident	ops/sec	RAM used/quota	disk used	Documents	Statistics
NewBucket	28,579	100%	0	51.5MB / 200MB	26.4MB	Documents	Statistics
travel-sample	31,591	100%	0	56MB / 100MB	34.4MB	Documents	Statistics

A warning message at the bottom states: "Warning: At least two servers with the data service are required to provide replication." The Windows taskbar at the bottom shows the date as 1/13/2021 and time as 10:51 AM.

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

Ans: select sum(distance) from `travel-sample` where type='route';

The screenshot shows the Accolite Query Editor. The left sidebar is the same as in the previous image. The main area is titled "Query Editor" and shows a query:

```
1 select sum(distance) from `travel-sample` where type='route'
```

Buttons for "Execute", "Explain", and "Advise" are visible. Below the query, it says "success just now | elapsed: 5.2s | execution: 5.2s | docs: 1 | size: 39 bytes". The "Query Results" section shows a JSON array:

```
1 - [
2 - {
3 -   "$1": 53538158.56144267
4 - }
5 - ]
```

On the right, the "Data Insights" panel shows "Queryable Buckets" for "travel-sample" (sampled 1000 of 31591) and "NewBucket" (sampled 1000 of 28579). The "travel-sample" bucket shows a distribution of types: "route" (82.5%), "landmark" (9.5%), "hotel" (3.6%), "country" (United States, type: "country" (4.0%), and "airport" (4.0%). The "NewBucket" bucket shows a distribution of types: "stops" = 0, type: "route" (79.5%), "type" = "landmark" (13.2%), "type" = "hotel" (1.6%), "type" = "airline" (0.6%), and "type" = "airport" (5.1%).

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

Ans: (for Left Join)

```
select * from `travel-sample` route left join `travel-sample` airline on route.type='route' and airline.type='airline' where route.sourceairport='SFO';
```

The screenshot displays the Accolite Query Workbench interface. The top navigation bar includes the Accolite logo, the word "Query", and buttons for "IMPORT" and "EXPORT". Below this, there are tabs for "Query Workbench" and "Query Monitor".

The main area is divided into three sections:

- Query Editor:** Contains the SQL query:

```
1 select * from `travel-sample` route left join `travel-sample` airline
2 on route.type='route' and airline.type='airline' where route.sourceairport='SFO';
```

 Below the editor are buttons for "Execute", "Explain", and "Advise". A status bar indicates "success just now | elapsed: 438.8ms | execution: 438.8ms | docs: 100 | size: 365158 bytes".
- Query Results:** Shows the results in JSON format. The first document is an array containing an object for the "airline" and an object for the "route". The "airline" object has fields: "callsign": "MILE-AIR", "country": "United States", "iata": "Q5", "icao": "MLA", "id": 18, "name": "48-Mile Air", and "type": "airline". The "route" object is partially visible.
- Data Insights:** This section provides a summary of the data. It includes "Queryable Buckets" for the "travel-sample" bucket (sampled 1000 of 31591) and "Queryable By Doc ID Only" for the "NewBucket" (sampled 1000 of 28579). The "travel-sample" bucket shows the following distribution: "type" = "route" (82.5%), "type" = "landmark" (9.5%), "type" = "hotel" (3.6%), "country" = "United States", "type" = "route" (3.6%), and "type" = "airport" (4.0%). The "NewBucket" shows: "stops" = 0, "type" = "route" (79.5%), "type" = "landmark" (13.2%), "type" = "hotel" (1.6%), "type" = "airline" (0.6%), and "type" = "airport" (5.1%).

A warning message at the bottom left states: "Warning: At least two servers with the data service are required to provide replication."

(for Right Join)

```
select * from `travel-sample` route right join `travel-sample` airline on route.type='route' and airline.type='airline' where route.sourceairport='SFO';
```

The screenshot shows the Accolite Query Workbench interface. The Query Editor contains the following SQL query:

```
1 select * from `travel-sample` route right join `travel-sample` airline
2 on route.type='route' and airline.type='airline' where route.sourceairport='SFO' ;
```

The Query Results tab shows the following JSON output:

```
1- [
2- {
3-   "airline": {
4-     "callsign": "MILE-AIR",
5-     "country": "United States",
6-     "iata": "QS",
7-     "icao": "MLA",
8-     "id": 10,
9-     "name": "48-Mile Air",
10-    "type": "airline"
11-  },
12-   "route": {
13-     "airline": "UA",
14-     "airlineid": "airline_5209",
15-     "sourceairport": "SFO",
16-     "targetairport": "LAX",
17-     "type": "route"
18-   }
19- }
20- ]
```

The Data Insights panel shows the following data:

- Queryable Buckets:**
 - travel-sample: sampled 1000 of 31591
 - type = "route": 82.5%
 - type = "landmark": 9.5%
 - type = "hotel": 3.6%
 - country = "United States", type = "": 1.6%
 - type = "airport": 4.0%
- Queryable By Doc ID Only:**
 - NewBucket: sampled 1000 of 28579
 - stops = 0, type = "route": 79.5%
 - type = "landmark": 13.2%
 - type = "hotel": 1.6%
 - type = "airline": 0.6%
 - type = "airport": 5.1%

A warning message is displayed: "Warning: At least two servers with the data service are required to provide replication."

(for Inner Join)

select * from `travel-sample` route inner join `travel-sample` airline on route.type='route' and airline.type='airline' where route.sourceairport='SFO';

The screenshot shows the Accolite Query Workbench interface. The Query Editor contains the following SQL query:

```
1 select * from `travel-sample` route inner join `travel-sample` airline
2 on route.type='route' and airline.type='airline' where route.sourceairport='SFO';
```

The Query Results tab shows the following JSON output:

```
1- [
2- {
3-   "airline": {
4-     "callsign": "MILE-AIR",
5-     "country": "United States",
6-     "iata": "QS",
7-     "icao": "MLA",
8-     "id": 10,
9-     "name": "48-Mile Air",
10-    "type": "airline"
11-  },
12-   "route": {
13-     "airline": "UA",
14-     "airlineid": "airline_5209",
15-     "sourceairport": "SFO",
16-     "targetairport": "LAX",
17-     "type": "route"
18-   }
19- }
20- ]
```

The Data Insights panel shows the following data:

- Queryable Buckets:**
 - travel-sample: sampled 1000 of 31591
 - type = "route": 82.5%
 - type = "landmark": 9.5%
 - type = "hotel": 3.6%
 - country = "United States", type = "": 1.6%
 - type = "airport": 4.0%
- Queryable By Doc ID Only:**
 - NewBucket: sampled 1000 of 28579
 - stops = 0, type = "route": 79.5%
 - type = "landmark": 13.2%
 - type = "hotel": 1.6%
 - type = "airline": 0.6%
 - type = "airport": 5.1%

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

Map

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

Reduce (built in: _count, _sum, _stats)

```
1 _count
```

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

Development Time Subset Full Cluster Data Set

Key	Value
"12907"	null
"13003"	null
"13193"	

Activate Windows
Go to Settings to activate Windows.

Question 5: Refer CLI interface & try to export the travel sample data.

```
C:\Windows\System32\cmd.exe
JSON import failed: Authentication error executing "GET http://127.0.0.1:8091/pools/default" check username and password
C:\Program Files\Couchbase\Server\bin>
C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u Mohit_Sharma -p Iammohit@12 -b travel-sample -o E:/travelSample.json -f lines -t 4
Json exported to 'E:/travelSample.json' successfully
Documents exported: 31591 Documents skipped: 0
C:\Program Files\Couchbase\Server\bin>cbimport json -c couchbase://127.0.0.1 -u Mohit_Sharma -p Iammohit@12 -b Test_bucket -f lines -d file://E:/travelSample.json -t 4
-g %id%
JSON 'file://E:/travelSample.json' imported to 'http://127.0.0.1:8091' successfully
Documents imported: 31591 Documents failed: 0
C:\Program Files\Couchbase\Server\bin>
```

Activate Windows
Go to Settings to activate Windows.