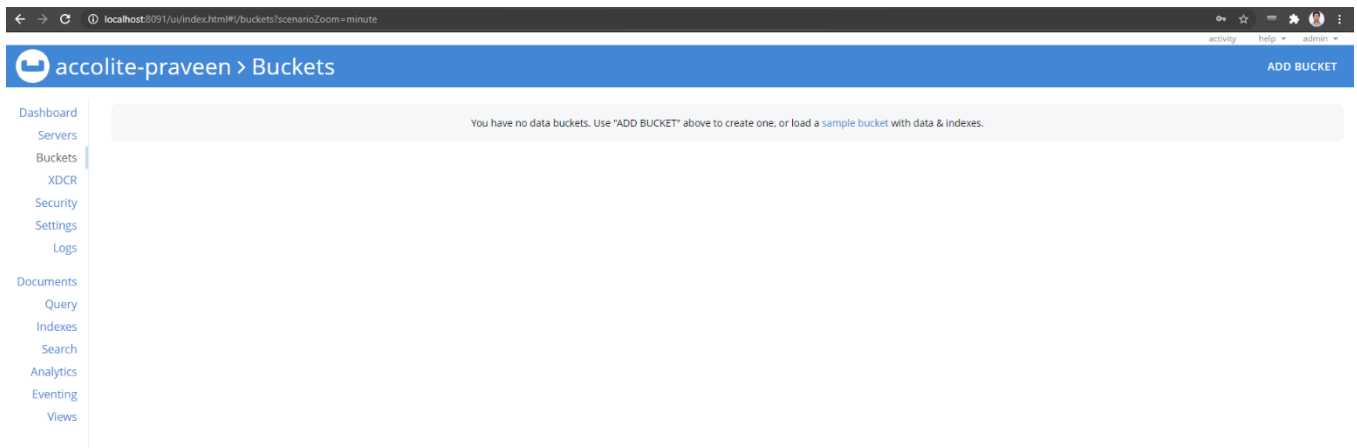


AU 2021 - NoSQL Basics & Fundamentals (ASSIGNMENT)

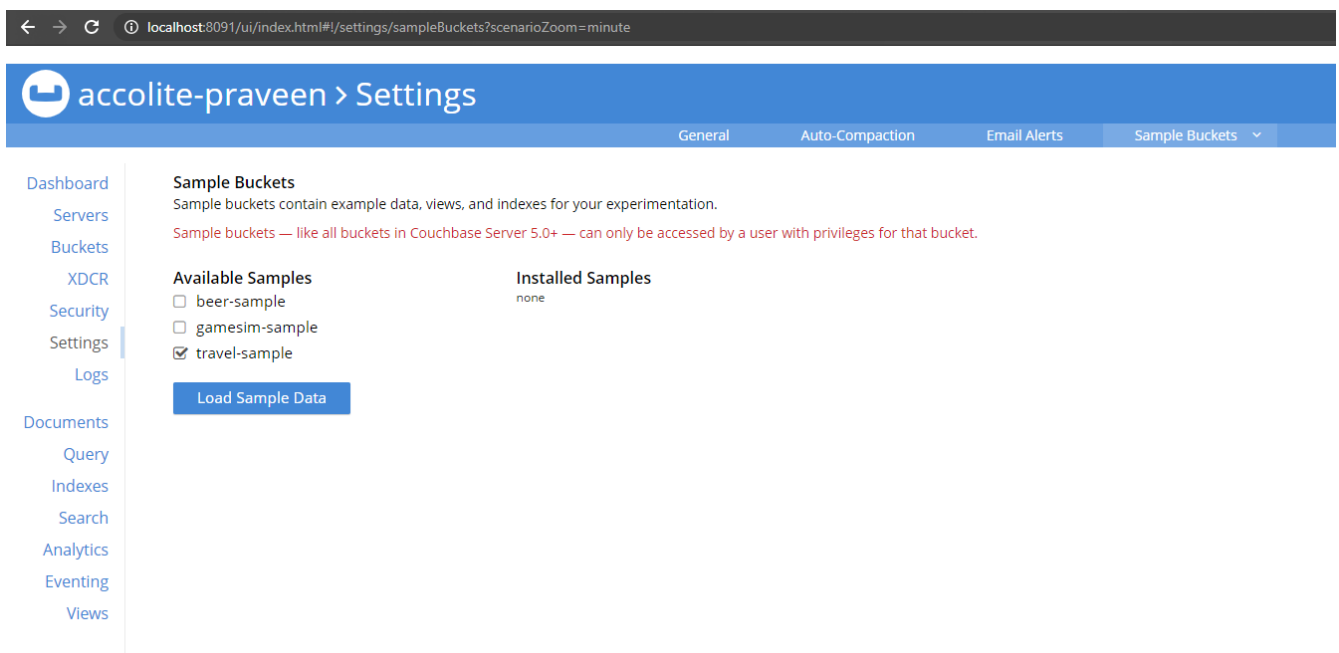
Q1. Import `travel-sample` bucket

STEP 1:



The screenshot shows the 'Buckets' page in the Accolite-Praveen application. The browser address bar shows 'localhost:8091/ui/index.html#/buckets?scenarioZoom=minute'. The page header includes the application logo and name 'accolite-praveen > Buckets', along with an 'ADD BUCKET' button. A left sidebar contains a navigation menu with items: Dashboard, Servers, Buckets (highlighted), XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Analytics, Eventing, and Views. The main content area displays a message: 'You have no data buckets. Use "ADD BUCKET" above to create one, or load a [sample bucket](#) with data & indexes.'

STEP 2:



The screenshot shows the 'Settings' page in the Accolite-Praveen application, specifically the 'Sample Buckets' tab. The browser address bar shows 'localhost:8091/ui/index.html#/settings/sampleBuckets?scenarioZoom=minute'. The page header includes the application logo and name 'accolite-praveen > Settings', and a tabbed interface with 'General', 'Auto-Compaction', 'Email Alerts', and 'Sample Buckets' (selected). A left sidebar contains a navigation menu with items: Dashboard, Servers, Buckets, XDCR, Security, Settings (highlighted), Logs, Documents, Query, Indexes, Search, Analytics, Eventing, and Views. The main content area is titled 'Sample Buckets' and contains the following text: 'Sample buckets contain example data, views, and indexes for your experimentation.' and 'Sample buckets — like all buckets in Couchbase Server 5.0+ — can only be accessed by a user with privileges for that bucket.' Below this, there are two sections: 'Available Samples' and 'Installed Samples'. The 'Available Samples' section lists three items: 'beer-sample' (unchecked), 'gamesim-sample' (unchecked), and 'travel-sample' (checked). The 'Installed Samples' section shows 'none'. A 'Load Sample Data' button is located below the 'Available Samples' list.

Dashboard

Servers

Buckets

XDCR

Security

Settings

Logs

Documents

Query

Indexes

Search

Analytics

Eventing

Views

Bucket

show top keys

Limit ①

Offset ①

Document ID ①

show range

N1QL WHERE ①

travel-sample

10

0

optional...



















optional...

Retrieve Docs

10 Results for *travel-sample*, limit: 10, offset: 0


☐ enable field editing

[< prev batch](#) | [next batch >](#)

	id	description
   	airline_10	("callsign":"MILE-AIR","country":"United States","lata":"Q5","icao":"MLA","id":10,"name":"40-Mile Air","type":"airline")
   	airline_10123	("callsign":"TXW","country":"United States","lata":"TQ","icao":"TXW","id":10123,"name":"Texas Wings","type":"airline")
   	airline_10226	("callsign":"atfly","country":"United States","lata":"A1","icao":"A1F","id":10226,"name":"Atfly","type":"airline")
   	airline_10642	("callsign":null,"country":"United Kingdom","lata":null,"icao":"JRB","id":10642,"name":"royal.britannica","type":"airline")
   	airline_10748	("callsign":"LOCALR","country":"United States","lata":"ZQ","icao":"LOC","id":10748,"name":"Locair","type":"airline")
   	airline_10765	("callsign":"SASQUATCH","country":"United States","lata":"K5","icao":"SQH","id":10765,"name":"SeaPort Airlines","type":"airline")
   	airline_109	("callsign":"ACE AIR","country":"United States","lata":"KO","icao":"AER","id":109,"name":"Alaska Central Express","type":"airline")
   	airline_112	("callsign":"FLYSTAR","country":"United Kingdom","lata":"SW","icao":"AEU","id":112,"name":"Astraeus","type":"airline")
   	airline_1191	("callsign":"REUNION","country":"France","lata":"UU","icao":"REU","id":1191,"name":"Air Austral","type":"airline")
   	airline_1203	("callsign":"AIRLINAIR","country":"France","lata":"A5","icao":"RLA","id":1203,"name":"Airlinair","type":"airline")

Q2. Write a query to get sum of all distances where type="route" for each airline id.

← → ↻ ⓘ localhost:8091/ui/index.html#/query/workbench?scenarioZoom=minute

 accolite-praveen > Query

Query Workbench ▾ Query Monitor

Dashboard

Servers

Buckets

XDCR

Security

Settings

Logs

Documents

Query

Indexes

Search

Analytics

Eventing

Views

Query Editor

< history (25/25) >

```
1 SELECT t.airlineid,
2       SUM(distance)
3 FROM `travel-sample` t
4 WHERE t.type="route"
5 GROUP BY t.airlineid;
```

Execute

Explain

Advise

✓ success just now | elapsed: 940.7ms | execution: 940.7ms | docs: 214 | size: 16291 bytes

format

Query Results

🔍

Table JSON Tree Plan Plan Text Advice

1	[
2	{
3	"\$1": 4126.252748052769,
4	"airlineid": "airline_386"
5	},
6	{
7	"\$1": 75433.5827954445,
8	"airlineid": "airline_225"
9	},
10	{
11	"\$1": 7754.024808671785,
12	"airlineid": "airline_5234"
13	},
14	{
15	"\$1": 12465.78416071858,
16	"airlineid": "airline_5039"
17	},
18	{
19	"\$1": 15605.899941894153,
20	"airlineid": "airline_333"

Q3. Write queries to join(LEFT,RIGHT,INNER) type="route" & "airline" and fetch the data whose sourceairport="SFO"

LEFT JOIN

← → ↻

localhost:8091/ui/index.html#/query/workbench?scenarioZoom=minute

accolite-praveen > Query

Query Workbench Query Monitor

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs

Documents
Query
Indexes
Search
Analytics
Eventing
Views

Query Editor

< history (18/23) >

```
1 SELECT *
2 FROM `travel-sample` r LEFT
3 JOIN `travel-sample` a ON r.airlineid = META(a).id
4 WHERE r.sourceairport = "SFO"
5 AND r.type = "route"
6 AND a.type = "airline"
```

Execute Explain Advise ✓ success just now | elapsed: 73.9ms | execution: 73.5ms | docs: 183 | size: 668123 bytes format

Query Results

Table JSON Tree Plan Plan Text Advice

```
1+ {
2+ {
3+   "a": {
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+  "r": {
13+    "airline": "UA",
14+    "airlineid": "airline_5209",
15+    "destinationairport": "ABQ",
16+    "distance": 1439.277222893166,
17+    "equipment": "CRJ",
18+    "id": 57626,
19+    "schedule": [
20+      {
```

RIGHT JOIN

← → ↻

localhost:8091/ui/index.html#/query/workbench?scenarioZoom=minute

accolite-praveen > Query

Query Workbench Query Monitor

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs

Documents
Query
Indexes
Search
Analytics
Eventing
Views

Query Editor

< history (24/24) >

```
1 SELECT *
2 FROM `travel-sample` r RIGHT
3 JOIN `travel-sample` a ON r.airlineid = META(a).id
4 WHERE r.sourceairport = "SFO"
5 AND r.type = "route"
6 AND a.type = "airline"
```

Execute Explain Advise ✓ success just now | elapsed: 3.6s | execution: 3.6s | docs: 183 | size: 668123 bytes format

Query Results

Table JSON Tree Plan Plan Text Advice

```
1+ {
2+ {
3+   "a": {
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+  "r": {
13+    "airline": "FL",
14+    "airlineid": "airline_1316",
15+    "destinationairport": "ATL",
16+    "distance": 3434.7108309317646,
17+    "equipment": "73G",
18+    "id": 25480,
19+    "schedule": [
20+      {
```

INNER JOIN

localhost:8091/ui/index.html#/query/workbench?scenarioZoom=minute

accolite-praveen > Query

Query Workbench

Query Monitor

Dashboard

Servers

Buckets

XDCR

Security

Settings

Logs

Documents

Query

Indexes

Search

Analytics

Eventing

Views

Query Editor

< history (16/16) >

```
1 SELECT *
2 FROM `travel-sample` r
3 INNER JOIN `travel-sample` a ON r.airlineid = META(a).id
4 WHERE r.sourceairport = "SFO"
5 AND r.type = "route"
6 AND a.type = "airline"
```

Execute

Explain

Advise

✓ success just now | elapsed: 62.4ms | execution: 62.4ms | docs: 183 | size: 668123 bytes

format

Query Results

Table

JSON

Tree

Plan

Plan Text

Advice

```
1 {
2   {
3     "a": {
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    "r": {
13      "airline": "UA",
14      "airlineid": "airline_5209",
15      "destinationairport": "ABQ",
16      "distance": 1439.2772722093166,
17      "equipment": "CRJ",
18      "id": "57626",
19      "schedule": [
20        {
21          "departure": "2015-07-01T00:00:00Z",
```

Q4. Write a mapreduce to get the number of all documents based on entities(type).

Search

Analytics

Eventing

Views

View Index Code

Map

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

Reduce (built in: _count, _sum, _stats)

```
1 _count
```

Make Copy

Save Changes

Results

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

Development Time Subset

Full Cluster Data Set

<

>

Show Results

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

Q5. Export and import the data from travel-sample to NewBucket and preview the data in NewBucket.

```
C:\Windows\System32\cmd.exe

C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u admin
-p 123@Praveen -b travel-sample -o C:/ExportedJSON/travelSample.json -f lines -t 4
Json exported to `C:/ExportedJSON/travelSample.json` successfully
Documents exported: 31591 Documents skipped: 0

C:\Program Files\Couchbase\Server\bin>cbimport json -c couchbase://127.0.0.1 -u admin
-p 123@Praveen -b NewBucket -f lines -d file://C:/ExportedJSON/travelSample.json -t
4 -g %id%
JSON `file://C:/ExportedJSON/travelSample.json` imported to `http://127.0.0.1:8091` s
uccessfully
Documents imported: 31591 Documents failed: 0

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

Screenshot of data in NewBucket

localhost:8091/ui/index.html#/documents/editor?scenarioZoom=minute&bucket=NewBucket

activity help admin









































accolite-praveen > Documents

CLASSIC EDITOR ADD DOCUMENT

Document Editor Import Documents

Bucket show top keys Limit 10 Offset 0 Document ID optional... show range N1QL WHERE no indexes available... Retrieve Docs

10 Results for NewBucket, limit: 10, offset: 0 enable field editing < prev batch | next batch >

	id	
   	10	{"country":"United States","lata":"Q5","icao":"MLA","id":10,"name":"40-Mile Air","type":"airline","callsign":"MILE-AIR"}
   	10000	{"schedule":[{"day":0,"flight":{"AF198","utc":"10:13:00"},{"utc":"19:14:00","day":0,"flight":{"AF547"}, {"day":0,"flight":{"AF943","utc":"01:31:00"}, {"day":1,"flight":{"AF356","utc":"12:40:00"}, {"day":1,"f...
   	10001	{"schedule":[{"day":0,"flight":{"AF248","utc":"21:24:00"}, {"day":1,"flight":{"AF517","utc":"13:36:00"}, {"day":1,"flight":{"AF279","utc":"21:35:00"}, {"flight":{"AF753","utc":"00:54:00","day":1}, {"day":1,"f...
   	10002	{"id":10002,"schedule":[{"utc":"15:05:00","day":0,"flight":{"AF678"}, {"day":0,"flight":{"AF392","utc":"11:04:00"}, {"day":0,"flight":{"AF114","utc":"07:35:00"}, {"utc":"02:03:00","day":0,"flight":{"AF062"},...
   	10003	{"destinationairport":"ATL","id":10003,"sourceairport":"TPA","type":"route","airline":"AF","airlineid":"airline_137","distance":654.9546621929924,"equipment":"757 739","schedule":[{"day":0,"flight":A...
   	10004	{"airline":"AF","airlineid":"airline_137","distance":9442.50092891188,"id":10004,"sourceairport":"TPE","stops":0,"type":"route","destinationairport":"AMS","equipment":"777","schedule":[{"day":0,"flight":...
   	10005	{"airlineid":"airline_137","distance":1175.4394367597245,"type":"route","schedule":[{"day":0,"flight":{"AF117","utc":"23:12:00"}, {"day":0,"flight":{"AF096","utc":"16:52:00"}, {"day":1,"flight":{"AF210","u...
   	10006	{"schedule":[{"utc":"05:02:00","day":0,"flight":{"AF288"}, {"day":0,"flight":{"AF230","utc":"19:40:00"}, {"day":0,"flight":{"AF785","utc":"09:37:00"}, {"day":0,"flight":{"AF577","utc":"17:27:00"}, {"day":1,"f...
   	10007	{"sourceairport":"TRN","type":"route","airline":"AF","distance":573.0051071016999,"equipment":"E90 AR8 E70","id":10007,"schedule":[{"day":0,"flight":{"AF913","utc":"18:56:00"}, {"utc":"21:24:00","day":0,...
   	10008	{"airlineid":"airline_137","distance":1082.2656801145617,"id":10008,"type":"route","sourceairport":"TUL","stops":0,"airline":"AF","destinationairport":"ATL","equipment":"CR7 CR9","schedule":[{"day":0,...