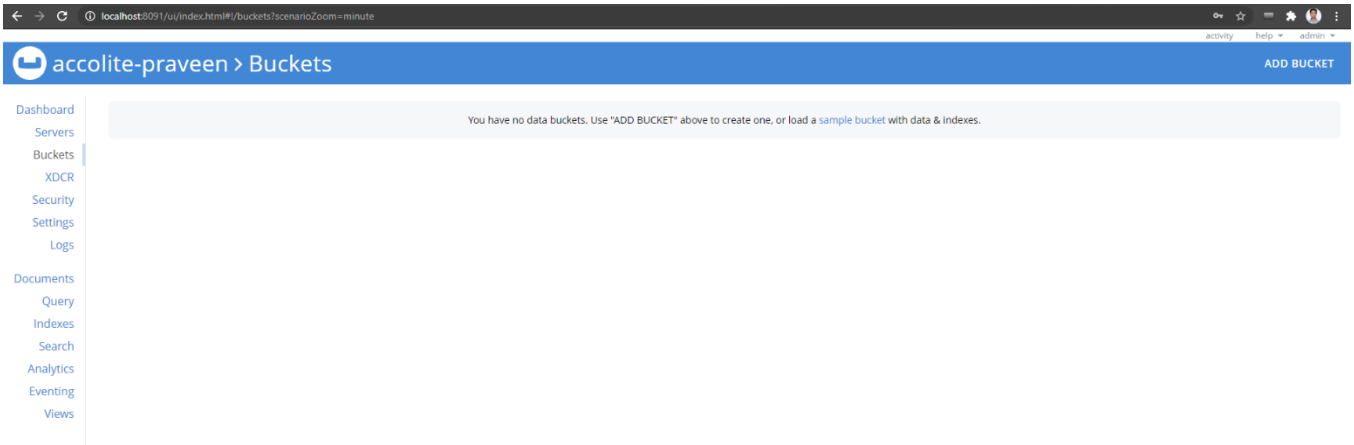


AU 2021 - NoSQL Basics & Fundamentals (ASSIGNMENT)

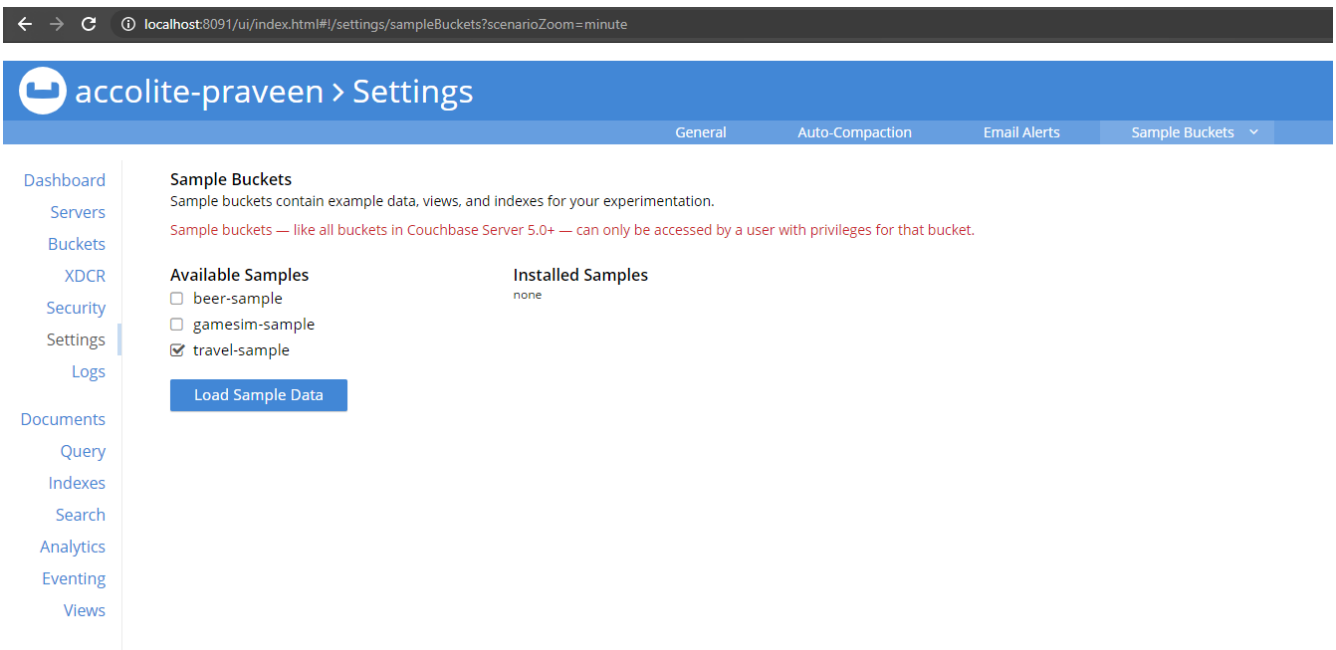
Q1. Import `travel-sample` bucket

STEP 1:



The screenshot shows the 'Buckets' page in the Accolite Praveen interface. The browser address bar shows 'localhost:8091/ui/index.html#/buckets?scenarioZoom=minute'. The page header includes the Accolite logo, the user name 'accolite-praveen', and the title 'Buckets'. A sidebar on the left lists navigation options: Dashboard, Servers, Buckets (selected), 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.' An 'ADD BUCKET' button is located in the top right corner.

STEP 2:



The screenshot shows the 'Settings' page in the Accolite Praveen interface, specifically the 'Sample Buckets' tab. The browser address bar shows 'localhost:8091/ui/index.html#/settings/sampleBuckets?scenarioZoom=minute'. The page header includes the Accolite logo, the user name 'accolite-praveen', and the title 'Settings'. The 'Sample Buckets' tab is selected, and the sub-tab 'Sample Buckets' is also selected. The main content area is titled 'Sample Buckets' and contains the following text: 'Sample buckets contain example data, views, and indexes for your experimentation.' Below this, a red warning message states: 'Sample buckets — like all buckets in Couchbase Server 5.0+ — can only be accessed by a user with privileges for that bucket.' The 'Available Samples' section lists three options: 'beer-sample' (unchecked), 'gamesim-sample' (unchecked), and 'travel-sample' (checked). A 'Load Sample Data' button is located below the 'Available Samples' list. The 'Installed Samples' section shows 'none'.

← → ↺ localhost:8091/ui/index.html#/documents/editor?scenarioZoom=minute&bucket=travel-sample

activity help admin

accolite-praveen > Documents

CLASSIC EDITOR ADD DOCUMENT

Document Editor Import Documents

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

Bucket

show top keys

Limit

Offset

Document ID

show range

N1QL WHERE































optional...

Retrieve Docs

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


enable field editing

< prev batch | next batch >

	id	
  	airline_10	{"callsign":"MILE-AIR","country":"United States","iata":"Q5","icao":"MLA","id":10,"name":"40-Mile Air","type":"airline"}
  	airline_10123	{"callsign":"TXW","country":"United States","iata":"TQ","icao":"TXW","id":10123,"name":"Texas Wings","type":"airline"}
  	airline_10226	{"callsign":"atfly","country":"United States","iata":"A1","icao":"A1P","id":10226,"name":"Atfly","type":"airline"}
  	airline_10642	{"callsign":null,"country":"United Kingdom","iata":null,"icao":"JRB","id":10642,"name":"Jc royal.britannica","type":"airline"}
  	airline_10748	{"callsign":"LOCAIR","country":"United States","iata":"ZQ","icao":"LOC","id":10748,"name":"Localir","type":"airline"}
  	airline_10765	{"callsign":"SASQUATCH","country":"United States","iata":"K5","icao":"SQH","id":10765,"name":"SeaPort Airlines","type":"airline"}
  	airline_109	{"callsign":"ACE AIR","country":"United States","iata":"KO","icao":"AER","id":109,"name":"Alaska Central Express","type":"airline"}
  	airline_112	{"callsign":"FLYSTAR","country":"United Kingdom","iata":"SW","icao":"AEU","id":112,"name":"Astraeus","type":"airline"}
  	airline_1191	{"callsign":"REUNION","country":"France","iata":"UU","icao":"REU","id":1191,"name":"Air Austral","type":"airline"}
  	airline_1203	{"callsign":"AIRLINAIR","country":"France","iata":"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": 1439.277222093166,
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).

Servers

Buckets

XDCR

Security

Settings

Logs

Documents

Query

Indexes

Search

Analytics

Eventing

Views

```
1 {
2   "airline": "T0",
3   "airlineid": "airline_8745",
4   "destinationairport": "NTE",
5   "distance": 1247.7439104166704,
6   "equipment": "73H",
7   "id": 53124,
8   "schedule": [{
9     "day": 0,
10    "flight": "T0478",
11    "utc": "11:52:00"
12  }], {
13    "day": 1,
14    "flight": "T0948",
```

```
1 {
2   "id": "route_53124",
3   "rev": "1-1658607ca13000000000000000000000",
4   "expiration": 0,
5   "flags": 33554432
6 }
```

View Index Code

Map

```
1 function (doc, meta) {
2   if(doc.type=="route"){
3     emit(meta.id, 'A');
4   }
5 }
```

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

Development Time Subset

Full Cluster Data Set

<

>

Show Results

Key	Value
null	24024
undefined	

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

The screenshot displays the NewBucket web interface for document management. The top navigation bar includes 'activity', 'help', and 'admin'. The main header shows 'accolite-praveen > Documents' with tabs for 'Document Editor' and 'Import Documents'. A sidebar on the left lists various dashboard options like Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Analytics, Eventing, and Views. The main content area shows a table of 10 results for 'NewBucket' with a limit of 10 and offset of 0. The table columns are 'id' and 'Document ID'. The first row shows an 'id' of 10 and a 'Document ID' of 'optional...'. The second row shows an 'id' of 10000 and a 'Document ID' of 'optional...'. The third row shows an 'id' of 10001 and a 'Document ID' of 'optional...'. The fourth row shows an 'id' of 10002 and a 'Document ID' of 'optional...'. The fifth row shows an 'id' of 10003 and a 'Document ID' of 'optional...'. The sixth row shows an 'id' of 10004 and a 'Document ID' of 'optional...'. The seventh row shows an 'id' of 10005 and a 'Document ID' of 'optional...'. The eighth row shows an 'id' of 10006 and a 'Document ID' of 'optional...'. The ninth row shows an 'id' of 10007 and a 'Document ID' of 'optional...'. The tenth row shows an 'id' of 10008 and a 'Document ID' of 'optional...'. The table also includes a 'show range' dropdown set to 'N1QL WHERE' and a 'Retrieve Docs' button.

id	Document ID
10	optional...
10000	optional...
10001	optional...
10002	optional...
10003	optional...
10004	optional...
10005	optional...
10006	optional...
10007	optional...
10008	optional...