KIRK DAHL
McKesson   **Assignment 10**   Deep Azure

Handed out: 12/14/2017   Due by 11:59 PM, midnight (CST) on Thursday, 01/04/2018

You are welcome to do this assignment in the language of your choice.

Problem 01. Please use Azure Portal to create a CosmosDB Account using MongoDB API. Create a database and a collection. If you know what you are doing, please accomplish those tasks using PowerShell or Azure CLI. Subsequently, use a sample client application in the language of your choice to create and store two JSON documents describing people. As attributes use: firstname, lastname and occupation. Demonstrate that you can select and display documents using a query for a specified occupation. On the portal side, using Data Explorer, demonstrate that you can see stored JSON document. Base your work on one of the following instructions:
https://docs.microsoft.com/en-us/azure/cosmos-db/create-mongodb-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/create-mongodb-java
https://docs.microsoft.com/en-us/azure/cosmos-db/create-mongodb-flask
https://docs.microsoft.com/en-us/azure/cosmos-db/create-mongodb-nodejs
(45%)

CREATE COSMODB USING MONGO API (kirkdahlmongodb)

CREATE DATABASE

```
Kirks-MacBook:~ el5vgxz$ az cosmosdb database create --name kirkdahlmongodb --db-
name database --resource-group rg-kirkdahl
{
  "_colls": "colls/",
  "_etag": "\"0000cc00-0000-0000-0000-5a43d5840000\"",
  "_rid": "+UBrAA==",
  "_self": "dbs/+UBrAA==/",
  "_ts": 1514395012,
  "_users": "users/",
  "id": "database"
}
```

CREATE COLLECTION

```
Kirks-MacBook:~ el5vgxz$ az cosmosdb collection create --collection-name collection
--name kirkdahlmongodb --db-name database --resource-group rg-kirkdahl
{
  "collection": {
    "_conflicts": "conflicts/",
    "_docs": "docs/",
    "_etag": "\"0000cd00-0000-0000-0000-5a43d6170000\"",
    "_rid": "+UBrAP3VNQA=",
    "_self": "dbs/+UBrAA==/colls/+UBrAP3VNQA=/",
    "_sprocs": "sprocs/",
    "_triggers": "triggers/",
    "_ts": 1514395159,
    "_udfs": "udfs/",
    "id": "collection",
    "indexingPolicy": {
      "automatic": true,
      "excludedPaths": [],
      "includedPaths": [
        {
          "indexes": [
            {
              "dataType": "String",
              "kind": "Range",
              "precision": -1
            },
            {
              "dataType": "Number",
              "kind": "Range",
              "precision": -1
            }
          ],
          "path": "/*"
        }
      ],
      "indexingMode": "consistent"
    }
  },
  "offer": {
    "_etag": "\"0000ce00-0000-0000-0000-5a43d6170000\"",
    "_rid": "OMI-",
    "_self": "offers/OMI-/",
    "_ts": 1514395159,
    "content": {
      "offerIsRUPerMinuteThroughputEnabled": false,
      "offerThroughput": 1000
    },
```

```
      "id": "OMI-",
      "offerResourceId": "+UBrAP3VNQA=",
      "offerType": "Invalid",
      "offerVersion": "V2",
      "resource": "dbs/+UBrAA==/colls/+UBrAP3VNQA=/"
  }
}
```

GIT CLONE SAMPLE APP

```
Kirks-MacBook:week10 el5vgxz$ git clone https://github.com/Azure-Samples/azure-
cosmos-db-mongodb-java-getting-started.git
Cloning into 'azure-cosmos-db-mongodb-java-getting-started'...
remote: Counting objects: 52, done.
remote: Total 52 (delta 0), reused 0 (delta 0), pack-reused 52
Unpacking objects: 100% (52/52), done.
Kirks-MacBook:week10 el5vgxz$
```

UPDATED Program.java

```java
Kirks-MacBook:azure-cosmos-db-mongodb-java-getting-started el5vgxz$ more
src/GetStarted/Program.java
package GetStarted;

import org.bson.Document;

import com.mongodb.MongoClient;
import com.mongodb.MongoClientURI;
import com.mongodb.client.MongoCollection;
import com.mongodb.client.MongoDatabase;
import com.mongodb.client.model.Filters;

/**
 * Simple application that shows how to use Azure Cosmos DB with the MongoDB API and
Java.
 *
 */
public class Program {

    public static void main(String[] args)
    {
        /*
         * Replace connection string from the Azure Cosmos Portal
         */
        MongoClientURI uri = new
MongoClientURI("mongodb://kirkdahlmongodb:DGU6COdTDk3vMlcqiW38G7FzMddcV3oWBCRlpIYQVF
JtooiQ8rJ25xqiUegkAJbStLGN331xMImx4O6GwpIWtw==@kirkdahlmongodb.documents.azure.com:1
0255/?ssl=true&replicaSet=globaldb");

        MongoClient mongoClient = null;
        try {
            mongoClient = new MongoClient(uri);

            // Get database
            MongoDatabase database = mongoClient.getDatabase("database");

            // Get collection
            MongoCollection<Document> collection =
database.getCollection("collection");

            // Insert documents
            Document document1 = new Document("firstName", "Mickey");
            collection.insertOne(document1);

            Document document2 = new Document("firstName", "Donald");
```

```
        collection.insertOne(document2);

        // Find people by name
        Document queryResult = collection.find(Filters.eq("firstName",
"Donald")).first();
        System.out.println(queryResult.toJson());

        System.out.println( "Completed successfully" );

    } finally {
        if (mongoClient != null) {
            mongoClient.close();
        }
    }
}
}
```
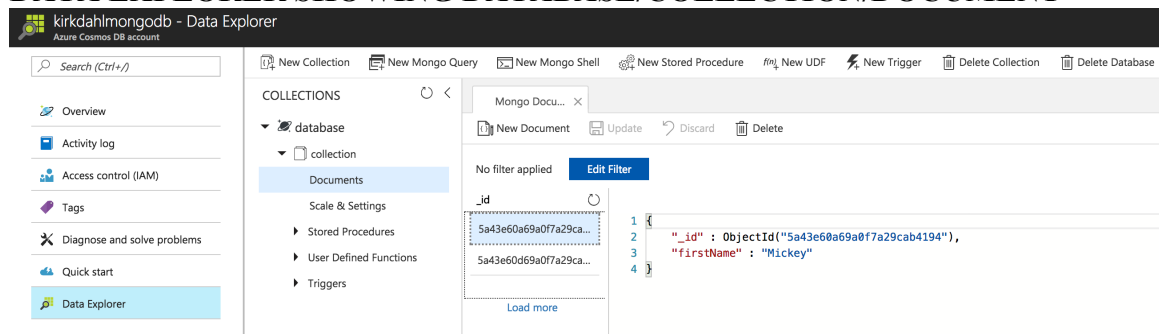
RUN:
```
mvn package
mvn exec:java –D exec.mainClass=GetStarted.Program
```

DATA EXPLORER SHOWING DATABASE/COLLECTION/DOCUMENT

Problem 02. Please use Azure Portal to create a CosmosDB Account using Graph API. Create a database and a graph. If you know what you are doing, please accomplish those tasks using PowerShell or Azure CLI. Subsequently, use a sample client application in the language of your choice to create and store three people (Mike, Sandeep and Mohammad). As properties of nodes use: firstName, lastName and jobTitle. Use graph relationships to express the fact that Mike and Mohammad work for Sandeep. On the portal side use Data Explorer to demonstrate that you can visualize stored graph. Base your work on one of the following instructions:
https://docs.microsoft.com/en-us/azure/cosmos-db/create-graph-dotnet
https://docs.microsoft.com/en-us/azure/cosmos-db/create-graph-java
https://docs.microsoft.com/en-us/azure/cosmos-db/create-graph-python
https://docs.microsoft.com/en-us/azure/cosmos-db/create-graph-nodejs
(45%)

CREATE COSMOSDB GRAPH

☐ 🪐 **kirkdahlcosmosgraph**		Creating	East US
☐ 🪐 **kirkdahlmongodb**		Online	East US

MODIFIED THE src/remote.yml

Document Endpoint
https://kirkdahlcosmosgraph.documents.azure.com:443/

However, my endpoint was not "graphs" it was "documents". I tried both unsuccessfully.

```
hosts: [kirkdahlcosmosgraph.documents.azure.com]
port: 443
username: /dbs/graphdatabase/colls/graphcollection
password:
QqTBbAOwpBnRqPYhMUieQG70MQOL3Y3vsTLWcO1YwsJBpFCB0pNpWQ7wxdQHHnOzYHmmMtPAi0u1qw1BSNXm
iA==
connectionPool: {
  enableSsl: true}
serializer: { className:
org.apache.tinkerpop.gremlin.driver.ser.GraphSONMessageSerializerV1d0, config: {
serializeResultToString: true }}
```

I also made sure I had the added dependencies in the pom.xml

RECEIVED THESE ERRORS IN GRAPH

```
System.AggregateException: One or more errors occurred. --->
Microsoft.Azure.Documents.DocumentClientException: The input authorization
token can't serve the request. Please check that the expected payload is built
as per the protocol, and check the key being used. Server used the following
payload to sign: 'post
docs
dbs/graphdatabase/colls/graphcollection
wed, 27 dec 2017 19:30:34 gmt

'
ActivityId: 73367a3b-c8cb-442c-a56f-db0615c32743,
Microsoft.Azure.Documents.Common/1.19.121.4
   at
Microsoft.Azure.Documents.Client.ClientExtensions.<ParseResponseAsync>d__4.Move
Next()
--- End of stack trace from previous location where exception was thrown ---
   at System.Runtime.ExceptionServices.ExceptionDispatchInfo.Throw()
```

Problem 03. Please delete all existing accounts and resource groups and demonstrate that you have no remaining Azure objects. Use Azure Portal do delete objects. Use Azure CLI to verify that you have no objects left.
(10%)

DELETING IN PORTAL

☑ 🪐 **kirkdahlcosmosgraph**	Deleting	East US	McKe
☐ 🪐 **kirkdahlmongodb**	Deleting	East US	McKe

CLI SHOWS NO RESOURCES

```
Kirks-MacBook:week10 el5vgxz$ az cosmosdb list -g rg-kirkdahl
[]
Kirks-MacBook:week10 el5vgxz$
```

RESOURCE GROUP BEFORE

```
Kirks-MacBook:week10 el5vgxz$ az group list | grep kirk
    "id": "/subscriptions/6f5d1e5e-5295-4b19-9069-76eaa53bdb9c/resourceGroups/rg-
kirkdahl",
    "name": "rg-kirkdahl",
```

RESOURCE GROUP DELETED

```
Kirks-MacBook:week10 el5vgxz$ az group list | grep kirk
Kirks-MacBook:week10 el5vgxz$
```

SUBMISSION INSTRUCTIONS:

Your main submission should be a MS Word or PDF document containing descriptions of your action while configuring Azure services. If your MS Word document is larger than 1 MB, save it as a MINIMIZED PDF. Please be merciful and capture small JPGs. Describe the purpose of every action and the significance of the results. Start with the text of this homework assignment as the template. Please add any other files that you might have used or generated. Please write your solution as if you are writing a tutorial for your colleagues. Please make your text readable. Make sure that your fonts, especially in captured images are not unreadable. Please do not provide ZIP or RAR or any other archives. Canvas cannot open those archives and they turn into a nuisance for us.