**Exercise17**

**Working with DynamoDB locally**

1. Installing and launching DynamoDB locally
   1. Open the link <https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DynamoDBLocal.html> [1] Download and install JRE if you do not have it in your computer
   2. Click *Deploying DynamoDB locally on your computer* under Topics

Go to Download DynamoDB local and follow steps 1-2

* 1. For step3, open a powershell terminal (this will be your server window) Change the title of your DynamoDB local server shell using the command $Host.UI.RawUI.WindowTitle = 'YourNameDDBLocalServer'. Replace YourName with your full name. [If you are on Mac, then please open appropriate prompt and find a command to change the title]

Execute the command netstat -ano | find /i "8000". If anything is printed out, replace 8000 with 8001. [Thank you Jaron for your comment.]

Execute the given command (with 8000 if you did not get any output from the above command; otherwise, use 8001.

(Take a snapshot of this server shell that confirms your server is running)

* 1. Open another powershell terminal (this will be your client window). Change the title of your DynamoDB client shell using the command $Host.UI.RawUI.WindowTitle = 'YourNameDDBClient'. Replace YourName with your full name.

All the remaining steps will be performed in the client shell.

Download and install AWS CLI from:

<https://docs.aws.amazon.com/cli/latest/userguide/getting-started-install.html>

Now you can execute the aws configure command as given in the first link (Step I.a)

Skip *AWS Access Key ID* and *AWS Secret Access Key*, for *Default region name*, give us-east-1, and for *Default output format*, give json.

1. Create a table

aws dynamodb create-table --attribute-definitions AttributeName=Username,AttributeType=S --table-name NewLocalTable --key-schema AttributeName=Username,KeyType=HASH --provisioned-throughput ReadCapacityUnits=1,WriteCapacityUnits=1 --output json --region us-east-1 --endpoint-url <http://localhost:8000>

(Take a snapshot of this client shell that confirms the table was created)

1. Verify that the table was added

aws dynamodb list-tables --endpoint-url <http://localhost:8000>

(Take a snapshot of this client shell that confirms the table was added)

1. Create another table

aws dynamodb create-table --table-name MusicCollection --attribute-definitions AttributeName=Artist,AttributeType=S AttributeName=SongTitle,AttributeType=S --key-schema AttributeName=Artist,KeyType=HASH AttributeName=SongTitle,KeyType=RANGE --provisioned-throughput ReadCapacityUnits=1,WriteCapacityUnits=1 --region us-east-1 --endpoint-url <http://localhost:8000>

1. Verify that the table was added

aws dynamodb list-tables --region us-east-1 --endpoint-url http://localhost:8000

(Take a snapshot of the client shell that confirms the table was added)

1. Delete the first table

aws dynamodb delete-table --table-name NewLocalTable --region us-east-1 --endpoint-url <http://localhost:8000>

1. Check that the table was deleted

aws dynamodb list-tables --region us-east-1 --endpoint-url <http://localhost:8000>

(Take a snapshot of the client shell that confirms the table was deleted)

1. Delete the second table
2. Check the second table was also deleted

(Take a snapshot of the client shell that confirms the table was deleted)

1. Cleanup
   1. Delete the DynamoDB folder from your computer
2. Key Takeaways
   1. Having this local version helps you save on throughput, data storage, and data transfer fees. In addition, you don't need an internet connection while you develop your application. [1]

Sources:

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DynamoDBLocal.html>

<https://www.youtube.com/watch?v=z77UbwWf1po>

<https://awsclibuilder.com/home/services/dynamodb>

https://devblogs.microsoft.com/powershell-community/changing-console-title/