BDA LAB WEEK-1
CS255

PRACTICE

```
Microsoft Windows [Version 10.0.22631.3296]
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C:\Users\STUDENT>mongosh "mongodb+srv://cluster0.o6q3djy.mongodb.net/" --apiVersion 1 --username
Current Mongosh Log ID: 660a7a3a96cb6be06499291b
Connecting to:        mongodb+srv://<credentials>@cluster0.o6q3djy.mongodb.net/?appName=mongosh-
Using MongoDB:        7.0.7 (API Version 1)
Using Mongosh:        2.0.0
mongosh 2.2.1 is available for download: https://www.mongodb.com/try/download/shell

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

Atlas atlas-hhqb90-shard-0 [primary] test> use BDAlab
```

I. CREATE DATABASE IN MONGODB.

use myDB;

Confirm the existence of your database

db;

To list all databases

show dbs;

```
Atlas atlas-hhqb90-shard-0 [primary] test> use BDAlab
switched to db BDAlab
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.createCollection("Student");
Uncaught:
SyntaxError: Unexpected character '"'. (1:20)

> 1 | db.createCollection("Student");
    |                     ^
  2 |

Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db;
BDAlab
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> show dbs;
```

II. CRUD (CREATE, READ, UPDATE, DELETE) OPERATIONS

1. To create a collection by the name "Student". Let us take a look at the collection list prior to the creation of the new collection "Student".

db.createCollection("Student");   => *sql equivalent*   **CREATE TABLE STUDENT(...);**

2. To drop a collection by the name "Student".

   db.Student.drop();

3. Create a collection by the name "Students" and store the following data in it.

   db.Student.insert({_id:1,StudName:"MichelleJacintha",Grade:"VII",Hobbies:"InternetSurfing"});

4. Insert the document for "AryanDavid" in to the Students collection only if it does not already exist in the collection. However, if it is already present in the collection, then update the document with new values. (Update his Hobbies from "Skating" to "Chess".) Use "Update else insert" (if there is an existing document, it will attempt to update it, if there is no existing document then it will insert it).

   db.Student.update({_id:3,StudName:"AryanDavid",Grade:"VII"},{$set:{Hobbies:"Skating"}},{upsert:true});

5. FIND METHOD

A. To search for documents from the "Students" collection based on certain search criteria.

   db.Student.find({StudName:"Aryan David"});

B. To display only the StudName and Grade from all the documents of the Students collection. The identifier_id should be suppressed and NOT displayed.

db.Student.find({},{StudName:1,Grade:1,_id:0});

C. To find those documents where the Grade is set to 'VII'

db.Student.find({Grade:{$eq:'VII'}}).pretty();

D. To find those documents from the Students collection where the Hobbies is set to either 'Chess' or is set to 'Skating'.

db.Student.find({Hobbies :{ $in: ['Chess','Skating']}}).pretty ();

E. To find documents from the Students collection where the StudName begins with "M".

db.Student.find({StudName:/^M/}).pretty();

F. To find documents from the Students collection where the StudNamehas an "e" in any position.

db.Student.find({StudName:/e/}).pretty();

G. To find the number of documents in the Students collection.

db.Student.count();

H. To sort the documents from the Students collection in the descending order of StudName.

db.Student.find().sort({StudName:-1}).pretty();

```
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.createCollection("Student")
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.insert({_id:1,StudName:"MichelleJacintha",Grade:"VII",Hobbies:"InternetSurfing"})
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{ acknowledged: true, insertedIds: { '0': 1 } }
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.update({_id:3,StudName:"AryanDavid",Grade:"VII"},{$set$set:{Hobbies:"Skating"}},{upsert:true});
DeprecationWarning: Collection.update() is deprecated. Use updateOne, updateMany, or bulkWrite.
{
  acknowledged: true,
  insertedId: 3,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 1
}
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({StudName:"Aryan David"})

Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({},{StudName:1,Grade:1,_id:0});
[
  { StudName: 'MichelleJacintha', Grade: 'VII' },
  { Grade: 'VII', StudName: 'AryanDavid' }
]
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({Grade:{$eq:'VII'}}).pretty()
[
  {
    _id: 1,
    StudName: 'MichelleJacintha',
    Grade: 'VII',
    Hobbies: 'InternetSurfing'
  },
  { _id: 3, Grade: 'VII', StudName: 'AryanDavid', Hobbies: 'Skating' }
]
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({Hobbies :{ $in: ['Chess','Skating']}}).pretty ()

[
  { _id: 3, Grade: 'VII', StudName: 'AryanDavid', Hobbies: 'Skating' }
]
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({StudName:/^M/}).pretty()
[
  {
    _id: 1,
    StudName: 'MichelleJacintha',
    Grade: 'VII',
    Hobbies: 'InternetSurfing'
  }
]
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find({StudName:/e/}).pretty()
[
```

```
[
  {
    _id: 1,
    StudName: 'MichelleJacintha',
    Grade: 'VII',
    Hobbies: 'InternetSurfing'
  }
]
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.count()
DeprecationWarning: Collection.count() is deprecated. Use countDocuments or estimatedDocumentCount.
2
Atlas atlas-hhqb90-shard-0 [primary] BDAlab> db.Student.find().sort({StudName:-1}).pretty();
[
  {
    _id: 1,
    StudName: 'MichelleJacintha',
    Grade: 'VII',
    Hobbies: 'InternetSurfing'
  },
  { _id: 3, Grade: 'VII', StudName: 'AryanDavid', Hobbies: 'Skating' }
Atlas atlas-hhqb90-shard-0 [primary] BDAlab>
```