MONGO DB: REPORT 2

ADD UPDATE & DELETE:

A Quick Grasp from Report 1-

- MongoDB is a NoSQL Database
- Each Row can be associated with Documents
- Documents can be represented as JSON
- Each table can be called as Collection

//Importing Data in MongoDB:

MongoDB Compass can import data into a collection from either a **JSON** or **CSV** file.

Limitations

- Importing data into a collection is not permitted in **MongoDB Compass Readonly Edition**.
- Importing data is not available if you are connected to a Data Lake.

Importing Using JSON ->

When importing data from a **JSON** file, you can format your data as:

- Newline-delimited documents, or
- Comma-separated documents in an array

EXAMPLE ->

The following newline-delimited `.json` file is formatted correctly:

{ "type": "home", "number": "212-555-1234" }

{ "type": "cell", "number": "646-555-4567" }

{ "type": "office", "number": "202-555-0182"}

The following comma-separated `.json` array file is also formatted correctly:

[{ "type": "home", "number": "212-555-1234" }, { "type": "cell", "number": "646-555-4567" }, { "type": "office", "number": "202-555-0182"}]

Compass ignores line breaks in JSON arrays.

Compass automatically generates ObjectIDs for these objects on import since no ObjectIDs were specified in the initial JSON.

Procedure

To import your formatted data into a collection:

1 .

Connect to the deployment containing the collection you wish to import data into.

To learn how to connect to a deployment, see Connect to MongoDB.

2

Navigate to your target collection.

You can either select the collection from the Collections tab or click the collection in the left-hand pane.

3

Click the Add Data ***dropdown and select*** Import JSON or CSV file*.*

4

Select the appropriate file type.

Select either a JSON or CSV file to import and click Select.

If you are importing a CSV file, you may specify fields to import and the types of those fields under Specify Fields and Types.

To exclude a field from a CSV file you are importing, uncheck the checkbox next to that field name. To select a type for a field, use the dropdown menu below that field name.

5

Configure import options.

Under Options, configure the import options for your use case.

If you are importing a CSV file, you may select how your data is delimited.

For both JSON and CSV file imports, you can toggle Ignore empty strings and Stop on errors:

- If checked, Ignore empty strings drops fields with empty string values from your imported documents. The document is still imported with all other fields.
- If checked, Stop on errors prevents any data from being imported in the event of an error. If unchecked, data is inserted until an error is encountered and successful inserts are not rolled back. The import operation will not continue after encountering an error in either case.

6

Click Import***.***

A progress bar displays the status of the import. If an error occurs during import, the progress bar turns red and an error message appears in the dialog. To see all errors, click View Log.

After successful import, the dialog closes and Compass displays the collection page containing the newly imported documents…

Importing Using CSV ->

When importing data from a **CSV** file, the first line of the file must be a comma-separated list of your document field names. Subsequent lines in the file must be comma-separated field values in the order corresponding with the field order in the first line.

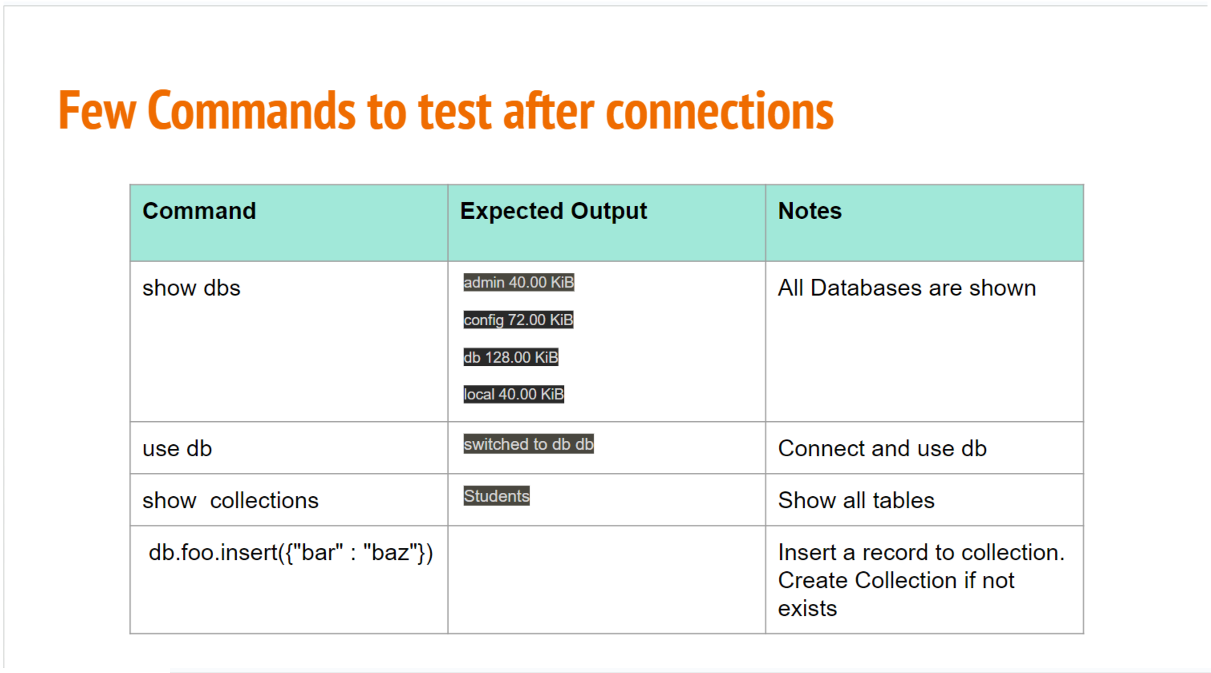
EXAMPLE

The following `.csv` file imports three documents:

```
name,age,fav_color,pet
Jeff,25,green,Bongo
Alice,20,purple,Hazel
Tim,32,red,Lassie
```

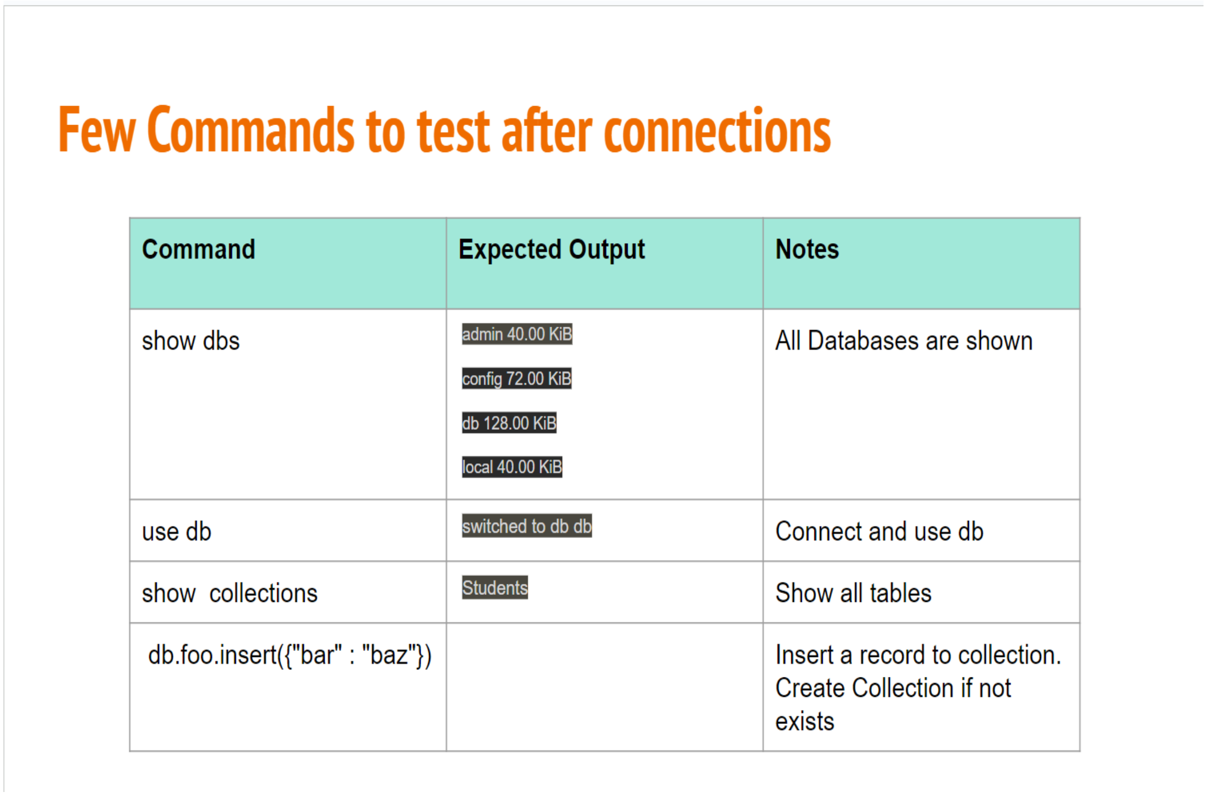
MongoDB Compass automatically generates ObjectIDs for these objects on import since no ObjectIDs were specified in the initial CSV file.

- After importing the file it must be able to be used in mongo compass after connection with the Mo



Few Commands to test after connections

Command	Expected Output	Notes
show dbs	admin 40.00 KiB config 72.00 KiB db 128.00 KiB local 40.00 KiB	All Databases are shown
use db	switched to db db	Connect and use db
show collections	Students	Show all tables
db.foo.insert({"bar" : "baz"})		Insert a record to collection. Create Collection if not exists



Few Commands to test after connections

Command	Expected Output	Notes
show dbs	admin 40.00 KiB config 72.00 KiB db 128.00 KiB local 40.00 KiB	All Databases are shown
use db	switched to db db	Connect and use db
show collections	Students	Show all tables
db.foo.insert({"bar" : "baz"})		Insert a record to collection. Create Collection if not exists

DOCUMENTS, COLLECTIONS & DATABASE:

DOCUMENTS->

- Database is the main important of the MongoDB.
- The ordered set of keys with associated values.
- The representation of documents varies by programming language, but most languages has data structures that is a natural fit, such as map, hash, or dictionary.

{“greeting”:“Hello,World!!!”}

COLLECTIONS->

- A Collection is a group of document.
- If the document is the MongoDB analog of a row in relational database, then a collection can be thought of as the analog to the table.

DATABASE->

- MongoDB groups collections into databases.
- A single instance of MongoDB can host several databases, each grouping together zero or more collections.
- A database has its own permissions, and each database is stored in separate files on disk.
- A good rule of thumb is to store all data for a single application in the same database.

DATATYPE->

Date

`mongosh` provides various methods to return the date, either as a string or as a `Date` object:

- `Date()` method which returns the current date as a string.
- `new Date()` constructor which returns a `Date` object using the `ISODate()` wrapper.

- `ISODate()` constructor which returns a `Date` object using the `ISODate()` wrapper.
-

Int32

If a number can be converted to a 32-bit integer, `mongosh` will store it as `Int32`. If not, `mongosh` defaults to storing the number as a `Double`. Numerical values that are stored as `Int32` in `mongosh` would have been stored by default as `Double` in the `mongo` shell.

The Int32() constructor can be used to explicitly specify 32-bit integers.

```
db.types.insertOne(
   {
       "_id": 1,
       "value": Int32("1"),
       "expectedType": "Int32"
   }
)
```

Decimal128

Decimal128() values are 128-bit decimal-based floating-point numbers that emulate decimal rounding with exact precision.

This functionality is intended for applications that handle monetary data, such as financial, tax, and scientific computations.

The `Decimal128` BSON type uses the IEEE 754 decimal128 floating-point numbering format which supports 34 decimal digits (i.e. significant digits) and an exponent range of −6143 to +6144.

```
db.types.insertOne(
  {
      "_id": 5,
      "value": Decimal128("1"),
      "expectedType": "Decimal128"
  }
)
```

Timestamp

MongoDB uses a BSON Timestamp internally in the oplog. The `Timestamp` type works similarly to the Java Timestamp type. Use the Date type for operations involving dates.

A `Timestamp` signature has two optional parameters.

```
Timestamp( { "t": <integer>, "i": <integer> } )
```

Long

The Long() constructor can be used to explicitly specify a 64-bit integer.

```
db.types.insertOne(
{
"_id": 3,
"value": Long("1"),
"expectedType": "Long"
}
)
```