

**Program: Mechanical Engineering**


Course Number	CCPS 530
Section Number	01
Course Title	Web Systems Development
Semester/Year	Fall 2021

Instructor	Dr. Ghassem Tofighi
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<b>Report NO.</b>	<b>7</b>
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Report Title	MongoDB
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Group No.	N/A
Submission Date	November 23, 2021
Due Date	November 23, 2021

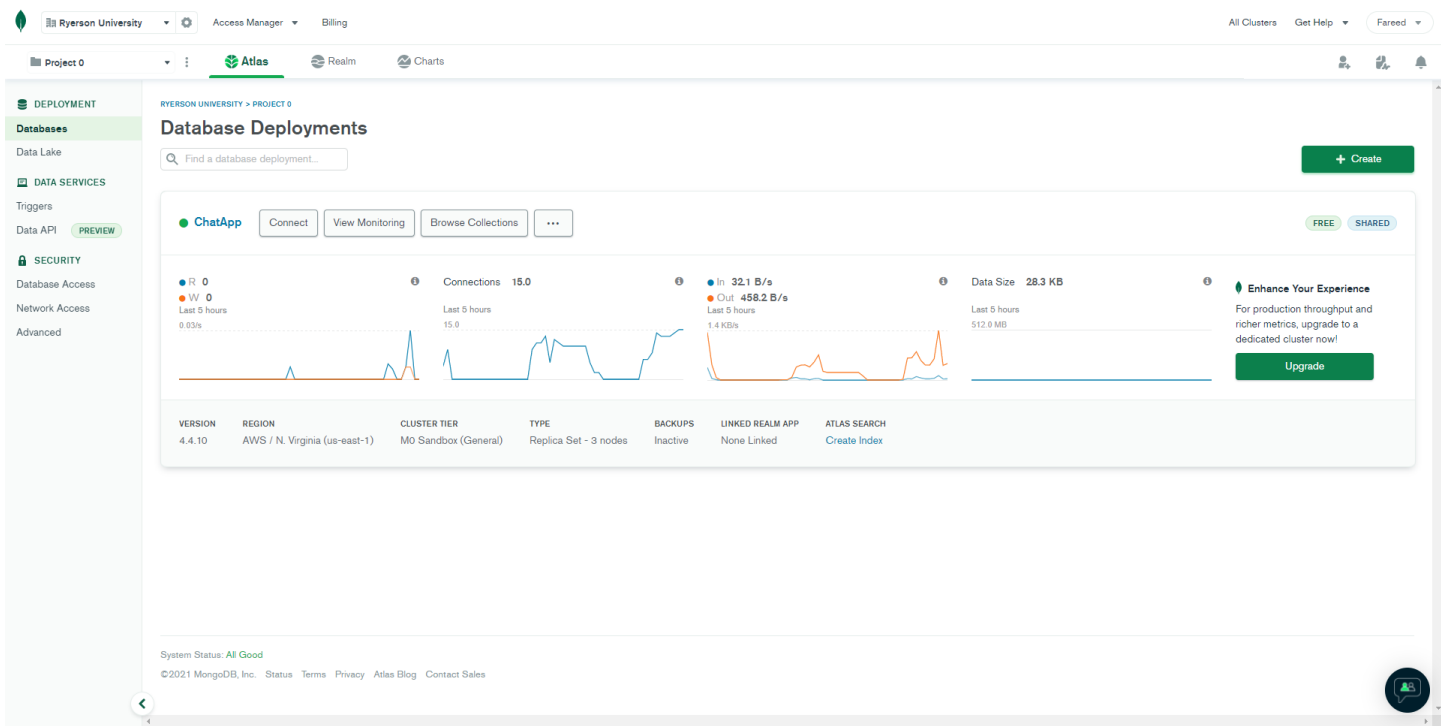
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# Installation of mongoDB

The developer had already created the mongoDB’s free account a while ago for the purpose of his research work under a professor at Ryerson University. A free cluster under the name “ChatApp” was created back then and the same cluster has been used to perform this LAB. As the installation was already done a while ago please refer to the snips below to developers database atlas and collections and records for this LAB.



RYERSON UNIVERSITY > PROJECT 0

### Database Access

Database Users Custom Roles

+ ADD NEW DATABASE USER

User Name	Authentication Method	MongoDB Roles	Resources	Actions
fareed	SCRAM	readWriteAnyDatabase@admin	All Resources	<a href="#">EDIT</a> <a href="#">DELETE</a>
ryerson	SCRAM	readWriteAnyDatabase@admin	All Resources	<a href="#">EDIT</a> <a href="#">DELETE</a>
test	SCRAM	readWriteAnyDatabase@admin	All Resources	<a href="#">EDIT</a> <a href="#">DELETE</a>

MongoDB Compass - chatapp.pllqz.mongodb.net/mydb

ConnectViewHelp

Local

5 DBS12 COLLECTIONS

☆ FAVORITE

HOSTS  
chatapp-shard-00-01.pllqz.mongodb.net:27017  
chatapp-shard-00-02.pllqz.mongodb.net:27017  
chatapp-shard-00-00.pllqz.mongodb.net:27017

CLUSTER  
Replica Set (atlas-nw4qzd-shard-0)  
3 Nodes

EDITION  
MongoDB 4.4.10 Enterprise

Q Filter your data

> ChatDB

> admin

> local

▼ mydb

books

mydb

> mydb2

+

> \_MONGOSH

Collections

CREATE COLLECTION

Collection Name ^	Documents	Avg. Document Size	Total Document Size	Num. Indexes	Total Index Size	Properties
books	5	318.8 B	1.6 KB	1	20.5 KB	
mydb	0	-	0.0 B	1	24.6 KB	

MongoDB Compass - chatapp.pllqz.mongodb.net

ConnectViewHelp

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> ChatDB

> admin

> local

> mydb

> mydb2

+

> \_MONGOSH

DatabasesPerformance

CREATE DATABASE

Database Name	Storage Size	Collections	Indexes
ChatDB	20.5KB	1	1
admin	0.0B	0	0
local	0.0B	8	0
mydb	41.0KB	2	2
mydb2	4.1KB	1	1

MongoDB Compass - chatapp.pllqz.mongodb.net/mydb.books

Connect View Help

Local

5 DBS 12 COLLECTIONS

☆ FAVORITE

HOSTS

- chatapp-shard-00-01.pllqz.mongodb.net:27017
- chatapp-shard-00-02.pllqz.mongodb.net:27017
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  - books
  - mydb
- > mydb2

> \_MONGOSH

mydb.books Documents

DOCUMENTS 5 TOTAL SIZE 1.6KB AVG. SIZE 319B INDEXES 1 TOTAL SIZE 4.1KB AVG. SIZE 4.1KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' } OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW { } ☰

Displaying documents 1 - 5 of 5 < > C REFRESH

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce2"),
  "title": "A Promised Land",
  "author": "Barack Obama",
  "publisher": "Crown",
  "date": "November 17, 2020",
  "website": "https://www.chapters.indigo.ca/en-ca/books/a-promised-land/97815247631..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce3"),
  "title": "An Astronaut's Guide To Life On Earth",
  "author": "Chris Hadfield",
  "publisher": "Random House of Canada",
  "date": "September 1, 2015",
  "website": "https://www.chapters.indigo.ca/en-ca/books/an-astronauts-guide-to-life..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce4"),
  "title": "Will",
  "author": "Will Smith",
  "publisher": "Random House Publishing Group",
  "date": "November 9, 2021",
  "website": "https://www.chapters.indigo.ca/en-ca/books/will/9781984877925-item.htm..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce5"),
  "title": "The Apollo Murders",
  "author": "Chris Hadfield",
  "publisher": "Random House of Canada",
  "date": "SOctober 12, 2021"
}
```

MongoDB Compass - chatapp.pllqz.mongodb.net/mydb.books

Connect View Help

Local

5 DBS 12 COLLECTIONS

☆ FAVORITE

HOSTS

- chatapp-shard-00-01.pllqz.mongodb.net:27017
- chatapp-shard-00-02.pllqz.mongodb.net:27017
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CLUSTER

Replica Set (atlas-nw4qzd-shard-0)

3 Nodes

EDITION

MongoDB 4.4.10 Enterprise

Q Filter your data

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- > admin
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mydb.books Documents

DOCUMENTS 5 TOTAL SIZE 1.6KB AVG. SIZE 319B INDEXES 1 TOTAL SIZE 4.1KB AVG. SIZE 4.1KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' } OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW { } ☰

Displaying documents 1 - 5 of 5 < > C REFRESH

```
{
  "title": "An Astronaut's Guide To Life On Earth",
  "author": "Chris Hadfield",
  "publisher": "Random House of Canada",
  "date": "September 1, 2015",
  "website": "https://www.chapters.indigo.ca/en-ca/books/an-astronauts-guide-to-life..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce4"),
  "title": "Will",
  "author": "Will Smith",
  "publisher": "Random House Publishing Group",
  "date": "November 9, 2021",
  "website": "https://www.chapters.indigo.ca/en-ca/books/will/9781984877925-item.htm..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce5"),
  "title": "The Apollo Murders",
  "author": "Chris Hadfield",
  "publisher": "Random House of Canada",
  "date": "SOctober 12, 2021",
  "website": "https://www.chapters.indigo.ca/en-ca/books/the-apollo-murders/97807352..."
}
```

```
{
  "_id": ObjectId("619d7618b83bcedbddf34ce6"),
  "title": "Go Tell The Bees That I Am Gone: A Novel",
  "author": "Diana Gabaldon",
  "publisher": "Random House Publishing Group",
  "date": "November 23, 2021",
  "website": "https://www.chapters.indigo.ca/en-ca/books/go-tell-the-bees-that/97803..."
}
```

# GitHub Link to HTML page

<https://github.com/FareedSyed31/FareedSyed31.github.io/blob/main/LAB7/index.js>

## Queries used to create books collection

```
var MongoClient = require('mongodb').MongoClient;
var url =
"mongodb+srv://ryerson:123456a@chatapp.pllqz.mongodb.net/myFirstDatabase?retryWrites=true&w=
majority";

MongoClient.connect(url, function (err, db) {
  if (err) throw err;
  var dbo = db.db("mydb");
  dbo.createCollection("books", function (err, res) {
    if (err) throw err;
    console.log("Collection created!");
    db.close();
  });
});
```

## Queries used to inserts books in books collection

```
var MongoClient = require('mongodb').MongoClient;
var url =
"mongodb+srv://ryerson:123456a@chatapp.pllqz.mongodb.net/myFirstDatabase?retryWrites=true&w=
majority";
MongoClient.connect(url, function (err, db) {
  if (err) throw err;
  var dbo = db.db("mydb");

  var books = [
    {
      "title": "A Promised Land",
      "author": "Barack Obama",
      "publisher": "Crown",
      "date": "November 17, 2020",
      "website":
"https://www.chapters.indigo.ca/en-ca/books/a-promised-land/9781524763169-item.html?ikwid=ob
ama&ikwsec=Home&ikwidx=1#algoliaQueryId=25558a99d98968a203953344c6a079d8"
    },
    {
      "title": "An Astronaut's Guide To Life On Earth",
      "author": "Chris Hadfield",
      "publisher": "Random House of Canada",
      "date": "September 1, 2015",
      "website":
"https://www.chapters.indigo.ca/en-ca/books/an-astronauts-guide-to-life/9780345812711-item.h
tml?ikwid=chris+hadfield&ikwsec=Home&ikwidx=2#algoliaQueryId=cab8339a71c0681f35987cefebb26de
8"
    },
  ],
  {
```

```

        "title": "Will",
        "author": "Will Smith",
        "publisher": "Random House Publishing Group",
        "date": "November 9, 2021",
        "website":
        "https://www.chapters.indigo.ca/en-ca/books/will/9781984877925-item.html?ref=shop%3abooks%3a
books-main%3abuzzworthy-books%3a1%3a"
    },
    {
        "title": "The Apollo Murders",
        "author": "Chris Hadfield",
        "publisher": "Random House of Canada",
        "date": "SOctober 12, 2021",
        "website":
        "https://www.chapters.indigo.ca/en-ca/books/the-apollo-murders/9780735282353-item.html?ikwse
c=Home&ikwidx=2#algoliaQueryId=320ae0c1e6b31d3d6ff907b0bc220be1"
    },
    {
        "title": "Go Tell The Bees That I Am Gone: A Novel",
        "author": "Diana Gabaldon",
        "publisher": "Random House Publishing Group",
        "date": "November 23, 2021",
        "website":
        "https://www.chapters.indigo.ca/en-ca/books/go-tell-the-bees-that/9780385685542-item.html?ik
wsec=Home&ikwidx=0#algoliaQueryId=320ae0c1e6b31d3d6ff907b0bc220be1"
    }
];

    dbo.collection("customers").insertOne(books, function(err, res) {
        if (err) throw err;
        console.log("5 books inserted");
        db.close();
    });
});

```

## Conclusion

Total time spent on this LAB was around 2 hours. 1 hour was dedicated to readings, researching and learning using the Module8, Stack Overflow and blog posts. And the rest of the time was spent in writing the code. Another 30 minutes was spent on debugging the code to make sure everything works fine. Approximately 30 Minutes were spent on writing the report for this LAB. Over all the Lab was a successful and fun learning experience.