Program: Mechanical Engineering

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

Instructor	Dr. Ghassem Tofighi

Report NO.	7

Report Title	MongoDB

Group No.	N/A
Submission Date	November 23, 2021
Due Date	November 23, 2021

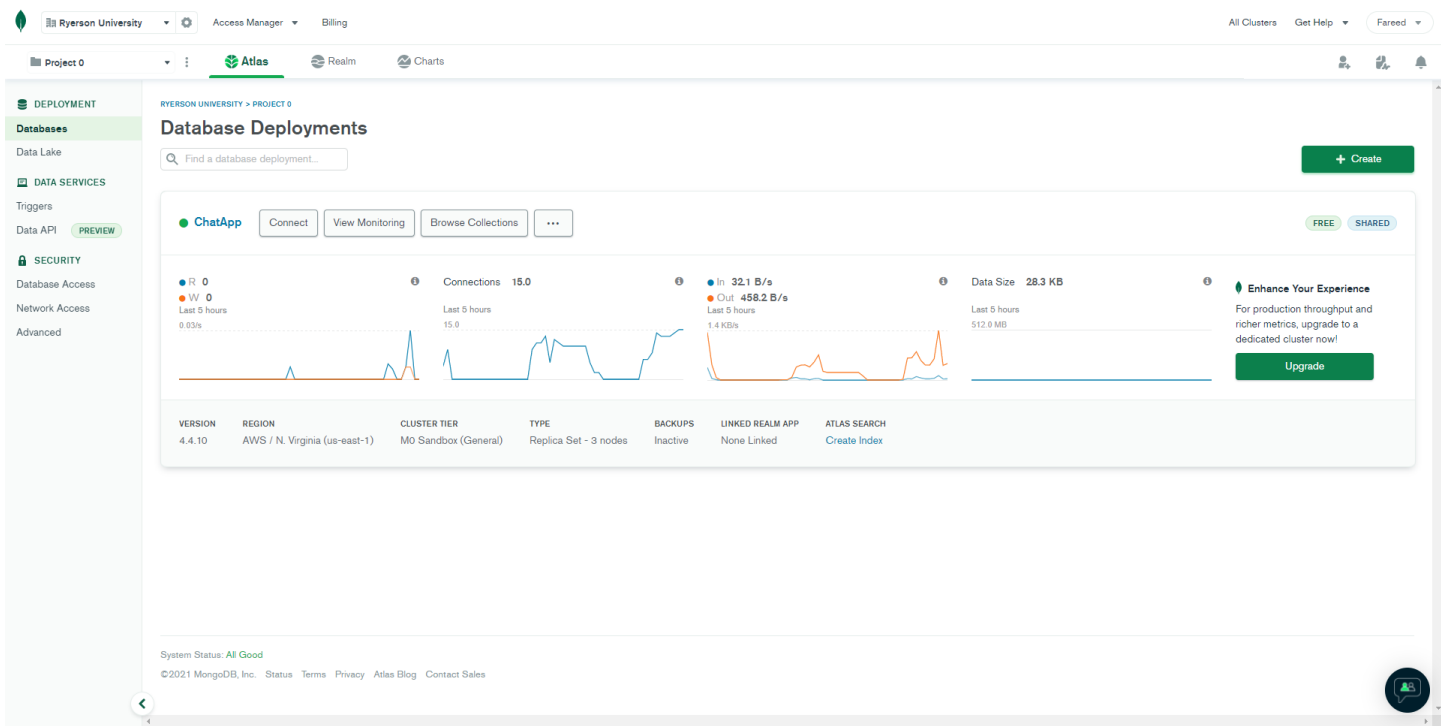| Name	Student ID	Signature*
Fareed Syed	xxxx19438	

(Note: Remove the first 4 digits from your student ID)

*By signing above you attest that you have contributed to this submission and confirm that all work you have contributed to this submission is your own work. Any suspicion of copying or plagiarism in this work will result in an investigation of Academic Misconduct and may result in a "0" on the work, an "F" in the course, or possibly more severe penalties, as well as a Disciplinary Notice on your academic record under the Student Code of Academic Conduct, which can be found online at http://www.ryerson.ca/senate/policies/pol60.pdf.

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.

Connect View Help

Local

∨ 5 DBS   12 COLLECTIONS   C
☆ 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

🔍 Filter your data

> ChatDB
> admin
> local
∨ mydb   ⊕ 🗑
   📁 books
   📁 mydb
> mydb2

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		🗑

＋

>_MONGOSH   ∧

Connect View Help

Local

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☆ FAVORITE

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MongoDB 4.4.10 Enterprise

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> admin
> local
> mydb
> mydb2

Databases   **Performance**

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	🗑

＋

>_MONGOSH   ∧

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
chatapp-shard-00-00.pllqz.mongodb.net:27017

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🔍 Filter your data

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> local
∨ mydb
    📁 books   ...
    📁 mydb
> mydb2

➕

>_MONGOSH

mydb.books
Documents ✕   +

mydb.books

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   ‹ ›   ↻ 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"

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mydb.books
Documents ✕   +

mydb.books

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   ↺   ...

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_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

Queries used to create books collection

```javascript
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

```javascript
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.