**ADT Lab 6 (10pts)**

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**Semester: Spring 2024**

**Q1**

**Q2**

**Q3**

**Q4**

**Highlight the questions you are done with to green color before you submit**

Setup Instructions:

Set up a local or cloud-based MongoDB instance, if you haven't already. You can use the MongoDB Atlas cloud service or install MongoDB Compass on your local machine.

Use either the MongoDB Compass or MongoDB Atlas for this lab.

MongoDB Compass

1. Connect to cluster “mongodb+srv://m001-student:m001-mongodb-basics@cluster0-jxeqq.mongodb.net/test” if you haven’t already done.
2. Use the sample **“sample\_mflix”** database and **"movieDetails"** collection.

MongoDB Atlas:

1. Create an account <https://account.mongodb.com/account/login?nds=true&_ga=2.265642447.1386835457.1695827612-1624550051.1695827612>
2. Under Deployment select Database and create a new database.

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1. Select M0 Free option and any region. Name your cluster and create.

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1. Create a user by specifying username and password. Keep it simple to remember, for example:   
   username: root

Password: root1234

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1. Select Cloud and click Add My Current IP Adress.

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1. Click Finish and the database cluster should be created.

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1. Click on Browse Collections and Load a Sample Dataset.

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1. Use the sample **“sample\_mflix”** database and **"movies"** collection.

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If you have never used MongoDB Atlas or Compass, here is a sample query and it’s answer.

You can use this as a reference to query the given database.

1. Retrieve all movies with a rating of at least 8. Answer: **{"imdb.rating": {$gte: 8}}**
2. MongoDB Compass output -

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1. MongoDB Atlas output -

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Questions:

**Q1:** **Retrieve all movies with the genre "Action" and "Comedy" at the same time.**

Expected Output:

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#Paste your Q1 output screenshot here along with query and cluster name

**Query : {genres:{$all: [/Action/, /Comedy/]}}**

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**Q2:** **Retrieve all movies that have an imdb rating of at least 7 and were released between 2008 and 2012 (inclusive of years 2008 and 2012), and sort them by imdb rating in descending order.**

Expected Output:

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#Paste your Q2 screenshot here along with query and cluster name

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**Q3:** **Retrieve all movies that have a title shorter than 10 characters or a rating less than 5.**

Expected Output:

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#Paste your Q3 screenshot here along with query and cluster name

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**Q4:** **Retrieve all movies that have a "title" value that contains the word "hero" or "villain" and sort by year in ascending order.**

Expected Output:

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#Paste your Q4 screenshot here along with query and cluster name

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**Hints:**

The queries could be tricky if you are using mongodb for the first time.

Here are some hints to solve the questions:

1. $regex: This could be used in the queries today for regex matching. You can find more info about it here -> <https://www.mongodb.com/docs/manual/reference/operator/query/regex/>
2. Google how to apply sorting on mongodb atlas and mongodb compass.