

MongoDB Lab Assignments with Solutions

MongoDB Exercise in mongo shell

Connect to a running mongo instance, use a database named **mongo_practice**.
Document all your queries in a javascript file to use as a reference.

Insert Documents

Insert the following documents into a movies collection.

title : Fight Club

writer : Chuck Palahniuk

year : 1999

actors : [

Brad Pitt

Edward Norton

]

title : Pulp Fiction

writer : Quentin Tarantino

year : 1994

actors : [

John Travolta

Uma Thurman

]

title : Inglorious Basterds

writer : Quentin Tarantino

year : 2009

actors : [

Brad Pitt

Diane Kruger

Eli Roth

]

title : The Hobbit: An Unexpected Journey

writer : J.R.R. Tolkein

year : 2012

franchise : The Hobbit

title : The Hobbit: The Desolation of Smaug

writer : J.R.R. Tolkein

year : 2013

franchise : The Hobbit

title : The Hobbit: The Battle of the Five Armies

writer : J.R.R. Tolkein

year : 2012

franchise : The Hobbit

synopsis : Bilbo and Company are forced to engage in a war against an array of combatants and keep the Lonely Mountain from falling into the hands of a rising darkness.

title : Pee Wee Herman's Big Adventure

title : Avatar

Reference

[:https://www.tutorialspoint.com/mongodb/mongodb_insert_document.htm](https://www.tutorialspoint.com/mongodb/mongodb_insert_document.htm)

Query / Find Documents

query the movies collection to

1. get all documents
2. get all documents with writer set to "Quentin Tarantino"
3. get all documents where actors include "Brad Pitt"
4. get all documents with franchise set to "The Hobbit"
5. get all movies released in the 90s
6. get all movies released before the year 2000 or after 2010

Reference:

https://www.tutorialspoint.com/mongodb/mongodb_query_document.htm

Update Documents

1. add a synopsis to "The Hobbit: An Unexpected Journey" : "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon Smaug."
2. add a synopsis to "The Hobbit: The Desolation of Smaug" : "The dwarves, along with Bilbo Baggins and Gandalf the Grey, continue their quest to reclaim Erebor, their homeland, from Smaug. Bilbo Baggins is in possession of a mysterious and magical ring."
3. add an actor named "Samuel L. Jackson" to the movie "Pulp Fiction"

Reference:

https://www.tutorialspoint.com/mongodb/mongodb_update_document.htm

Text Search

1. find all movies that have a synopsis that contains the word "Bilbo"
2. find all movies that have a synopsis that contains the word "Gandalf"
3. find all movies that have a synopsis that contains the word "Bilbo" and not the word "Gandalf"
4. find all movies that have a synopsis that contains the word "dwarves" or "hobbit"
5. find all movies that have a synopsis that contains the word "gold" and "dragon"

Reference: https://www.tutorialspoint.com/mongodb/mongodb_text_search.htm

Delete Documents

1. delete the movie "Pee Wee Herman's Big Adventure"
2. delete the movie "Avatar"

Reference:

https://www.tutorialspoint.com/mongodb/mongodb_delete_document.htm

Relationships

Insert the following documents into a users collection

```
username : GoodGuyGreg
first_name : "Good Guy"
last_name : "Greg"
username : ScumbagSteve
full_name :
  first : "Scumbag"
  last : "Steve"
```

Insert the following documents into a posts collection

```
username : GoodGuyGreg
title : Passes out at party
body : Wakes up early and cleans house

username : GoodGuyGreg
title : Steals your identity
body : Raises your credit score
```

username : GoodGuyGreg
title : Reports a bug in your code
body : Sends you a Pull Request

username : ScumbagSteve
title : Borrows something
body : Sells it

username : ScumbagSteve
title : Borrows everything
body : The end

username : ScumbagSteve
title : Forks your repo on github
body : Sets to private

Insert the following documents into a comments collection

username : GoodGuyGreg
comment : Hope you got a good deal!
post : [post_obj_id]
where [post_obj_id] is the ObjectId of the posts document: "Borrows something"

username : GoodGuyGreg
comment : What's mine is yours!
post : [post_obj_id]
where [post_obj_id] is the ObjectId of the posts document: "Borrows everything"

username : GoodGuyGreg
comment : Don't violate the licensing agreement!
post : [post_obj_id]
where [post_obj_id] is the ObjectId of the posts document: "Forks your repo on github"

username : ScumbagSteve
comment : It still isn't clean
post : [post_obj_id]
where [post_obj_id] is the ObjectId of the posts document: "Passes out at party"

username : ScumbagSteve
comment : Denied your PR cause I found a hack
post : [post_obj_id]

where [post_obj_id] is the ObjectId of the posts document: "Reports a bug in your code"

Querying related collections

1. find all users
2. find all posts
3. find all posts that was authored by "GoodGuyGreg"
4. find all posts that was authored by "ScumbagSteve"
5. find all comments
6. find all comments that was authored by "GoodGuyGreg"
7. find all comments that was authored by "ScumbagSteve"
8. find all comments belonging to the post "Reports a bug in your code"

References:

<https://docs.mongodb.com/manual/reference/method/db.collection.find/>

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Lab 2

Use the earthquake2008.CSV file

```
cd mongodb
$ ./bin/mongoimport --db data_for_test --collection earthquake_2008 --type csv --headerline --file /sample_data/Earthquake_2008.csv
```

Simple query

List the databases, select one database, and list the collections(tables) in the database selected.

Return how many documents (rows) there are in the collection (table) in which we're interested.

Select one document in which the variable 'mag' is bigger than 7.

Select all the documents in which the variable 'mag' is less than 5.

Select all the documents in which the variable 'mag' is less than 5. Additionally, we only return the variables "mag", "time", and "place".

Select variables "mag", "time" and "place" (It's empty in the first {}, so there is no selection condition). Then we sort ascently and only return the first 5 documents.