# MongoDB Lab Assignments -Day 1

**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 Palahniuko 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[://ww](http://www.tutorialspoint.com/mongodb/mongodb_insert_document.htm)w.t[utorialspoint.com/mongodb/mongodb\_insert\_document.htm](http://www.tutorialspoint.com/mongodb/mongodb_insert_document.htm)

# Query / Find Documents

query the **movies** collection to

1. get all documents

db.movies.find().pretty()

1. get all documents with writer set to "Quentin Tarantino"

db.movies.find({writer:"Quentin Tarantino"})

1. get all documents where actors include "Brad Pitt"

db.movies.find({actors:"Brad Pitt"})

1. get all documents with franchise set to "The Hobbit"

db.movies.find({franchise:"The Hobbit"})

1. get all movies released in the 90s

db.movies.find({$and:[{year: {$gt: 1900}}, {year: {$lt: 2000}}]})

1. get all movies released before the year 2000 or after 2010

db.movies.find({$or:[{year: {$gt: 2000}}, {year: {$lt: 2010}}]})

Reference: https[://ww](http://www.tutorialspoint.com/mongodb/mongodb_query_document.htm)w.t[utorialspoint.com/mongodb/mongodb\_query\_document.htm](http://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."

db.movies.update({title:'The Hobbit:An Unexpected Journey'},{$push:{synopsis:"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."}})

1. 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."

db.movies.update({title:"The Hobbit:The Desolation of Smaug"},{$push:{synopsis:"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."}})

1. add an actor named "Samuel L. Jackson" to the movie "Pulp Fiction"

db.movies.update({title:"Pulp Fiction"},{$push:{actors: ['Samuel L. Jackson']}})

Reference: https[://ww](http://www.tutorialspoint.com/mongodb/mongodb_update_document.htm)w.t[utorialspoint.com/mongodb/mongodb\_update\_document.htm](http://www.tutorialspoint.com/mongodb/mongodb_update_document.htm)

# Text Search

1. find all movies that have a synopsis that contains the word "Bilbo"

db.movies.find({$text:{$search:"Bilbo"}})

1. find all movies that have a synopsis that contains the word "Gandalf"

db.movies.find({$text:{$search:"Gandalf"}})

1. find all movies that have a synopsis that contains the word "Bilbo" and not the word "Gandalf"

db.movies.find({$text:{$search:"Bilbo -Gandalf"}})

1. find all movies that have a synopsis that contains the word "dwarves" or "hobbit"

db.movies.find({$text:{$search:"dwarves hobbit"}})

1. find all movies that have a synopsis that contains the word "gold" and "dragon"

db.movies.find({$text:{$search:"gold dragon"}})

Reference: https[://w](http://www.tutorialspoint.com/mongodb/mongodb_text_search.htm)ww[.t](http://www.tutorialspoint.com/mongodb/mongodb_text_search.htm)u[torialspoint.com/mongodb/mongodb\_text\_search.htm](http://www.tutorialspoint.com/mongodb/mongodb_text_search.htm)

# Delete Documents

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

db.movies.deleteOne({title:”Pee Wee Herma’s Big Adventue”})

1. delete the movie "Avatar"

db.movies,deleteOne({title:”Avatar”})

Reference: https[://ww](http://www.tutorialspoint.com/mongodb/mongodb_delete_document.htm)w.t[utorialspoint.com/mongodb/mongodb\_delete\_document.htm](http://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

db.users.find().pretty();

1. find all posts

db.posts.find().pretty();

1. find all posts that was authored by "GoodGuyGreg"

db.posts.find({ username: 'GoodGuyGreg' }).pretty();

1. find all posts that was authored by "ScumbagSteve"

db.posts.find({ username: 'ScumbagSteve' }).pretty();

1. find all comments

db.comments.find().pretty();

1. find all comments that was authored by "GoodGuyGreg"

db.comments.find({ username: 'GoodGuyGreg' }).pretty();

1. find all comments that was authored by "ScumbagSteve"

db.posts.find({ username: 'Scumbagsteve' }).pretty();

1. find all comments belonging to the post "Reports a bug in your code"

db.posts.aggregate([

{

$match: { title: 'Reports a bug in your code' }

},

{

$lookup: {

from: 'comments',

localField: '\_id',

foreignField: 'post',

as: 'comments'

}

}

]).pretty();

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

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