# 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)

**Command Used:**

1. use mongo\_practice
2. db.movies.insertMany([{

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'

}])

db.movies.insertMany([{

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'

}])

# Query / Find Documents

query the **movies** collection to

1. get all documents

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.find().pretty()

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

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.find({"writer": 'Quentin Tarantino'}).pretty()

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

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.find({actors:{$eq:"Brad Pitt"}})

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

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.find({franchise:{$eq:"The Hobbit"}})

1. get all movies released in the 90s

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

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

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

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.update({title: 'The Hobbit: An Unexpected Journey'}, {$set: {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."

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.update({title: 'The Hobbit: The Desolation of Smaug'}, {$set: {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"

Atlas atlas-10chxn-shard-0 [primary] mongo\_practice> db.movies.update({title: 'Pulp Fiction'}, {$set: {actors:['John Travolta', 'Uma Thurman', '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.createIndex({synopsis:"text"})

db.movies.aggregate({$match:{$text:{$search:"Bilbo"}}},{$project:{title:1}}) (or)

db.movies.aggregate({$match:{$text:{$search:"Bilbo"}}},{$project:{\_id:0,title:1}})

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

db.movies.aggregate({$match:{$text:{$search:"\"Gandalf\""}}},{$project:{title:1}})

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

db.movies.aggregate({$match:{$text:{$search:"Bilbo -Gandalf"}}},{$project:{title:1}})

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

db.movies.aggregate({$match:{$text:{$search:"dwarves hobbit"}}},{$project:{title:1}})

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

db.movies.aggregate({$match:{$text:{$search:"\"gold\" \”dragon\”"}}},{$project:{title:1}})

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 Herman's Big Adventure "})

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()

1. find all posts

db.posts.find()

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

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

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

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

1. find all comments

db.comments.find()

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

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

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

db.comments.find({username:'ScumbagSteve'})

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

db.comments.find({5:"Reports a bug in your code" })

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