# **Assignment 1:**

Connect to a running mongo instance, use a database named mongo\_practice

```
> db.mongo_practice
test.mongo_practice
> use mongo_practice
switched to db mongo_practice
```

Insert following documents into a movies collection

```
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 6,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
>
```

## Query/Find Documents

1) Get all documents:

```
db.movies.find().pretty()
      "_id" : ObjectId("6106d8c81a469f6f20b41349"),
     "title" : "Fight Club",
      "writer" : "Chuck Palahniuko",
      "year" : 1999,
      "actors" : [
              "Brad Pitt",
              "Edward Norton"
      1
      " id" : ObjectId("6106d8c81a469f6f20b4134a"),
      "title" : "Pulp Fiction",
      "writer" : "Quentin Tarantino",
      "year" : 1994,
      "actors" : [
             "John Travolta",
              "Uma Thurman"
      ]
      " id" : ObjectId("6106dbdc1a469f6f20b4134b"),
      "title" : "Inglorious Basterda",
      "writer" : "Quentin Tarantino",
      "year" : 2009,
      "actors" : [
              "Brad Pitt",
              "Diane Kruger",
             "Eli Roth"
      ]
```

```
{
    "_id" : ObjectId("6106dbdc1a469f6f20b4134c"),
    "title" : "The Hobbit: An Unexpected Journey",
    "writer" : "J.R.R. Tolkein",
    "year" : 2012,
    "franchise" : "The Hobbit"
}
{
    "_id" : ObjectId("6106dbdc1a469f6f20b4134d"),
    "title" : "The Hobbit: The Desolation of Smaug",
    "writer" : "J.R.R. Tolkein",
    "year" : 2013,
    "franchise" : "The Hobbit"
}
{
    "_id" : ObjectId("6106dbdc1a469f6f20b4134e"),
    "title" : "The Hobbit: The Battle of five Armies",
    "writer" : "J.R.R. Tolkein",
    "year" : 2012,
    "franchise" : "The Hobbit",
    "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"
}
{
    "_id" : ObjectId("6106dbdc1a469f6f20b4134f"),
    "title" : "Pee Wee Herman's Big Adventure"
}
{
    "_id" : ObjectId("6106dbdc1a469f6f20b41350"), "title" : "Avatar" }
}
```

### 2)writer Quentin Tarantino

```
> db.movies.find({writer:"Quentin Tarantino"})
{ "_id" : ObjectId("6106d8c81a469f6f20b4134a"), "title" : "Pulp Fiction", "writer" : "Quentin Tarantino", "year" : 1994,
   "actors" : [ "John Travolta", "Uma Thurman" ] }
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134b"), "title" : "Inglorious Basterda", "writer" : "Quentin Tarantino", "year"
: 2009, "actors" : [ "Brad Pitt", "Diane Kruger", "Eli Roth" ] }
> _
```

#### 3) Actor: Brad Pitt

```
> db.movies.find({actors:"Brad Pitt"})
{ "_id" : ObjectId("6106d8c81a469f6f20b41349"), "title" : "Fight Club", "writer" : "Chuck Palahniuko", "year" : 1999, "actors" : [ "Brad Pitt", "Edward Norton" ] }
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134b"), "title" : "Inglorious Basterda", "writer" : "Quentin Tarantino", "year"
: 2009, "actors" : [ "Brad Pitt", "Diane Kruger", "Eli Roth" ] }
>
```

#### 4) Frenchise Hobbit

```
> db.movies.findd({franchise:"The Hobbit"})
> db.movies.findd({franchise:"The Hobbit"})
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134c"), "title" : "The Hobbit: An Unexpected Journey", "writer" : "J.R.R. Tolkei
n", "year" : 2012, "franchise" : "The Hobbit" }
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134d"), "title" : "The Hobbit: The Desolation of Smaug", "writer" : "J.R.R. Tolk
ein", "year" : 2013, "franchise" : "The Hobbit" }
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134e"), "title" : "The Hobbit: The Battle of five Armies", "writer" : "J.R.R. To
lkein", "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" }
> __
```

### 5) Movies released in 90's

6) Movies released before 2000 or after 2010

## **Update Documents**

1) Add a synopsis to: The Hobbit: An Unexpected Journey

```
> db.movies.update({title:'The Hobbit: An Unexpected Journey'}, {$set:{synopsis:'a reluctant hobbit, Bilbo Baggins, sets
   out to the Lonely Mountains with a spirited group of dwarves to reclaim their mountain home - and the gold within it -
from the dragon Smaug'}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
{ " id" : ObjectId("6106dbdc1a469f6f20b4134c"), "title" : "The Hobbit: An Unexpected Journey", "writer" : "J.R.R. Tolkei
```

{ "\_id" : ObjectId("6106dbdc1a469f6f20b4134c"), "title" : "The Hobbit: An Unexpected Journey", "writer" : "J.R.R. Tolkei n", "year" : 2012, "franchise" : "The Hobbit", "synopsis" : "a reluctant hobbit, Bilbo Baggins, sets out to the Lonely M ountains with a spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon Smau g" }

2) Add synopsis to: The Hobbit: The Desolation of Smaug

```
> 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 possesion of a mysterious and magical ring'}})
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
{ "_id" : ObjectId("6106dbdc1a469f6f20b4134d"), "title" : "The Hobbit: The Desolation of Smaug", "writer" : "J.R.R. Tolk ein", "year" : 2013, "franchise" : "The Hobbit", "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 possesion of a mysterious and magical ring" }
```

3) Add an actor named Samuel L. Jackson to movie Pulp Fiction

```
db.movies.update({title:'Pulp Fiction'},{$set:{actors:'Samuel L.Jackson'}})
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.movies.find({title:'Pulp Fiction'})
{ "_id" : ObjectId("6106d8c81a469f6f20b4134a"), "title" : "Pulp Fiction", "writer" : "Quentin Tarantino", "year" : 1994,
    "actors" : "Samuel L.Jackson" }
```

### Text Search

1) Find all movies synopsis with word Bilbo

```
> db.movies.find({ $text: {$search: "Gandalf"}}).pretty()
Error: error: {
    "ok" : 0,
    "errmsg" : "text index required for $text query",
    "code" : 27,
    "codeName" : "IndexNotFound"
  db.movies.find({ $text: {$search:"Gandalf"}}).pretty()
 rror: error: {
           "ok"
                        "text index required for $text query",
           "errmsg"
           "code"
                     : 27,
           "codeName" : "IndexNotFound"
  db.movies.createIndex({synopsis:"text"})
           "numIndexesBefore" : 1,
           "numIndexesAfter" : 2,
           "createdCollectionAutomatically" : false,
  db.movies.find({$text: {$search: "Bilbo"}}).pretty()
           "_id" : ObjectId("6106dbdc1a469f6f20b4134d"),
"title" : "The Hobbit: The Desolation of Smaug",
"writer" : "J.R.R. Tolkein",
           "year": 2013,
"franchise": "The Hobbit",
"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 possesion of a mysterious and magical ring
           "_id": ObjectId("6106dbdc1a469f6f20b4134e"),
"title": "The Hobbit: The Battle of five Armies",
"writer": "J.R.R. Tolkein",
"year": 2012,
           "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
           "_id" : ObjectId("6106dbdc1a469f6f20b4134c"),
"title" : "The Hobbit: An Unexpected Journey",
"writer" : "J.R.R. Tolkein",
 "Writer : J.K.K. Tolken),

"year" : 2012,

"franchise" : "The Hobbit",

"synopsis" : "a reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountains with a spirited group of dwarv
s to reclaim their mountain home - and the gold within it - from the dragon Smaug"
```

2) Find all movies synopsis with word Gandalf

```
db.movies.find({$text: {$search: "Gandalf"}}).pretty()
        "_id" : ObjectId("6106dbdc1a469f6f20b4134d"),
"title" : "The Hobbit: The Desolation of Smaug",
"writer" : "J.R.R. Tolkein",
        "year": 2013,
"franchise": "The Hobbit",
"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 possesion of a mysterious and magical ring
```

3) Synopsis with word Bilbo and not the word Gandalf

```
> db.movies.find({$text: {$search: "Bilbo -Gandalf"}}).pretty()
{
        "_id" : ObjectId("6106dbdc1a469f6f20b4134e"),
        "title" : "The Hobbit: The Battle of 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"
}
{
        "_id" : ObjectId("6106dbdc1a469f6f20b4134c"),
        "title" : "The Hobbit: An Unexpected Journey",
        "writer" : "J.R.R. Tolkein",
        "year" : 2012,
        "franchise" : "The Hobbit",
        "synopsis" : "a reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountains with a spirited group of dwarv
es to reclaim their mountain home - and the gold within it - from the dragon Smaug"
}
```

4) All movies synopsis contain dwarves or hobbit

```
> db.movies.find({$text: {$search: "dwarves hobbit"}}).pretty()
{
        "_id" : ObjectId("6106dbdc1a469f6f20b4134c"),
        "title" : "The Hobbit: An Unexpected Journey",
        "writer" : "J.R.R. Tolkein",
        "year" : 2012,
        "franchise" : "The Hobbit",
        "synopsis" : "a reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountains with a spirited group of dwarv
es to reclaim their mountain home - and the gold within it - from the dragon Smaug"
}
{
        "_id" : ObjectId("6106dbdc1a469f6f20b4134d"),
        "title" : "The Hobbit: The Desolation of Smaug",
        "writer" : "J.R.R. Tolkein",
        "year" : 2013,
        "franchise" : "The Hobbit",
        "synopsis" : "The Hobbit",
        "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 possesion of a mysterious and magical ring"
}
```

5) All movies with synopsis with word gold and dragon

### **DELETE DOCUMENTS**

1) Delete movie "Pee Wee ....."

```
> db.movies.remove({title:"Pee Wee Herman's Big Adventure"})
WriteResult({ "nRemoved" : 1 })
```

2) Delete movie "Avatar"

```
> db.movies.remove({title:"Avatar"})
WriteResult({ "nRemoved" : 1 })
>
```

## Relationships

Insert following into a users collection ....

```
> db.users.insert([
... username: "GoodGuyGreg",
... first_name:"Good Guy",
... last_name:"Greg"
... }])
BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
 db.users.insert([
... username:"ScumbagSteve",
... first_name:"Scumbag",
... last name:"Steve"
... }])
BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
```

Insert the following documents into a posts collection

```
> db.posts.insert([
... {
... 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 everything",
... body:"Sells it"
... },
... {
... username: "ScumbagSteve",
... title:"Borrows something",
... body:"The end"
... },
... username: "ScumbagSteve",
... title:"Forks your repo on github",
... body:"Sets to private"
... }1)
BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 6,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
```

```
db.posts.find().pretty()
      " id" : ObjectId("610783579ae423f82f6b86be"),
      "username" : "GoodGuyGreg",
      "title" : "Passes out at party",
      "body" : "Wakes up early and cleans house"
      "_id" : ObjectId("610783579ae423f82f6b86bf"),
      "username" : "GoodGuyGreg",
      "title": "Steals your identity",
      "body" : "Raises your credit score"
      "_id" : ObjectId("610783579ae423f82f6b86c0"),
      "username" : "GoodGuyGreg",
"title" : "Reports a bug in your code",
      "body" : "Sends you a Pull Request"
      "_id" : ObjectId("610783579ae423f82f6b86c1"),
      "username": "ScumbagSteve",
"title": "Borrows everything",
      "body" : "Sells it"
      "_id" : ObjectId("610783579ae423f82f6b86c2"),
      "username" : "ScumbagSteve",
      "title" : "Borrows something",
      "body" : "The end"
      " id" : ObjectId("610783579ae423f82f6b86c3"),
      "username" : "ScumbagSteve",
      "title" : "Forks your repo on github",
      "body" : "Sets to private"
```

Insert following documents into a comments collection

```
> db.comments.insert([ { username: "GoodGuyGreg", comment:"Hope you got good deal!", post:0bjectId("610783579ae423f82f6b86c2")} , {username: "GoodGuyGreg", comment: "What's mine is yours!", post:0bjectId("610783579ae423f82f6b86c1")}, {username: "GoodGuyGreg", comment: "Don't voilate the licensing agreement!" , post:0bjectId("610783579ae423f82f6b86c3")} , {username: "ScunbagSteve", comment: "It still isn't clean", post:0bjectId("610783579ae423f82f6b86be")}, {username: "ScumbagSteve", comment: "Denied your PR cause I found a hack", post:0bjectId("610783579ae423f82f6b86c0")}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 5,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
```

```
db.comments.find().pretty()
      "_id" : ObjectId("61079308dbbfef0d14de0c7d"),
      "username" : "GoodGuyGreg",
      "comment" : "Hope you got good deal!",
      "post" : ObjectId("610783579ae423f82f6b86c2")
      "_id" : ObjectId("61079308dbbfef0d14de0c7e"),
      "username" : "GoodGuyGreg",
      "comment" : "What's mine is yours!",
      "post" : ObjectId("610783579ae423f82f6b86c1")
      "_id" : ObjectId("61079308dbbfef0d14de0c7f"),
      "username" : "GoodGuyGreg",
      "comment": "Don't voilate the licensing agreement!",
      "post" : ObjectId("610783579ae423f82f6b86c3")
      " id" : ObjectId("61079308dbbfef0d14de0c80"),
      "username" : "ScunbagSteve",
      "comment" : "It still isn't clean",
      "post" : ObjectId("610783579ae423f82f6b86be")
      " id" : ObjectId("61079308dbbfef0d14de0c81"),
      "username" : "ScumbagSteve",
      "comment" : "Denied your PR cause I found a hack",
      "post" : ObjectId("610783579ae423f82f6b86c0")
```

## **Query Related collections**

1) Find all users

```
> db.users.find().pretty()
{
        "_id" : ObjectId("610780939ae423f82f6b86bc"),
        "username" : "GoodGuyGreg",
        "first_name" : "Good Guy",
        "last_name" : "Greg"
}
{
        "_id" : ObjectId("610780f09ae423f82f6b86bd"),
        "username" : "ScumbagSteve",
        "first_name" : "Scumbag",
        "last_name" : "Steve"
}
```

2) Find all posts

```
db.posts.find().pretty()
      "_id" : ObjectId("610783579ae423f82f6b86be"),
      "username" : "GoodGuyGreg",
      "title" : "Passes out at party",
      "body" : "Wakes up early and cleans house"
      " id" : ObjectId("610783579ae423f82f6b86bf"),
      "username" : "GoodGuyGreg",
      "title" : "Steals your identity",
      "body" : "Raises your credit score"
      "_id" : ObjectId("610783579ae423f82f6b86c0"),
      "username" : "GoodGuyGreg",
      "title" : "Reports a bug in your code",
      "body" : "Sends you a Pull Request"
      "_id" : ObjectId("610783579ae423f82f6b86c1"),
      "username" : "ScumbagSteve",
      "title" : "Borrows everything",
      "body" : "Sells it"
      "_id" : ObjectId("610783579ae423f82f6b86c2"),
      "username" : "ScumbagSteve",
      "title" : "Borrows something",
      "body": "The end"
      "_id" : ObjectId("610783579ae423f82f6b86c3"),
      "username" : "ScumbagSteve",
      "title" : "Forks your repo on github",
      "body" : "Sets to private"
```

3) All posts authorised by "GoodGuyGreg"

```
> db.posts.find({username:"GoodGuyGreg"})
{ "_id" : ObjectId("610783579ae423f82f6b86be"), "username" : "GoodGuyGreg", "title" : "Passes out at party", "body" : "W
akes up early and cleans house" }
{ "_id" : ObjectId("610783579ae423f82f6b86bf"), "username" : "GoodGuyGreg", "title" : "Steals your identity", "body" : "
Raises your credit score" }
{ "_id" : ObjectId("610783579ae423f82f6b86c0"), "username" : "GoodGuyGreg", "title" : "Reports a bug in your code", "bod
y" : "Sends you a Pull Request" }
>
```

4) All posts authorised by "ScumbagSteve"

```
sts.find({username:"ScumbagSteve"})
: ObjectId("610783579ae423f82f6b86c1"), "username" : "ScumbagSteve", "title" : "Borrows everything", "body" : "S
_id" : ObjectId("610783579ae423f82f6b86c2"), "username" : "ScumbagSteve", "title" : "Borrows something", "body" : "Th
     : ObjectId("610783579ae423f82f6b86c3"), "username" : "ScumbagSteve", "title" : "Forks your repo on github", "bod
   "Sets to private" }
```

#### 5) Find all comments

```
> db.comments.find().pretty()
        " id" : ObjectId("61079308dbbfef0d14de0c7d"),
        "username" : "GoodGuyGreg",
        "comment" : "Hope you got good deal!",
        "post" : ObjectId("610783579ae423f82f6b86c2")
        " id" : ObjectId("61079308dbbfef0d14de0c7e"),
       "username" : "GoodGuyGreg",
       "comment" : "What's mine is yours!",
        "post" : ObjectId("610783579ae423f82f6b86c1")
        " id" : ObjectId("61079308dbbfef0d14de0c7f"),
        "username" : "GoodGuyGreg",
        "comment": "Don't voilate the licensing agreement!",
        "post" : ObjectId("610783579ae423f82f6b86c3")
        "_id" : ObjectId("61079308dbbfef0d14de0c80"),
        "username": "ScunbagSteve",
        "comment" : "It still isn't clean",
        "post" : ObjectId("610783579ae423f82f6b86be")
        " id" : ObjectId("61079308dbbfef0d14de0c81"),
        "username" : "ScumbagSteve",
        "comment" : "Denied your PR cause I found a hack",
        "post" : ObjectId("610783579ae423f82f6b86c0")
```

#### 6) All comments authorised by "GoodGuyGreg"

```
db.comments.find({username:"GoodGuyGreg"})

"_id": ObjectId("61079308dbbfef0d14de0c7d"), "username": "GoodGuyGreg", "comment": "Hope you got good deal!", "post
: ObjectId("610783579ae423f82f6b86c2") }

" id": ObjectId("610783579ae423f82f6b86c2")
: ObjectId( 610783579464237827606062 ) }
"_id" : ObjectId("61079308dbbfef0d14de0c7e"), "username" : "GoodGuyGreg", "comment" : "What's mine is yours!", "post"
ObjectId("610783579ae423f82f6b86c1") }
"_id" : ObjectId("61079308dbbfef0d14de0c7f"), "username" : "GoodGuyGreg", "comment" : "Don't voilate the licensing agr
ement!", "post" : ObjectId("610783579ae423f82f6b86c3") }
```

7) All comments authorised by "ScumbagSteve"

```
> db.comments.find({username: "ScumbagSteve"})
{ "_id" : ObjectId("61079308dbbfef0d14de0c81"), "username" : "ScumbagSteve", "comment" : "Denied your PR cause I found a
hack", "post" : ObjectId("610783579ae423f82f6b86c0") }
>
```

8) All comments belonging to "Reports a bug in your code"

```
> db.comments.find({post:ObjectId("610783579ae423f82f6b86c0")})
{ "_id" : ObjectId("61079308dbbfef0d14de0c81"), "username" : "ScumbagSteve", "comment" : "Denied your PR cause I found a hack", "post" : ObjectId("610783579ae423f82f6b86c0") }
>
```