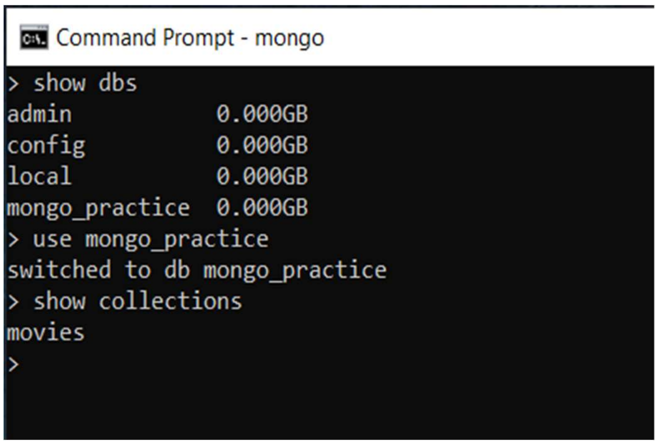
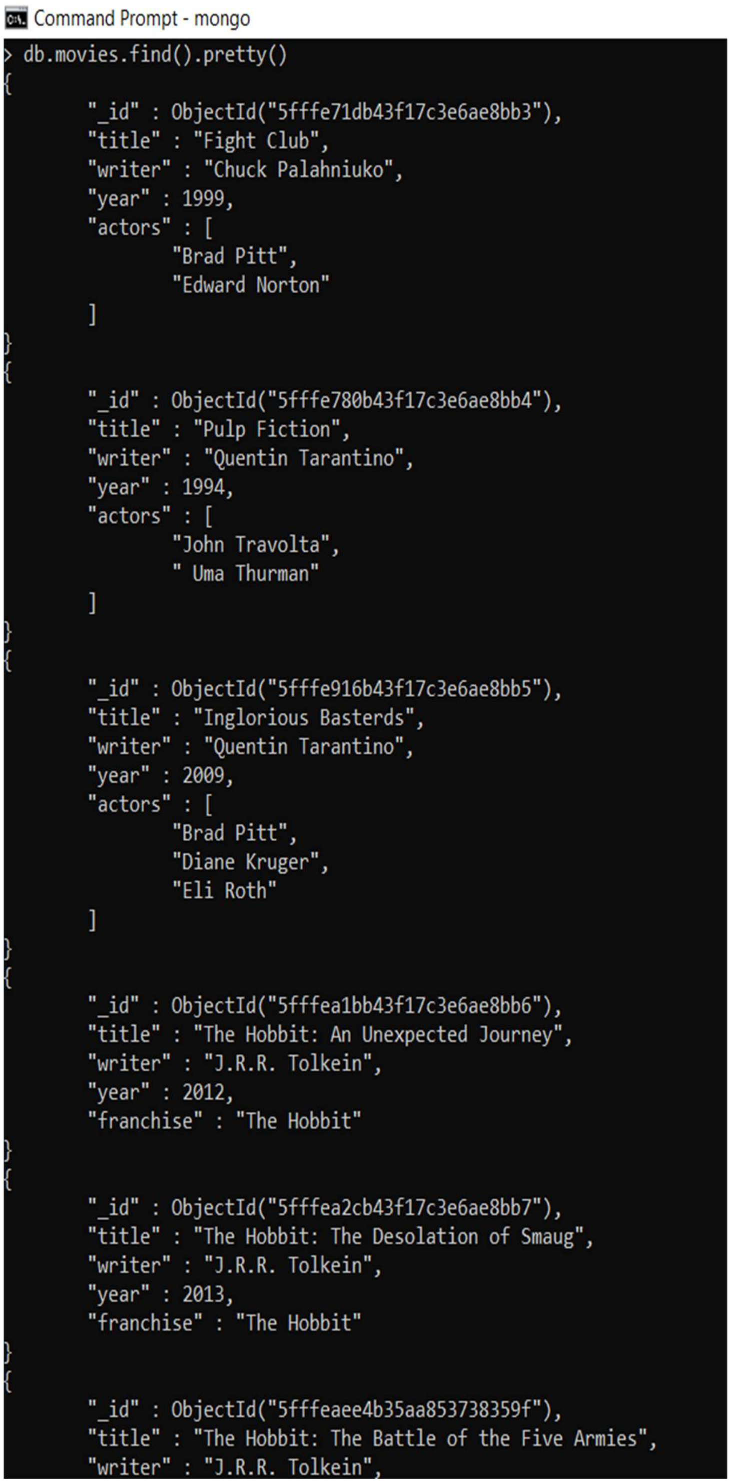
MongoDB Lab Assignments -Day 1

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


Command Prompt - mongo

```
> show dbs
admin           0.000GB
config          0.000GB
local           0.000GB
mongo_practice  0.000GB
> use mongo_practice
switched to db mongo_practice
> show collections
movies
>
```


Command Prompt - mongo

```
> db.movies.find().pretty()
{
        "_id" : ObjectId("5fffe71db43f17c3e6ae8bb3"),
        "title" : "Fight Club",
        "writer" : "Chuck Palahniuko",
        "year" : 1999,
        "actors" : [
                "Brad Pitt",
                "Edward Norton"
        ]
}
{
        "_id" : ObjectId("5fffe780b43f17c3e6ae8bb4"),
        "title" : "Pulp Fiction",
        "writer" : "Quentin Tarantino",
        "year" : 1994,
        "actors" : [
                "John Travolta",
                " Uma Thurman"
        ]
}
{
        "_id" : ObjectId("5fffe916b43f17c3e6ae8bb5"),
        "title" : "Inglorious Basterds",
        "writer" : "Quentin Tarantino",
        "year" : 2009,
        "actors" : [
                "Brad Pitt",
                "Diane Kruger",
                "Eli Roth"
        ]
}
{
        "_id" : ObjectId("5fffea1bb43f17c3e6ae8bb6"),
        "title" : "The Hobbit: An Unexpected Journey",
        "writer" : "J.R.R. Tolkein",
        "year" : 2012,
        "franchise" : "The Hobbit"
}
{
        "_id" : ObjectId("5fffea2cb43f17c3e6ae8bb7"),
        "title" : "The Hobbit: The Desolation of Smaug",
        "writer" : "J.R.R. Tolkein",
        "year" : 2013,
        "franchise" : "The Hobbit"
}
{
        "_id" : ObjectId("5fffeaee4b35aa853738359f"),
        "title" : "The Hobbit: The Battle of the Five Armies",
        "writer" : "J.R.R. Tolkein",
```

Insert Documents

Insert the following documents into a movies collection.

```
title : Fight Club
writer : Chuck Palahniuk
year : 1999
actors : [
  Brad Pitt
  Edward Norton
]
db.movies.insert ( {
          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
]
db.movies.insert ( {
          title : "Pulp Fiction",
          writer : "Quentin Tarantino",
          year : "2009",
          actors : [ "John Travolta", "Uma Thurman" ]
} )
```

```
title : Inglorious Basterds
writer : Quentin Tarantino
year : 2009
actors : [
  Brad Pitt
  Diane Kruger
  Eli Roth
]
db.movies.insert ( {
          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

```
db.movies.insert ( {
          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

```
db.movies.insert ( {
          title : "The Hobbit: The Desolation of Smaug",
          writer : "J.R.R Tolkien",
          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.

```
db.movies.insert ( {
          title : "The Hobbit: The Battle of the Five Armies",
          writer : "J.R.R Tolkien",
          year : "2002",
          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

```
db.movies.insert ( {
          title : "Pee Wee Herman's Big Adventures"
} )
```

title : Avatar

```
db.movies.insert ( {
        title : "Avatar"
} )
```

Query / Find Documents

query the movies collection to

1. get all documents
   ```
   db.movies.find()
   ```

2. get all documents with writer set to "Quentin Tarantino"
   ```
   db.movies.find (
           { "writer" : "Quentin Tarantino" }
   )
   ```

3. get all documents where actors include "Brad Pitt"
   ```
   db.movies.find (
           { "actors" : { $in : [ "Brad Pitt" ] } }
   )
   ```

4. get all documents with franchise set to "The Hobbit"
   ```
   db.movies.find (
           { "franchise" : "The Hobbit" }
   )
   ```

5. get all movies released in the 90s
   ```
   db.movies.find (
           { $and : [
                   { year : { $gt : 1989 } },
                   { year : { $lt : 2000 } }
           ] }
   )
   ```

6. get all movies released before the year 2000 or after 2010
   ```
   db.movies.find (
           { $or : [ { year : { $lt : 2000 } },{ year : { $gt : 2010 } } ] }

   )
   ```

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.updateOne (
        { 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." } }

)
```

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."

```
db.movies.updateOne (
        { 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." }}
)
```

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

```
db.movies.updateOne (
        { title: "Pulp Fiction"},
        { $push : { "actors" : "Samuel L. Jackson" } }
)
```

Text Search

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

```
db.movies.find (
	{ synopsis : { $regex : "Bilbo" } }
)
```

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

```
db.movies.find (
	{ synopsis : { $regex : "Gandalf" } }
)
```

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

```
db.movies.find (
	{ $and : [
		{ synopsis : { $regex : "Bilbo" } },
		{ synopsis : { $not : /Gandalf/ } }
	] }
)
```

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

```
db.movies.find (
	{ $or : [
		{ synopsis : { $regex : "dwarves" } },
		{ synopsis : { $regex : "hobbit" } }
	] }
)
```

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

```
db.movies.find (
	{ $and : [
		{ synopsis : { $regex : "gold" } },
		{ synopsis : { $regex : "gragon" } }
	] }
)
```

Delete Documents

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

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

2. delete the movie "Avatar"

```
db.movies.remove (
        { title : "Avatar" }
)
```

Relationships

Insert the following documents into a users collection

username : GoodGuyGreg
first_name : "Good Guy"
last_name : "Greg"

```
db.users.insert ( {
          Username : "GoodGuyGreg",
          first_name : "Good Guy",
          last_name : "Greg"
} )
```

---

username : ScumbagSteve
full_name :
  first : "Scumbag"
  last : "Steve"

```
db.users.insert ( {
          Username : "ScumbagSteve",
          Fullname : { 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

```
db.posts.insert ( {
	username : "GoodGuyGreg",
	title : "Passes out at Party",
	body : "Raises your credit score"
} )
```

---

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

```
db.posts.insert ( {
	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

```
db.posts.insert ( {
	username : "GoodGuyGreg",
	title : "Reports a bug in your code",
	body : "Sends you a pull request"
} )
```

---

username : ScumbagSteve
title : Borrows something
body : Sells it

```
db.posts.insert ( {
	username : "ScumbagSteve",
	title : "Borrows something",
	body : "Sells it"
} )
```

username : ScumbagSteve
title : Borrows everything
body : The end

```
db.posts.insert ( {
          username : "ScumbagSteve",
          title : "Borrows everything",
          body : "The end"
} )
```

---

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

```
db.posts.insert ( {
          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"

```
db.comments.insert ( {
          username : "GoodGuyGreg",
          comment : "Hope you got a good deal!",
          post : ObjectId("600012884b35aa85373835a7")
})
```

---

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"

```
db.comments.insertOne ( {
          username : "GoodGuyGreg",
          comment : "What's mine is yours!",
          post : ObjectId("600012944b35aa85373835a8")
} )
```

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

```
db.comments.insertOne ( {
          username : "GoodGuyGreg",
          comment : "Don't violate the licensing agreement!",
          post : ObjectId("600012ab4b35aa85373835a9")
} )
```

---

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"

```
db.comments.insert ( {
          username : "ScumbagSteve",
          comment : "It still isn't clean",
          post : ObjectId("6000126d4b35aa85373835a4")
})
```

---

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"

```
db.comments.insert ( {
        username : "ScumbagSteve",
        comment : "Denied your PR cause I found a hack",
        post : ObjectId("600012814b35aa85373835a6")
})
```

Querying related collections

1. find all users

   ```
   db.users.find().pretty()
   ```

2. find all posts

   ```
   db.posts.find().pretty()
   ```

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

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

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

   ```
   db.posts.find( { username : "ScumbagSteve" } )
   ```

5. find all comments

   ```
   db.comments.find().pretty()
   ```

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

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

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

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

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

   ```
   db.comments.find ( {
           "post" : ObjectId("600012814b35aa85373835a6") },
           {comment:1}
   )
   ```