CSC424 - Week 5 Lab - Warm Up

Note: I do not grade this in-class lab. You are more than welcome to collaborate with a classmate. Once you are complete the exercises, I encourage you to push your code to GitHub for later use.

```
// example
use tutorial

// ***************** inserts and queries *****************************
db.users.insert({username: "smith"})

db.users.find()

/* results like:  (_id will vary)

{ _id : ObjectId("4bf9bec50e32f82523389314"), username : "smith" }

*/

db.users.insert({username: "jones"})

db.users.count()

db.users.find()

/* results like: (_id will vary)

{ _id : ObjectId("4bf9bec50e32f82523389314"), username : "smith" }
{ _id : ObjectId("4bf9bec90e32f82523389315"), username : "jones" }

*/

db.users.find({username: "jones"})

/* results like:
{ _id : ObjectId("4bf9bec90e32f82523389315"), username : "jones" }
```

```
*/


// $or find
db.users.find({ $or: [
  { username: "smith" },
  { username: "jones" }
]})

/* results like:
{ _id : ObjectId("4bf9bec50e32f82523389314"), username : "smith" }
{ _id : ObjectId("4bf9bec90e32f82523389315"), username : "jones" }
*/



// ********************** updates **********************************
db.users.find({username: "smith"})
/* result like:
{
  "_id" : ObjectId("4bf9ec440e32f82523389316"),
  "username" : "smith"
}

*/

// update
db.users.update({username: "smith"}, {$set: {country: "Canada"}})

db.users.find({username: "smith"})

/* results like:
{
  "_id" : ObjectId("4bf9ec440e32f82523389316"),
  "country" : "Canada",
  "username" : "smith"
}

*/
```

```
// update that removes username - mistaken way to do it
db.users.update({username: "smith"}, {country: "Canada"})

// now have wiped out username
db.users.find({country: "Canada"})

/* results like
{
  "_id" : ObjectId("4bf9ec440e32f82523389316"),
  "country" : "Canada"
}

*/

// set username back to smith
db.users.update({country: "Canada"}, {username: "smith", country: "Canada"})

// remove country via $unset
db.users.update({username: "smith"}, {$unset: {country: 1}})

db.users.find({username: "smith"})


// set favorites for smith
db.users.update( {username: "smith"},
  {
    $set: {
      favorites: {
        cities: ["Chicago", "Cheyenne"],
        movies: ["Casablanca", "For a Few Dollars More", "The Sting"]
      }
    }
  })

// set favorites for jones
db.users.update( {username: "jones"},
  {
    $set: {
      favorites: {
```

```
      movies: ["Casablanca", "Rocky"]
    }
  }
})


// verify update results
db.users.find().pretty()  // used pretty to make more readable

//find users with favorite movie of "Casablanca"
db.users.find({"favorites.movies": "Casablanca"}).pretty()

// $addToSet
db.users.update( {"favorites.movies": "Casablanca"},
   {$addToSet: {"favorites.movies": "The Maltese Falcon"} },
      false,  // insert if not found?
      true )  // update all found? (if false, updates just first it finds)

// ****** deleting data *******************
db.foo.remove({})

// remove users with favorite city of Cheyenne
db.users.remove({"favorites.cities": "Cheyenne"})


// get rid of users table
db.users.drop()


// *************** other commands ***************************

// MongoDB console help
help

// BEFORE running  MongoDB console
// Help on running mongo command
mongo --help


// create large collection
```

```
for(i = 0; i < 200000; i++) {
   db.numbers.save({num: i});
 }

// verify results
db.numbers.count()

db.numbers.find()

db.numbers.find({num: 500})

// range query
db.numbers.find( {num: {"$gt": 199995 }} )

/* results like

{ "_id" : ObjectId("4bfbf1dedba1aa7c30afcade"), "num" : 199996 }
{ "_id" : ObjectId("4bfbf1dedba1aa7c30afcadf"), "num" : 199997 }
{ "_id" : ObjectId("4bfbf1dedba1aa7c30afcae0"), "num" : 199998 }

*/

// upper and lower bounds
db.numbers.find( {num: {"$gt": 20, "$lt": 25 }} )

/* results like:
{ "_id" : ObjectId("4bfbf132dba1aa7c30ac831f"), "num" : 21 }
{ "_id" : ObjectId("4bfbf132dba1aa7c30ac8320"), "num" : 22 }
{ "_id" : ObjectId("4bfbf132dba1aa7c30ac8321"), "num" : 23 }
{ "_id" : ObjectId("4bfbf132dba1aa7c30ac8322"), "num" : 24 }

*/
```