

Task 1

1. Create a database:

```
> use mongo_proj2_t1
switched to db mongo_proj2_t1
> _
```

2. Drop a database:

```
> use mongo_proj2_t1
switched to db mongo_proj2_t1
> db.dropDatabase()
{ "ok" : 1 }
> _
```

3. Creating a collection:

```
> db.createCollection("test_collection")
{ "ok" : 1 }
> db.createCollection("mycol",{capped:true,autoIndexId:true,size:6142800, max: 10000})
2018-11-27T09:00:21.071-0700 E QUERY [js] SyntaxError: missing name after . operator @(shell):1:28
> db.createCollection("mycol",{capped:true,autoIndexId:true,size:6142800, max: 10000})
{
  "note" : "the autoIndexId option is deprecated and will be removed in a future release",
  "ok" : 1
}
> _
```

4. Dropping a collection:

```
> db.test_collection.drop()
true
> db.mycol.drop()
true
> _
```

5. Insert a document:

```
> db.test_collection.insert({
... _id: ObjectId(),
... title: 'Mongo Db practice',
... description: 'this class is about MongoDB'
... })
WriteResult({ "nInserted" : 1 })
> _
```

6. Query a document:

```
> db.test_collection.find().pretty()
{
  "_id" : ObjectId("5bfd6b870865d1c91b85323e"),
  "title" : "Mongo Db practice",
  "description" : "this class is about MongoDB"
}
> _
```

7. Update a document:

```
> db.test_collection.update({'title':'Mongo Db practice'},{$set: {'title':'A BETTER MONGO TITLE'}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.test_collection.find().pretty()
{
  "_id" : ObjectId("5bfd6b870865d1c91b85323e"),
  "title" : "A BETTER MONGO TITLE",
  "description" : "this class is about MongoDB"
}
> _
```

8. Delete document:

```
> db.test_collection.remove({'title':"A BETTER MONGO TITLE"},1)
WriteResult({ "nRemoved" : 1 })
> db.test_collection.find().pretty()
> _
```

Task 2

To set up:

Had to move the json file into the bin where I was running mongoimport inorder to run the program and get the data.

```
C:\Program Files\MongoDB\Server\4.0\bin>mongoimport --db test --collection restaurants --drop --file ~/Desktop/data.json
2018-11-27T19:33:39.602-0700 Failed: open ~\Desktop\data.json: The system cannot find the path specified.
2018-11-27T19:33:39.604-0700 imported 0 documents

C:\Program Files\MongoDB\Server\4.0\bin>mongoimport --db test --collection restaurants --drop --file ~/data.json
2018-11-27T19:33:45.149-0700 Failed: open ~\data.json: The system cannot find the path specified.
2018-11-27T19:33:45.151-0700 imported 0 documents

C:\Program Files\MongoDB\Server\4.0\bin>mongoimport --db test --collection restaurants --drop --file data.json
2018-11-27T19:34:01.908-0700 connected to: localhost
2018-11-27T19:34:01.914-0700 dropping: test.restaurants
2018-11-27T19:34:03.843-0700 [#####...] test.restaurants 2.69MB/3.03MB (88.8%)
2018-11-27T19:34:03.913-0700 [#####] test.restaurants 3.03MB/3.03MB (100.0%)
2018-11-27T19:34:03.913-0700 imported 29353 documents

C:\Program Files\MongoDB\Server\4.0\bin>
```

1. List the five least populated zip codes in Colorado.

```
> db.restaurants.aggregate([
... {$match:{state:"CO"}},
... {$group:{_id:"$_id", LeastPop:{$min:"$pop"}}},
... {$sort:{LeastPop:1}},
... {$limit:5}
... ])
{ "_id" : "80914", "LeastPop" : 0 }
{ "_id" : "81633", "LeastPop" : 10 }
{ "_id" : "81243", "LeastPop" : 11 }
{ "_id" : "81081", "LeastPop" : 21 }
{ "_id" : "81021", "LeastPop" : 28 }
>
```

2. List the zip code and population for three zip codes in Brooklyn.

```
> db.restaurants.find( {city:"BROOKLYN"}, {_id:1, pop:1}).limit(3)
{ "_id" : "06234", "pop" : 4835 }
{ "_id" : "11203", "pop" : 80566 }
{ "_id" : "11201", "pop" : 46980 }
>
```

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Project: 2

Class: Database Systems

Due: 11/27/2018 at 11:59 pm

3. How many zip codes are there altogether in California, Arizona, and New Mexico?

```
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> db.restaurants.find({$or: [{state:"CA"}, {state: "AZ"}, {state:"NM"}]}).count()
2062
>
```

4. List the total population in each state.

Note: I organized it from least to greatest population.

```
> db.restaurants.aggregate([
... {$group: {_id: {$state: "$state"}, TotalPopulation: {$sum: "$pop"}}},
... {$sort: {TotalPopulation: 1}}
... ])
{ "_id" : { "State" : "WY" }, "TotalPopulation" : 453528 }
{ "_id" : { "State" : "AK" }, "TotalPopulation" : 544698 }
{ "_id" : { "State" : "VT" }, "TotalPopulation" : 562758 }
{ "_id" : { "State" : "DC" }, "TotalPopulation" : 606900 }
{ "_id" : { "State" : "ND" }, "TotalPopulation" : 638272 }
{ "_id" : { "State" : "DE" }, "TotalPopulation" : 666168 }
{ "_id" : { "State" : "SD" }, "TotalPopulation" : 695397 }
{ "_id" : { "State" : "MT" }, "TotalPopulation" : 798948 }
{ "_id" : { "State" : "RI" }, "TotalPopulation" : 1003218 }
{ "_id" : { "State" : "ID" }, "TotalPopulation" : 1006749 }
{ "_id" : { "State" : "HI" }, "TotalPopulation" : 1108229 }
{ "_id" : { "State" : "NH" }, "TotalPopulation" : 1109252 }
{ "_id" : { "State" : "NV" }, "TotalPopulation" : 1201833 }
{ "_id" : { "State" : "ME" }, "TotalPopulation" : 1226648 }
{ "_id" : { "State" : "NM" }, "TotalPopulation" : 1515069 }
{ "_id" : { "State" : "NE" }, "TotalPopulation" : 1578139 }
{ "_id" : { "State" : "UT" }, "TotalPopulation" : 1722850 }
{ "_id" : { "State" : "WV" }, "TotalPopulation" : 1793146 }
{ "_id" : { "State" : "AR" }, "TotalPopulation" : 2350725 }
{ "_id" : { "State" : "KS" }, "TotalPopulation" : 2475285 }
Type "it" for more
> it
{ "_id" : { "State" : "MS" }, "TotalPopulation" : 2573216 }
{ "_id" : { "State" : "IA" }, "TotalPopulation" : 2776420 }
{ "_id" : { "State" : "OR" }, "TotalPopulation" : 2842321 }
{ "_id" : { "State" : "OK" }, "TotalPopulation" : 3145585 }
{ "_id" : { "State" : "CT" }, "TotalPopulation" : 3287116 }
{ "_id" : { "State" : "CO" }, "TotalPopulation" : 3293755 }
{ "_id" : { "State" : "SC" }, "TotalPopulation" : 3486703 }
{ "_id" : { "State" : "AZ" }, "TotalPopulation" : 3665228 }
{ "_id" : { "State" : "KY" }, "TotalPopulation" : 3675484 }
{ "_id" : { "State" : "AL" }, "TotalPopulation" : 4040587 }
{ "_id" : { "State" : "LA" }, "TotalPopulation" : 4217595 }
{ "_id" : { "State" : "MN" }, "TotalPopulation" : 4372982 }
{ "_id" : { "State" : "MD" }, "TotalPopulation" : 4781379 }
{ "_id" : { "State" : "WA" }, "TotalPopulation" : 4866692 }
{ "_id" : { "State" : "TN" }, "TotalPopulation" : 4876457 }
{ "_id" : { "State" : "WI" }, "TotalPopulation" : 4891769 }
{ "_id" : { "State" : "MO" }, "TotalPopulation" : 5110648 }
{ "_id" : { "State" : "IN" }, "TotalPopulation" : 5544136 }
{ "_id" : { "State" : "MA" }, "TotalPopulation" : 6016425 }
{ "_id" : { "State" : "VA" }, "TotalPopulation" : 6181479 }
Type "it" for more
> it
{ "_id" : { "State" : "GA" }, "TotalPopulation" : 6478216 }
{ "_id" : { "State" : "NC" }, "TotalPopulation" : 6628637 }
{ "_id" : { "State" : "NJ" }, "TotalPopulation" : 7730188 }
{ "_id" : { "State" : "MI" }, "TotalPopulation" : 9295297 }
{ "_id" : { "State" : "OH" }, "TotalPopulation" : 10846517 }
{ "_id" : { "State" : "IL" }, "TotalPopulation" : 11427576 }
{ "_id" : { "State" : "PA" }, "TotalPopulation" : 11881643 }
{ "_id" : { "State" : "FL" }, "TotalPopulation" : 12686644 }
{ "_id" : { "State" : "TX" }, "TotalPopulation" : 16984601 }
{ "_id" : { "State" : "NY" }, "TotalPopulation" : 17990402 }
{ "_id" : { "State" : "CA" }, "TotalPopulation" : 29754890 }
>
```