

Important Note: This document illustrates all the important steps required to complete this lab. This is by no means a comprehensive step-by-step solution for this exercise. This is only provided as a reference to various commands needed to complete this exercise and for your further research on this topic. Also, note that the IP addresses and domain names might be different in your lab.

Q1. How many databases are present is mongodb cluster?

Answer: 7

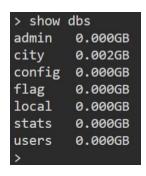
Solution:

Connect to mongodb server running on localhost

Command: mongo

```
student@attackdefense:~$ mongo
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.6.3
Welcome to the MongoDB shell.
For interactive help, type "help".
or more comprehensive documentation, see
     http://docs.mongodb.org/
Questions? Try the support group
      http://groups.google.com/group/mongodb-user
Server has startup warnings:
                                    [initandlisten]
2018-11-08T04:55:16.439+0000 I CONTROL
                                    [initandlisten] ** WARNING: Access control is not enabled for the database.
2018-11-08T04:55:16.439+0000 I CONTROL
Read and write access to data and configuration is unrestricted.
2018-11-08T04:55:16.440+0000 I CONTROL [initandlisten]
```

Command: show dbs



Q2. How many collections are present in database users?

Answer: 3

Commands:

use users show collections

> use users
switched to db users
> show collections
banned
current
past
>

Q3. What is the value of flag obtained from the mongodb cluster?

Answer: fl4g_f0r_m0ng0_db

Commands:

use flag show collections db.flag.find()

```
> use flag
switched to db flag
> show collections
flag
> db.flag.find()
{ "_id" : ObjectId("5be3c1b689bbb30054dd8397"), "flag" : "fl4g_f0r_m0ng0_db" }
>
```

Q4. What is the email address of user named "Heather" from "current" user collection?

Answer: mauris.sapien@eueratsemper.ca

Commands:

use users

db.current.find({"user":"Heather"})

```
> use users
switched to db users
> db.current.find({"user":"Heather"})
{ "_id" : ObjectId("5be3c1b689bbb30054dd829c"), "user" : "Heather", "join_date" : "31-12-1969", "email" : "mauris.sapien@eueratsemper.ca", "pho
ne" : "(572) 146-5308" }
>
```

Q5. How many users are present in "past" collection in users database?

Answer: 179

Commands:

use users

db.past.count()

```
> use users
switched to db users
> db.past.count()
179
>
```

Q6. How many cities of state "Massachusetts" are present in the collection city in database city?

Answer: 474

Commands:

use city
db.city.find({"state":"MA"}).count()

```
> use city
switched to db city
> db.city.find({"state":"MA"}).count()
474
>
```

Q7. How many cities have population greater than 15000 in the collection city in database city?

Answer: 5785

Commands:

use city

db.city.find({"pop":{\$gt:15000}}).count()

```
> use city
switched to db city
> db.city.find({"pop":{$gt:15000}}).count()
5785
>
```

Q8. How many cities of state "Indiana" have population greater than 15000 in collection "city" in database "city"?

Answer: 130

Commands:

use city

db.city.find({\$and:[{pop:{\$gt:15000}},{"state":"IN"}]}).count()

```
> use city
switched to db city
> db.city.find({$and:[{pop:{$gt:15000}},{"state":"IN"}]}).count()
130
>
```

Q9. How many cities have population less than 100 or belongs to state "Indiana" in collection "city" in database "city"?

Answer: 1376

Commands:

use city

db.city.find({\$or:[{pop:{\$lt:100}},{"state":"IN"}]}).count()

```
> use city
switched to db city
> db.city.find({$or:[{pop:{$lt:100}},{"state":"IN"}]}).count()
1376
>
```

Q10. How many Cities have their name starting with "AN" in collection "city" in database "city"?

Answer: 154

Commands:

use city

db.city.find({"city":{\$regex:"^AN.*"}}).count()

```
> use city
switched to db city
> db.city.find({"city":{$regex:"^AN.*"}}).count()
154
>
```

Q11. What is the name of 101st city in collection "city" when sorted in ascending order according to "city" in database "city"?

Answer: ADDY

Commands:

use city

db.city.find().sort({"city":1}).skip(100).limit(1)

```
> use city
switched to db city
> db.city.find().sort({"city":1}).skip(100).limit(1)
{ "_id" : "99101", "city" : "ADDY", "loc" : [ -117.892383, 48.44769 ], "pop" : 1226, "state" : "WA" }
>
```

Q12. What is the average population in collection "city" in database "city" (Upto two decimal places)?

Answer: 8462.79

Commands:

use city

db.city.aggregate({"\$group":{"_id":null,avg:{\$avg:"\$pop"}}})

```
> use city
switched to db city
> db.city.aggregate({"$group":{"_id":null,avg:{$avg:"$pop"}}})
{ "_id" : null, "avg" : 8462.794262937348 }
>
```

References:

- 1. MongoDB (https://www.mongodb.com/)
- 2. mongo (https://docs.mongodb.com/manual/mongo/)