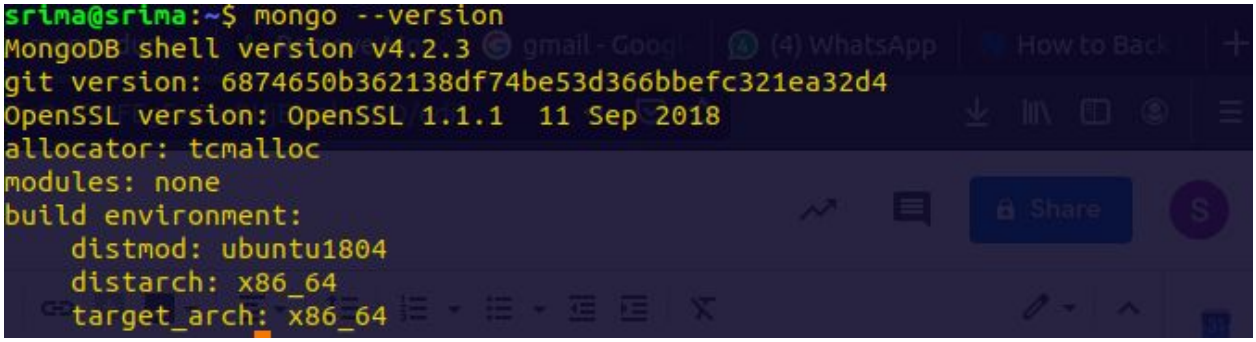
MONGO DB

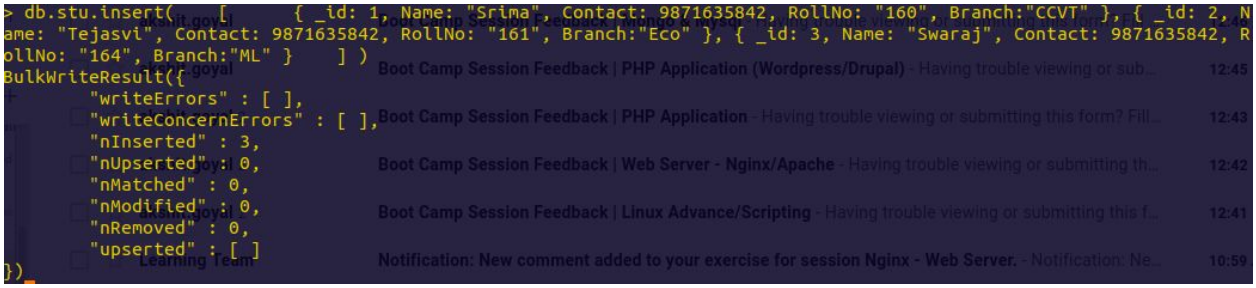
1. Install latest version of MongoDB from apt-get repository.

Sudo apt-get update && upgrade
Sudo apt-get install mongodb-server

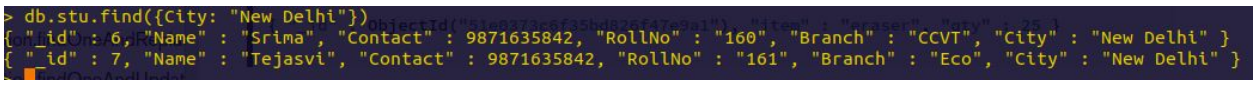


2. Create a database student.

3. Insert operation : 5 students data (Name, Contact, City, Roll No, Branch)



4. Read operation : All the students belong to a particular city



5. Update operation : Update the branch of all the students to CSE

```
> db.stu.update({'Branch':'CCVT'},{$set:{'Branch':'MFT'}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.stu.find()
{ "_id" : 1, "Name" : "Srima", "Contact" : 9871635842, "RollNo" : "160", "Branch" : "MFT" }
{ "_id" : 2, "Name" : "Tejasvi", "Contact" : 9871635842, "RollNo" : "161", "Branch" : "Eco" }
{ "_id" : 3, "Name" : "Swaraj", "Contact" : 9871635842, "RollNo" : "164", "Branch" : "ML" }
```

6. Take dump of the database

```
srima@srima: ~/DatabaseDump 75x39
srima@srima:~$ mkdir DatabaseDump
srima@srima:~$ mongodump --db student -o /home/srima/DatabaseDump
2020-02-21T13:21:31.007+0530    writing student.stu to
2020-02-21T13:21:31.007+0530    writing student.Stu to
2020-02-21T13:21:31.007+0530    writing student.products to
2020-02-21T13:21:31.008+0530    done dumping student.Stu (0 documents)
2020-02-21T13:21:31.008+0530    done dumping student.stu (6 documents)
2020-02-21T13:21:31.008+0530    done dumping student.products (6 documents)
srima@srima:~$ cd DatabaseDump/
srima@srima:~/DatabaseDump$ ls
student
srima@srima:~/DatabaseDump$
```

7. Drop the database

```
> db.dropDatabase()
{ "dropped" : "student", "ok" : 1 }
> show dbs
admin   0.000GB
config  0.000GB
local   0.000GB
```

8. Restore the database again to have the full data

```
srima@srima:~$ mongorestore -d student /home/srima/DatabaseDump/student/
2020-02-21T14:41:55.981+0530    the --db and --collection args should only
be used when restoring from a BSON file. Other uses are deprecated and will
 not exist in the future; use --nsInclude instead
2020-02-21T14:41:55.981+0530    building a list of collections to restore f
rom /home/srima/DatabaseDump/student dir
2020-02-21T14:41:55.982+0530    reading metadata for student.stu from /home
/srima/DatabaseDump/student/stu.metadata.json
2020-02-21T14:41:55.982+0530    reading metadata for student.products from
/home/srima/DatabaseDump/student/products.metadata.json
2020-02-21T14:41:56.198+0530    restoring student.stu from /home/srima/Data
baseDump/student/stu.bson
2020-02-21T14:41:56.364+0530    restoring student.products from /home/srima
/DatabaseDump/student/products.bson
2020-02-21T14:41:56.364+0530    no indexes to restore
2020-02-21T14:41:56.365+0530    finished restoring student.stu (6 documents
)
2020-02-21T14:41:56.366+0530    reading metadata for student.Stu from /home
/srima/DatabaseDump/student/Stu.metadata.json
2020-02-21T14:41:56.366+0530    no indexes to restore
2020-02-21T14:41:56.366+0530    finished restoring student.products (6 docu
ments)
2020-02-21T14:41:56.519+0530    restoring student.Stu from /home/srima/Data
baseDump/student/Stu.bson
2020-02-21T14:41:56.520+0530    no indexes to restore
2020-02-21T14:41:56.520+0530    finished restoring student.Stu (0 documents
)
2020-02-21T14:41:56.520+0530    done
```

```
> show dbs
admin    0.000GB
config   0.000GB
local    0.000GB
student  0.000GB
```

9. Enable authentication on the Mongo

```
> db.createUser(
... {user: "Srima",
... pwd: "Password",
... roles:[{role:"userAdminAnyDatabase",db:"admin"}]
... }
... )
Successfully added user: {
        "user" : "Srima",
        "roles" : [
                {
                        "role" : "userAdminAnyDatabase",
                        "db" : "admin"
                }
        ]
}
>
```

10. Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009

```
1993  sudo curl -O http://downloads.mongodb.org/linux/mongodb-linux-x86_64
-2.6.12.tgz
1994  sudo tar -zxvf mongodb-linux-x86_64-2.6.12.tgz
```

```
srima@srima:~$ export PATH=mondb/bin:$PATH
srima@srima:~$ echo $PATH
mondb/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
srima@srima:~$ ls
 bootcamp       data          Documents     27009  hello                    mysqldump                        snap
 Bootcamp2020   database      Downloads            ltp                      'Onboarding Guide for Trainees.pdf'  ssl
 c              DatabaseDump  error.txt            mongo                    Pictures                         Templates
 change         DB            examples.desktop     mongodb-linux-x86_64-2.6.12.tgz  Public                       test
 copy           Desktop       git                  Music                    restore.spst                     Videos
srima@srima:~$ export PATH=mongo/bin:$PATH
srima@srima:~$ echo $PATH
mongo/bin:mondb/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
```

```
srima@srima:~/mongo/mongodb-linux-x86_64-2.6.12$ sudo bin/mongod --port 27009
2020-02-21T16:33:39.509+0530 [initandlisten] MongoDB starting : pid=6863 port=27009 dbpath=/data/db 64-bit host=srima
2020-02-21T16:33:39.509+0530 [initandlisten] db version v2.6.12
2020-02-21T16:33:39.509+0530 [initandlisten] git version: d73c92b1c85703828b55c2916a5dd4ad46535f6a
2020-02-21T16:33:39.509+0530 [initandlisten] build info: Linux build5.ny.cbi.10gen.cc 2.6.32-431.3.1.el6.x86_64 #1 SMP Fri Jan 3 21:39:27 UTC 2014 x86_
64 BOOST_LIB_VERSION=1_49
2020-02-21T16:33:39.509+0530 [initandlisten] allocator: tcmalloc
2020-02-21T16:33:39.509+0530 [initandlisten] options: { net: { port: 27009 } }
2020-02-21T16:33:39.566+0530 [initandlisten] journal dir=/data/db/journal
```

11. Create init service of Mongo installed later*

MY SQL

1. Install Mysql

Sudo apt-get update && update
Sudo apt-get install mysql

```
srima@srima:~/mysqldump$ sudo mysql --version
mysql  Ver 14.14 Distrib 5.7.29, for Linux (x86_64) using  EditLine wrapper
```

2. Create a database student

```
mysql> create database student;
Query OK, 1 row affected (0.03 sec)
```

3. Insert operation : 5 students data (Name, Contact, City, Roll No, Branch)

```
mysql> insert into Stu values ("Srima",987783742,"New Delhi",160,"CCVT"), ("Teja
svi",98716358,"New Delhi",162,"MFT"), ("Swaraj",9876345,"Kolkata",877,"CCVT");
Query OK, 3 rows affected (0.05 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

4. Read operation : All the students belong to a particular city

```
mysql> select * from Stu where City = "New delhi";
+---------+-----------+-----------+--------+--------+
| Name    | Contact   | City      | RollNo | Branch |
+---------+-----------+-----------+--------+--------+
| Srima   | 987783742 | New Delhi |    160 | CCVT   |
| Tejasvi |  98716358 | New Delhi |    162 | MFT    |
+---------+-----------+-----------+--------+--------+
2 rows in set (0.00 sec)
```

5. Update operation : Update the branch of all the students to CSE

```
mysql> update Stu set Name = "Srima pal" where Name = "Srima";
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Select * from Stu;
+-----------+-----------+-----------+--------+--------+
| Name      | Contact   | City      | RollNo | Branch |
+-----------+-----------+-----------+--------+--------+
| Srima pal | 987783742 | New Delhi |    160 | CCVT   |
| Tejasvi   |  98716358 | New Delhi |    162 | MFT    |
| Swaraj    |   9876345 | Kolkata   |    877 | CCVT   |
+-----------+-----------+-----------+--------+--------+
3 rows in set (0.01 sec)
```

5. Take dump of the database

```
srima@srima:~$ sudo mysqldump student > /home/srima/mysqldump/backup.sql
[sudo] password for srima:
srima@srima:~$ cd mysqldump/
srima@srima:~/mysqldump$ ls
backup.sql
srima@srima:~/mysqldump$
```

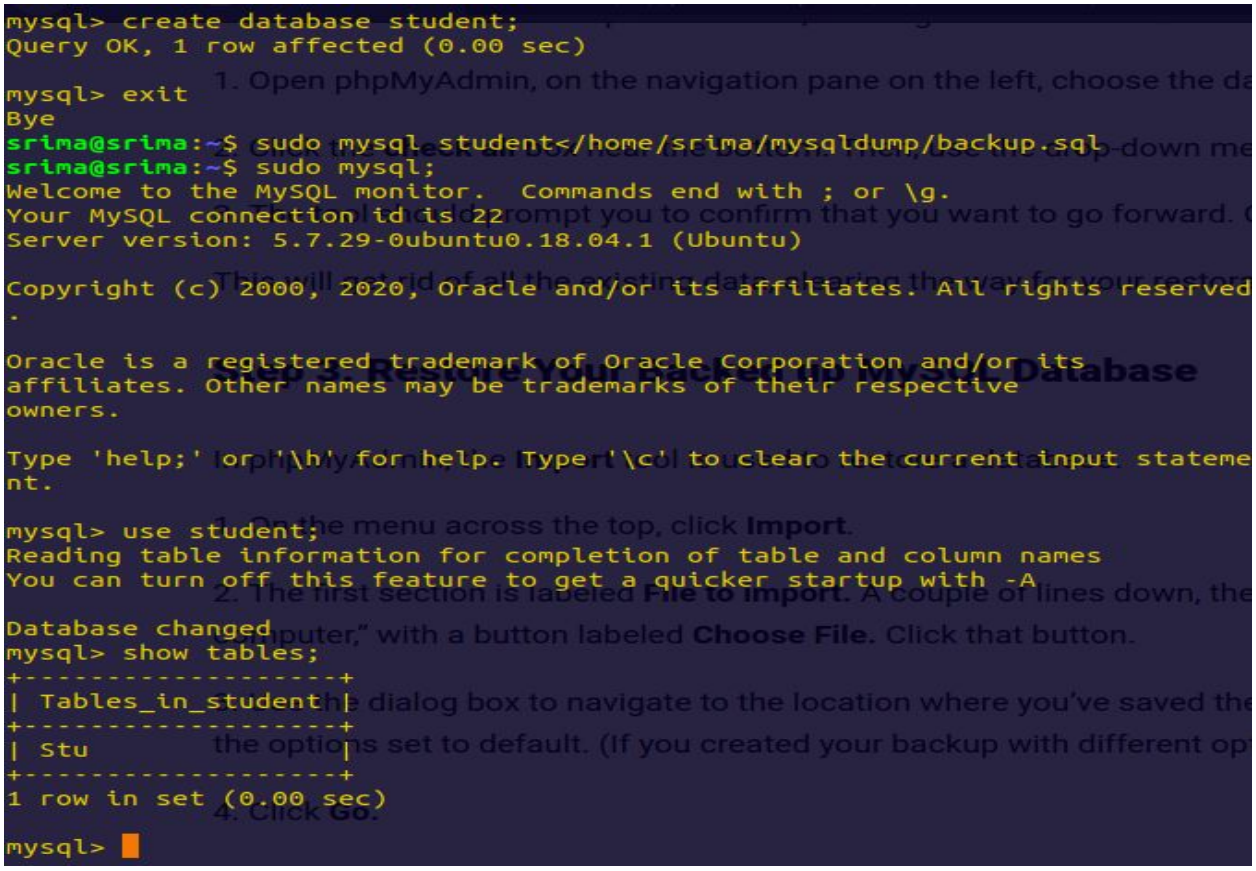
6. Delete operation : Delete the record of last 2 students according to the roll number

```
mysql> delete from Stu order by RollNo desc limit 2;
Query OK, 2 rows affected (0.05 sec)

mysql> select * from Stu;
+-----------+-----------+-----------+--------+--------+
| Name      | Contact   | City      | RollNo | Branch |
+-----------+-----------+-----------+--------+--------+
| Srima pal | 987783742 | New Delhi |    160 | CCVT   |
+-----------+-----------+-----------+--------+--------+
1 row in set (0.00 sec)
```

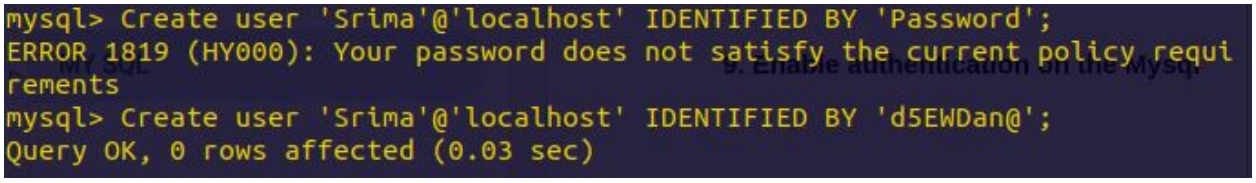
7. Drop the database

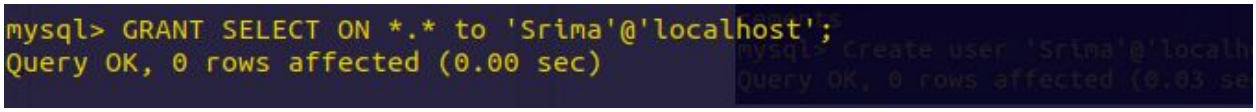
```
mysql> drop database student;
Query OK, 1 row affected (0.22 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| d                  |
| mysql              |
| performance_schema |
| sale               |
| sys                |
+--------------------+
6 rows in set (0.00 sec)

mysql>
```

8. Restore the database again to have the full data



9. Enable authentication on the Mysql





```
mysql> use student;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> update Stu set Name="Swaraj Nair" where Name="Swaraj";
ERROR 1142 (42000): UPDATE command denied to user 'Srima'@'localhost' for t
able 'Stu'
mysql> Select Name from Stu;
+------------+
| Name       |
+------------+
| Srima pal  |
| Tejasvi    |
| Swaraj     |
+------------+
3 rows in set (0.01 sec)
```

10. Install another mysql

Sudo apt-get update && update -y
Sudo apt-get install mysql-server -y

```
srima@srima:~/mysqldump$ sudo mysql --version
[sudo] password for srima:
Sorry, try again.
[sudo] password for srima:
mysql  Ver 14.14 Distrib 5.7.29, for Linux (x86_64) using  EditLine wrapper
srima@srima:~/mysqldump$
```

11. Create init service of Mongo installed later*

12. Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009