

**TO
THE
NEW™**



MySql and Mongo

Trainee Name : Chhavi Sharma

Newers ID : 4023

Mentor Name : Nishith Kulshrestha

College : UPES

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

Ans.

```
chhavi@chhavi:~$ sudo su
root@chhavi:/home/chhavi# wget -qO - https://www.mongodb.org/static/pgp/server-4.2.asc | sudo apt-key add -
OK
root@chhavi:/home/chhavi# cat /etc/apt/sources.list.d/mongodb-org-4.2.list
deb [ arch=amd64,arm64 ] https://repo.mongodb.org/apt/ubuntu bionic/mongodb-org/4.2 multiverse
root@chhavi:/home/chhavi# sudo apt-get update
Hit:1 http://in.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://in.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Ign:4 http://dl.google.com/linux/chrome/deb stable InRelease
Hit:5 http://dl.google.com/linux/chrome/deb stable Release
Ign:7 https://repo.mongodb.org/apt/ubuntu bionic/mongodb-org/4.2 InRelease
Hit:8 https://repo.mongodb.org/apt/ubuntu bionic/mongodb-org/4.2 Release
Get:10 http://packages.microsoft.com/repos/vscode stable InRelease [3,959 B]
Get:11 http://in.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]

root@chhavi:/home/chhavi# apt-get install -y mongodb-org
Reading package lists... Done
Building dependency tree
Reading state information... Done

root@chhavi:/var/lib# systemctl status mongod
● mongod.service - MongoDB Database Server
   Loaded: loaded (/lib/systemd/system/mongod.service; disabled; vendor preset: enabled)
   Active: active (running) since Tue 2020-02-18 14:55:53 IST; 3s ago
     Docs: https://docs.mongodb.org/manual
   Main PID: 11852 (mongod)
    CGroup: /system.slice/mongod.service
            └─11852 /usr/bin/mongod --config /etc/mongod.conf

chhavi@chhavi:/var/lib/mongodb$ mongo
MongoDB shell version v4.2.3
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("56cd761c-e996-4297-b229-e527279b8264") }
MongoDB server version: 4.2.3
Server has startup warnings:
2020-02-18T14:55:53.574+0530 I STORAGE [initandlisten]
2020-02-18T14:55:53.574+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine
2020-02-18T14:55:53.574+0530 I STORAGE [initandlisten] ** See http://dochub.mongodb.org/core/pro
dnotes-filesystem
2020-02-18T14:55:54.063+0530 I CONTROL [initandlisten]
2020-02-18T14:55:54.063+0530 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2020-02-18T14:55:54.063+0530 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2020-02-18T14:55:54.063+0530 I CONTROL [initandlisten]
```

2.Create a database student

Ans.

```
> use student
switched to db student
> db
student
> show dbs
admin    0.000GB
config  0.000GB
```

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

Ans.

```
> db.stu_details.insert([{Name:'Rohit',ContactNo:9856543210,City:'Bengaluru',RollNo:46,Branch:'CS'},{Name:'Som',ContactNo:9566543210,City:'Kolata',RollNo:53,Branch:'CS'},{Name:'Sameer',ContactNo:9872343210,City:'New Delhi',RollNo:36,Branch:'Mech'}]);
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
> db.stu_details.insert({Name:'Richa',ContactNo:9877843210,City:'Mumbai',RollNo:76,Branch:'CS'})
WriteResult({ "nInserted" : 1 })
> db.mycol.find().pretty()
> db.stu_details.find().pretty()
{
  "_id" : ObjectId("5e49212ae36eea2b195298a1"),
  "Name" : "Raj",
  "ContactNo" : 9876543210,
  "City" : "Mumbai",
  "RollNo" : 56,
  "Branch" : "CS"
}
```

```

{
  "_id" : ObjectId("5e492203e36eea2b195298a2"),
  "Name" : "Rohit",
  "ContactNo" : 9856543210,
  "City" : "Bengaluru",
  "RollNo" : 46,
  "Branch" : "CS"
}

{
  "_id" : ObjectId("5e492203e36eea2b195298a3"),
  "Name" : "Som",
  "ContactNo" : 9566543210,
  "City" : "Kolata",
  "RollNo" : 53,
  "Branch" : "CS"
}

{
  "_id" : ObjectId("5e492203e36eea2b195298a4"),
  "Name" : "Sameer",
  "ContactNo" : 9872343210,
  "City" : "New Delhi",
  "RollNo" : 36,
  "Branch" : "Mech"
}

```

```

{
  "_id" : ObjectId("5e49221fe36eea2b195298a5"),
  "Name" : "Richa",
  "ContactNo" : 9877843210,
  "City" : "Mumbai",
  "RollNo" : 76,
  "Branch" : "CS"
}
>

```

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

Ans.

```

> db.stu_details.find({"City":"Mumbai"})
{ "_id" : ObjectId("5e49212ae36eea2b195298a1"), "Name" : "Raj", "ContactNo" : 9876543210, "City" : "Mumbai", "RollNo" : 56, "Branch" : "CS" }
{ "_id" : ObjectId("5e49221fe36eea2b195298a5"), "Name" : "Richa", "ContactNo" : 9877843210, "City" : "Mumbai", "RollNo" : 76, "Branch" : "CS" }
> db.stu_details.find({"City":"Mumbai"}).pretty()
{
  "_id" : ObjectId("5e49212ae36eea2b195298a1"),
  "Name" : "Raj",
  "ContactNo" : 9876543210,
  "City" : "Mumbai",
  "RollNo" : 56,
  "Branch" : "CS"
}

{
  "_id" : ObjectId("5e49221fe36eea2b195298a5"),
  "Name" : "Richa",
  "ContactNo" : 9877843210,
  "City" : "Mumbai",
  "RollNo" : 76,
  "Branch" : "CS"
}
>

```


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

Ans.

```
chhavi@chhavi: /etc
> db.stu_details.updateMany({}, {$set: {Branch:"CSE"}})
{"acknowledged" : true, "matchedCount" : 5, "modifiedCount" : 5 }
db.stu_details.find().pretty()

  "_id" : ObjectId("5e49212ae36eea2b195298a1"),
  "Name" : "Raj",
  "ContactNo" : 9876543210,
  "City" : "Mumbai",
  "RollNo" : 56,
  "Branch" : "CSE"

  "_id" : ObjectId("5e492203e36eea2b195298a2"),
  "Name" : "Rohit",
  "ContactNo" : 9856543210,
  "City" : "Bengaluru",
  "RollNo" : 46,
  "Branch" : "CSE"

  "_id" : ObjectId("5e492203e36eea2b195298a3"),
  "Name" : "Som",
  "ContactNo" : 9566543210,
  "City" : "Kolata",
  "RollNo" : 53,
  "Branch" : "CSE"
```

6. Take dump of the database

Ans.

```
chhavi@chhavi:~/Documents/mongoBackup$ sudo mongodump --db student --out /home/chhavi/
/Documents/mongoBackup/`date +%m-%d-%y`
[sudo] password for chhavi:
2020-02-16T17:12:53.579+0530   writing student.stu_details to
2020-02-16T17:12:53.580+0530   done dumping student.stu_details (5 documents)
chhavi@chhavi:~/Documents/mongoBackup$
```

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

Ans.

```
chhavi@chhavi: ~
chhavi@chhavi: ~/Documents/mongoBackup/02-16-20
chhavi@chhavi: /var/lib/mongodb
> db.stu_details.find().sort({RollNo:-1}).limit(2);
{ "_id" : ObjectId("5e49221fe36eea2b195298a5"), "Name" : "Richa", "ContactNo" : 9877843210, "City" : "Mumbai", "RollNo" : 76, "Branch" : "CSE" }
{ "_id" : ObjectId("5e49212ae36eea2b195298a1"), "Name" : "Raj", "ContactNo" : 9876543210, "City" : "Mumbai", "RollNo" : 56, "Branch" : "CSE" }

> for(i=0;i<2;i++) { db.stu_details.findAndModify({query : {}, sort: {"RollNo" : -1}, remove:true}) }
{
  "_id" : ObjectId("5e49212ae36eea2b195298a1"),
  "Name" : "Raj",
  "ContactNo" : 9876543210,
  "City" : "Mumbai",
  "RollNo" : 56,
  "Branch" : "CSE"
}
```

```
chhavi@chhavi: ~
chhavi@chhavi: ~/Documents/mongoBackup/02-16-20
chhavi@chhavi: /var/lib/mongodb

"RollNo" : 56,
"Branch" : "CSE"
}
> db.stu_details.find().pretty();
{
  "_id" : ObjectId("5e492203e36eea2b195298a2"),
  "Name" : "Rohit",
  "ContactNo" : 9856543210,
  "City" : "Bengaluru",
  "RollNo" : 46,
  "Branch" : "CSE"
}
{
  "_id" : ObjectId("5e492203e36eea2b195298a3"),
  "Name" : "Som",
  "ContactNo" : 9566543210,
  "City" : "Kolata",
  "RollNo" : 53,
  "Branch" : "CSE"
}
{
  "_id" : ObjectId("5e492203e36eea2b195298a4"),
  "Name" : "Sameer",
  "ContactNo" : 9872343210,
  "City" : "New Delhi",
  "RollNo" : 36,
  "Branch" : "CSE"
}
>
```

8.Drop the database

Ans.

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

9.Restore the database again to have the full data

Ans.

```
chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongorestore -d student /home/chhavi/Documents/mongoBackup/02-16-20/student/
2020-02-18T15:22:17.821+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
2020-02-18T15:22:17.822+0530 building a list of collections to restore from /home/chhavi/Documents/mongoBackup/02-16-20/student dir
2020-02-18T15:22:17.823+0530 reading metadata for student.stu_details from /home/chhavi/Documents/mongoBackup/02-16-20/student/stu_details.metadata.json
2020-02-18T15:22:17.953+0530 restoring student.stu_details from /home/chhavi/Documents/mongoBackup/02-16-20/student/stu_details.bson
2020-02-18T15:22:17.957+0530 no indexes to restore
2020-02-18T15:22:17.957+0530 finished restoring student.stu_details (5 documents, 0 failures)
2020-02-18T15:22:17.957+0530 5 document(s) restored successfully. 0 document(s) failed to restore.
```


10.Enable authentication on the Mongo

Ans.

1.Start MongoDB without access control

```
chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongod --port 27017 --dbpath /data/db1
2020-02-18T22:25:25.840+0530 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] MongoDB starting : pid=28167 port=27017 dbpath=/data/db1 64-bit host=chhavi
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] db version v4.2.3
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] git version: 6874650b362138df74be53d366bbefc321ea32d4
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] OpenSSL version: OpenSSL 1.1.1 11 Sep 2018
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] allocator: tcmalloc
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] modules: none
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] build environment:
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] distmod: ubuntu1804
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] distarch: x86_64
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] target_arch: x86_64
2020-02-18T22:25:25.842+0530 I CONTROL [initandlisten] options: { net: { port: 27017 }, storage: { dbPath: "/data/db1" } }
2020-02-18T22:25:25.843+0530 I STORAGE [initandlisten] exception in initAndListen: NonExistentPath: Data directory /data/db1 not found., terminating
2020-02-18T22:25:25.843+0530 I NETWORK [initandlisten] shutdown: going to close listening sockets...
2020-02-18T22:25:25.843+0530 I - [initandlisten] Stopping further Flow Control ticket acquisitions.
2020-02-18T22:25:25.843+0530 I CONTROL [initandlisten] now exiting
2020-02-18T22:25:25.843+0530 I CONTROL [initandlisten] shutting down with code:100
```

2.Connect to the instance

```
chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongo --port 27017
MongoDB shell version v4.2.3
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("9a912a67-75c9-44ad-986a-da0d523f5e3f") }
MongoDB server version: 4.2.3
Server has startup warnings:
2020-02-18T22:32:03.857+0530 I STORAGE [initandlisten]
2020-02-18T22:32:03.857+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly discouraged with the new WiredTiger storage engine. See http://dochub.mongodb.org/core/wiredtiger.
2020-02-18T22:32:04.545+0530 I CONTROL [initandlisten]
2020-02-18T22:32:04.545+0530 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database. Read and write access to data is unrestricted.
2020-02-18T22:32:04.545+0530 I CONTROL [initandlisten]
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you and anyone you share the URL with. MongoDB may use this information to make product improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
```

3.Create the user administrator.

```

> use admin
switched to db admin
> db.createUser(
... {user: "adminChhavi",
... pwd:"chhavi",
... roles: [ { role: "userAdminAnyDatabase", db: "admin" } ]
... }
... )
Successfully added user: {
  "user" : "adminChhavi",
  "roles" : [
    {
      "role" : "userAdminAnyDatabase",
      "db" : "admin"
    }
  ]
}
> exit

```

4.Re-start the MongoDB instance with access control

```

chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongod --auth --port 27017 --dbpath /data/db1
2020-02-18T23:09:52.657+0530 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledPr
otocols 'none'
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] MongoDB starting : pid=30758 port=27017 dbpath=/data/db1 64-bit host=ch
havi
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] db version v4.2.3
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] git version: 6874650b362138df74be53d366bbefc321ea32d4
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] OpenSSL version: OpenSSL 1.1.1 11 Sep 2018
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] allocator: tcmalloc
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] modules: none
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] build environment:
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] distmod: ubuntu1804
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] distarch: x86_64
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] target_arch: x86_64
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] options: { net: { port: 27017 }, security: { authorization: "enabled" }
, storage: { dbPath: "/data/db1" } }
2020-02-18T23:09:52.659+0530 I STORAGE [initandlisten] exception in initAndListen: NonExistentPath: Data directory /data/db1 n
ot found., terminating
2020-02-18T23:09:52.659+0530 I NETWORK [initandlisten] shutdown: going to close listening sockets...
2020-02-18T23:09:52.659+0530 I - [initandlisten] Stopping further Flow Control ticket acquisitions.
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] now exiting
2020-02-18T23:09:52.659+0530 I CONTROL [initandlisten] shutting down with code:100

```

5.Connect and authenticate as the user administrator


```

chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongo --port 27017 -u "adminChhavi" -p "chhavi" --authenticationDatabase "admin"
MongoDB shell version v4.2.3
connecting to: mongodb://127.0.0.1:27017/?authSource=admin&compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("fe78e215-f7f9-4cfb-9afc-d181e5456dc3") }
MongoDB server version: 4.2.3
Server has startup warnings:
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten]
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten] ** See http://dochub.mongodb.org/core/prodnotes-filesystem
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten]
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten]
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
>

```

OR

5. Authenticating after connecting

```

chhavi@chhavi:~/Documents/mongoBackup/02-16-20$ mongo --port 27017
MongoDB shell version v4.2.3
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("b4940c4d-b277-41da-92ba-1b57a9e7d40a") }
MongoDB server version: 4.2.3
Server has startup warnings:
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten]
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine
2020-02-18T23:19:46.344+0530 I STORAGE [initandlisten] ** See http://dochub.mongodb.org/core/prodnotes-filesystem
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten]
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2020-02-18T23:19:47.003+0530 I CONTROL [initandlisten]
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

```

```
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
> use admin
switched to db admin
> db.auth("adminChhavi", "chhavi" )
1
> █
```

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

Ans.

12. Create init service of Mongo installed later*

Ans.

MYSQL

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

Ans.

```
chhavi@chhavi:~$ sudo apt-get install mysql-server
[sudo] password for chhavi:
Reading package lists... Done
Building dependency tree
Reading state information... Done
mysql-server is already the newest version (5.7.29-0ubuntu0.18.04.1).
0 upgraded, 0 newly installed, 0 to remove and 78 not upgraded.
```

2. Create a database student

Ans.

```
mysql> create database student;
Query OK, 1 row affected (0.01 sec)
```

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

Ans.

```
mysql> use student;
Database changed
mysql> create table stu_details(rollno int(5) primary key,
-> name varchar(255) not null,
-> city varchar(255),
-> branch varchar(20),
-> contact int(10));
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> desc stu_details;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| rollno | int(5)        | NO   | PRI | NULL    |       |
| name   | varchar(255)  | NO   |     | NULL    |       |
| city   | varchar(255)  | YES  |     | NULL    |       |
| branch | varchar(20)   | YES  |     | NULL    |       |
| contact | int(10)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)
```

```
mysql> insert into stu_details values(1,"chhavi","new delhi","cse","9650864580");
Query OK, 1 row affected (0.01 sec)

mysql> insert into stu_details values(2,"gargi","udaipur","finance","9797197046"),(3,"ravi","chennai","sales","9876543213"),(4,"simran","new delhi","it","987654543"),(5,"firoz","mumbai","finance","9867565656");
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> select * from stu_details;
+-----+-----+-----+-----+-----+
| rollno | name  | city    | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | cse    | 9650864580 |
| 2      | gargi  | udaipur  | finance | 9797197046 |
| 3      | ravi   | chennai  | sales   | 9876543213 |
| 4      | simran | new delhi | it      | 987654543  |
| 5      | firoz  | mumbai   | finance | 9867565656 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

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

Ans.

```
mysql> select * from stu_details where city="new delhi";
+-----+-----+-----+-----+-----+
| rollno | name  | city    | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | cse    | 9650864580 |
| 4      | simran | new delhi | it      | 987654543  |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

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

Ans.


```
mysql> update stu_details set branch="CSE";
Query OK, 5 rows affected (0.01 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> select * from stu_details;
+-----+-----+-----+-----+-----+
| rollno | name  | city    | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | CSE    | 9650864580 |
| 2      | gargi  | udaipur  | CSE    | 9797197046 |
| 3      | ravi   | chennai  | CSE    | 9876543213 |
| 4      | simran | new delhi | CSE    | 987654543  |
| 5      | firoz  | mumbai   | CSE    | 9867565656 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> █
```

6. Take dump of the database

Ans.

```
chhavi@chhavi:~/Documents$ sudo mysqldump student > /home/chhavi/Documents/sqlbackup/dump.sql
```

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

Ans.

```
mysql> delete from stu_details order by rollno desc limit 2;
Query OK, 2 rows affected (0.01 sec)

mysql> select * from stu_details;
+-----+-----+-----+-----+-----+
| rollno | name  | city    | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | CSE    | 9650864580 |
| 2      | gargi  | udaipur  | CSE    | 9797197046 |
| 3      | ravi   | chennai  | CSE    | 9876543213 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> █
```

8. Drop the database

Ans.

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

9. Restore the database again to have the full data

Ans.

```
mysql> create database student;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> use student;
Database changed
```

```
chhavi@chhavi:~/Documents/sqlbackup$ sudo mysql student < /home/chhavi/Documents/sql
backup/dump.sql
chhavi@chhavi:~/Documents/sqlbackup$
```

```
mysql> use student;
Database changed
mysql> show tables;
+-----+
| Tables_in_student |
+-----+
| stu_details        |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select * from stu_details;
+-----+-----+-----+-----+-----+
| rollno | name  | city    | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | CSE    | 9650864580 |
| 2      | gargi  | udaipur  | CSE    | 9797197046 |
| 3      | ravi   | chennai  | CSE    | 9876543213 |
| 4      | simran | new delhi | CSE    | 987654543  |
| 5      | firoz  | mumbai   | CSE    | 9867565656 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

10. Enable authentication on the MySQL

Ans.

```
mysql> CREATE USER 'new'@'localhost' IDENTIFIED BY 'pass';
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> grant select on student.* to 'new'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

```

chhavi@chhavi:~$ mysql -u new -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 43
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| student |
+-----+
2 rows in set (0.00 sec)

mysql> use student;
Reading table information for completion of table and column names
mysql> select * from stu_details;
+-----+-----+-----+-----+-----+
| rollno | name  | city   | branch | contact |
+-----+-----+-----+-----+-----+
| 1      | chhavi | new delhi | CSE    | 9650864580 |
| 2      | gargi  | udaipur  | CSE    | 9797197046 |
| 3      | ravi   | chennai  | CSE    | 9876543213 |
| 4      | simran | new delhi | CSE    | 987654543  |
| 5      | firoz  | mumbai   | CSE    | 9867565656 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> delete from stu_details;
ERROR 1142 (42000): DELETE command denied to user 'new'@'localhost' for table 'stu_details'
mysql>

```

11. Install another version of MySQL from source and run it on port 27009

Ans.

12. Create init service of MySQL installed later*

Ans.