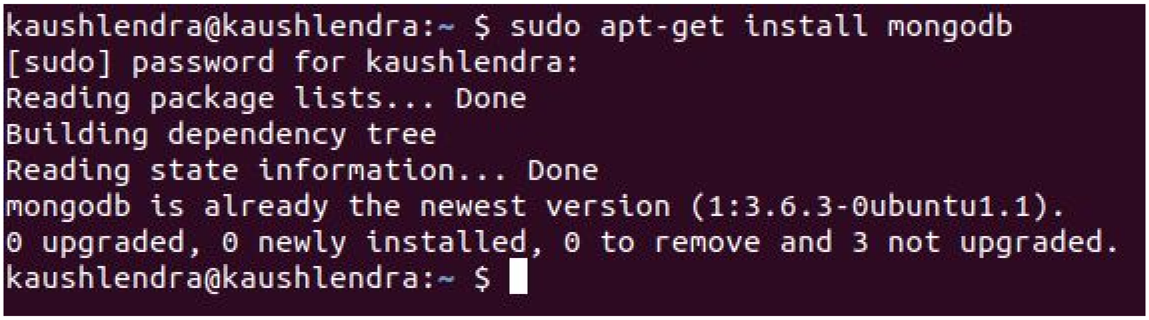
MONGO & MYSQL

MONGO

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

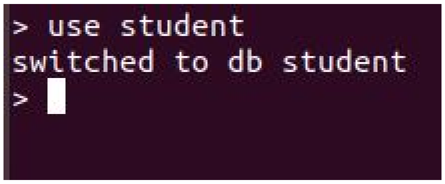
ANS 1.



```
kaushlendra@kaushlendra:~ $ sudo apt-get install mongodb
[sudo] password for kaushlendra:
Reading package lists... Done
Building dependency tree
Reading state information... Done
mongodb is already the newest version (1:3.6.3-0ubuntu1.1).
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
kaushlendra@kaushlendra:~ $ 
```

Ques 2. Create a database student

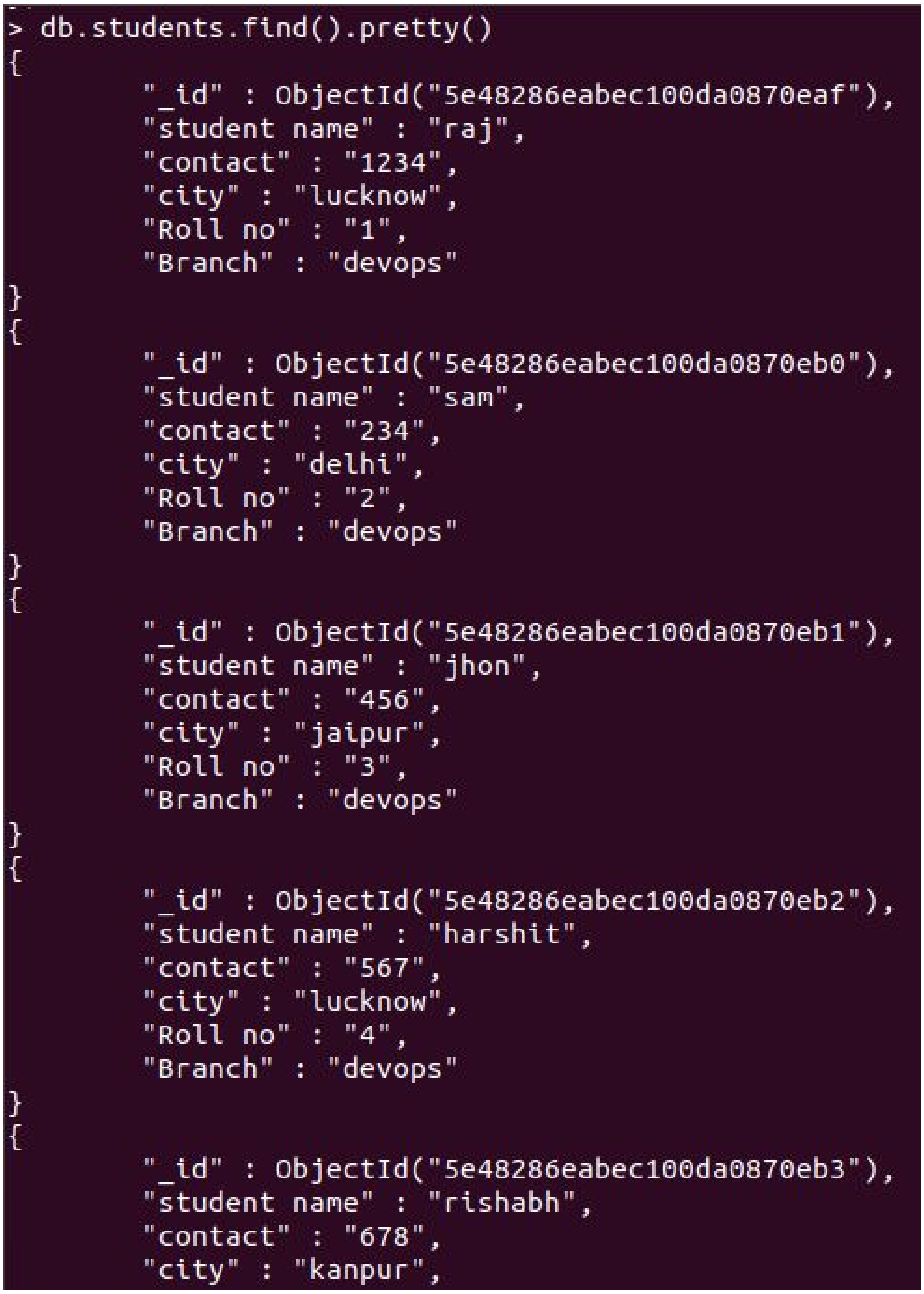
Ans 2.



```
> use student
switched to db student
> 
```

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

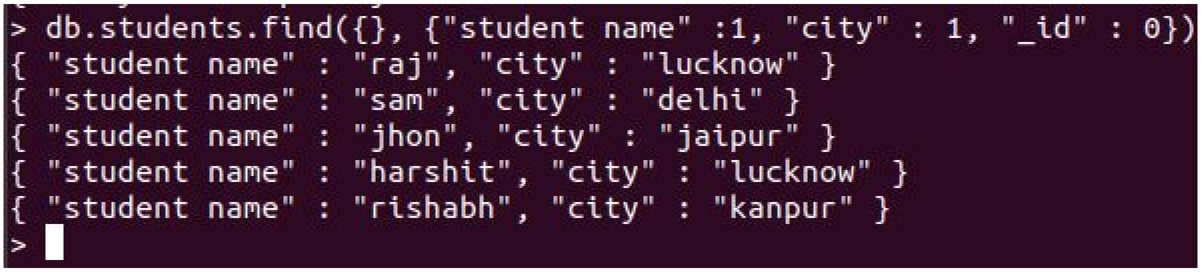
Ans 3.



```
> db.students.find().pretty()
{
        "_id" : ObjectId("5e48286eabec100da0870eaf"),
        "student name" : "raj",
        "contact" : "1234",
        "city" : "lucknow",
        "Roll no" : "1",
        "Branch" : "devops"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb0"),
        "student name" : "sam",
        "contact" : "234",
        "city" : "delhi",
        "Roll no" : "2",
        "Branch" : "devops"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb1"),
        "student name" : "jhon",
        "contact" : "456",
        "city" : "jaipur",
        "Roll no" : "3",
        "Branch" : "devops"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb2"),
        "student name" : "harshit",
        "contact" : "567",
        "city" : "lucknow",
        "Roll no" : "4",
        "Branch" : "devops"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb3"),
        "student name" : "rishabh",
        "contact" : "678",
        "city" : "kanpur",
```

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

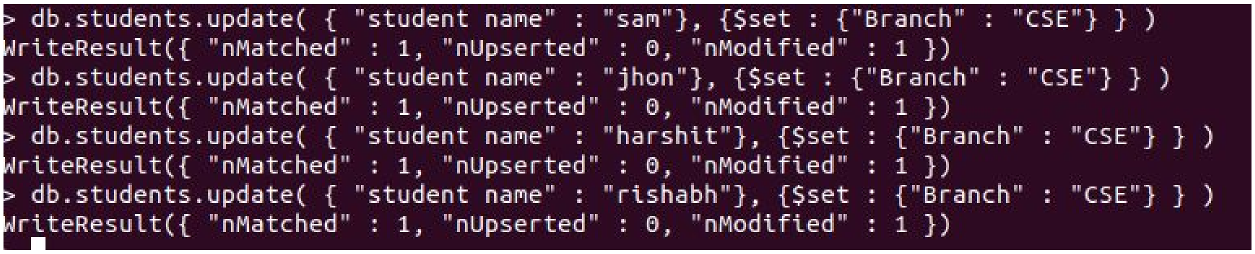
Ans 4.



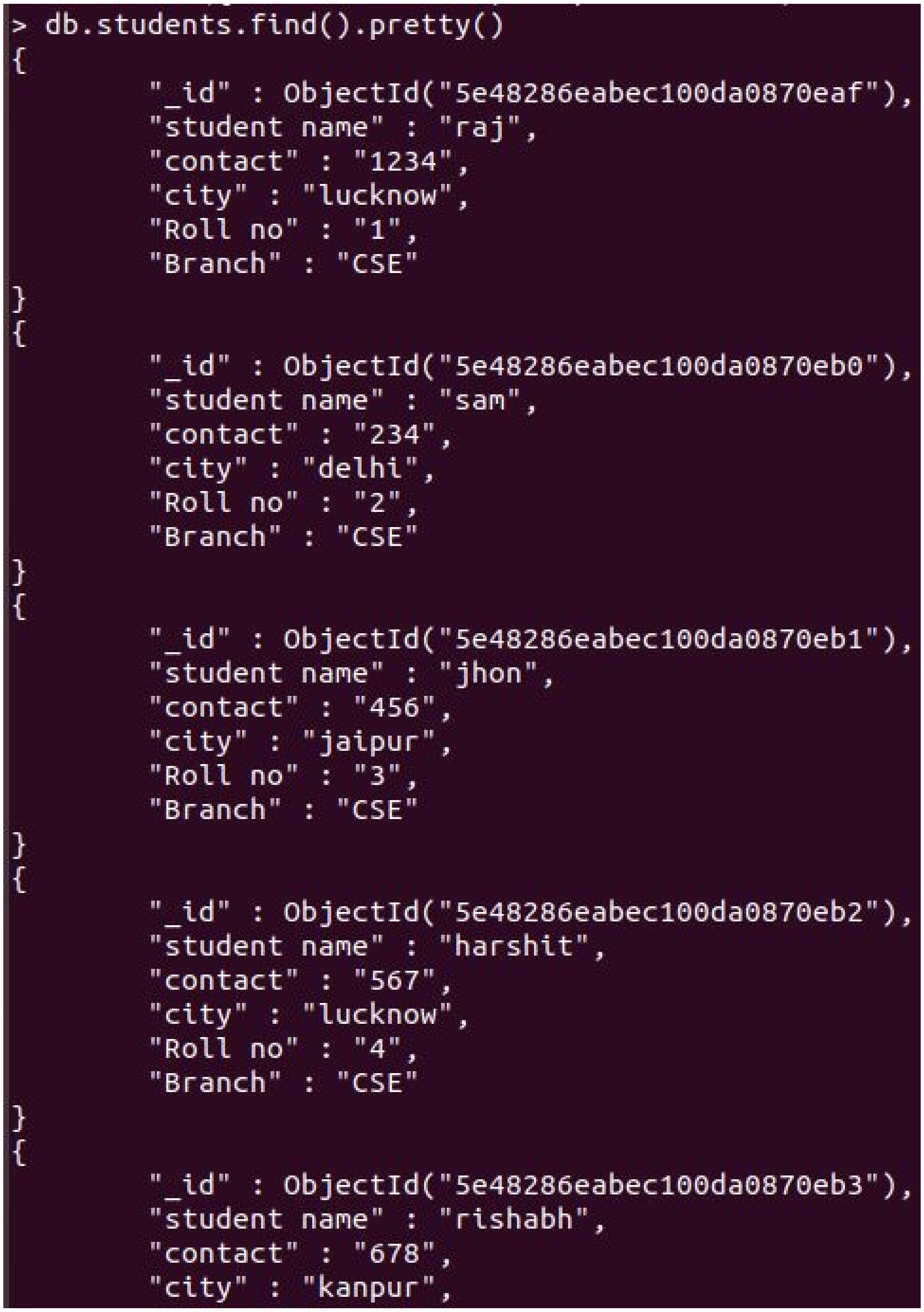
```
> db.students.find({}, {"student name" :1, "city" : 1, "_id" : 0})
{ "student name" : "raj", "city" : "lucknow" }
{ "student name" : "sam", "city" : "delhi" }
{ "student name" : "jhon", "city" : "jaipur" }
{ "student name" : "harshit", "city" : "lucknow" }
{ "student name" : "rishabh", "city" : "kanpur" }
> 
```

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

Ans 5.



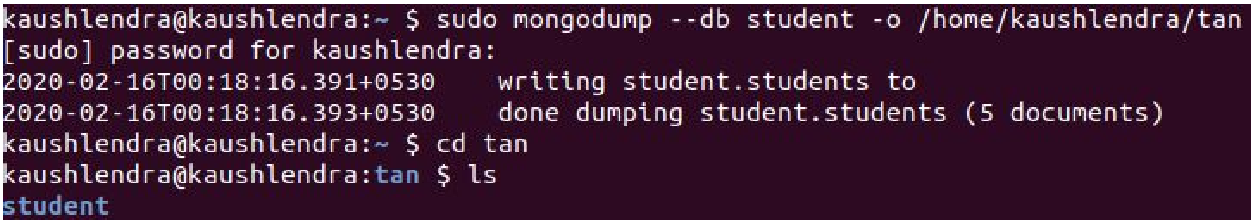
```
> db.students.update( { "student name" : "sam"}, {$set : {"Branch" : "CSE"} } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.students.update( { "student name" : "jhon"}, {$set : {"Branch" : "CSE"} } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.students.update( { "student name" : "harshit"}, {$set : {"Branch" : "CSE"} } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.students.update( { "student name" : "rishabh"}, {$set : {"Branch" : "CSE"} } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```



```
> db.students.find().pretty()
{
        "_id" : ObjectId("5e48286eabec100da0870eaf"),
        "student name" : "raj",
        "contact" : "1234",
        "city" : "lucknow",
        "Roll no" : "1",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb0"),
        "student name" : "sam",
        "contact" : "234",
        "city" : "delhi",
        "Roll no" : "2",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb1"),
        "student name" : "jhon",
        "contact" : "456",
        "city" : "jaipur",
        "Roll no" : "3",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb2"),
        "student name" : "harshit",
        "contact" : "567",
        "city" : "lucknow",
        "Roll no" : "4",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb3"),
        "student name" : "rishabh",
        "contact" : "678",
        "city" : "kanpur",
```

Ques 6. Take dump of the database

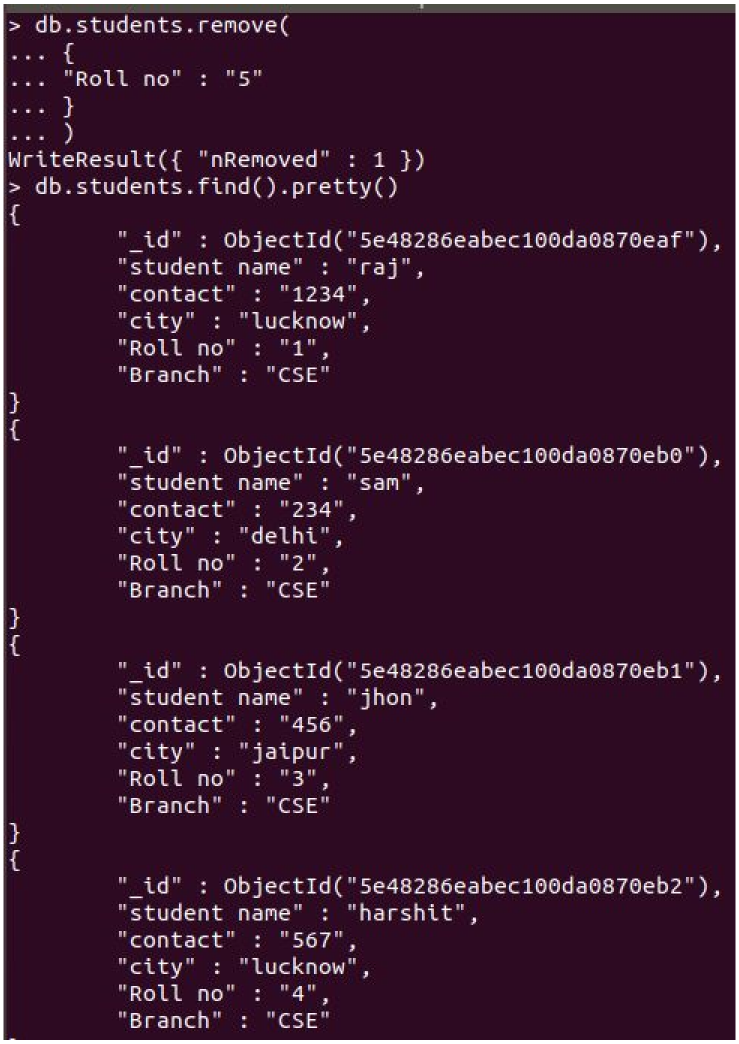
Ans 6.



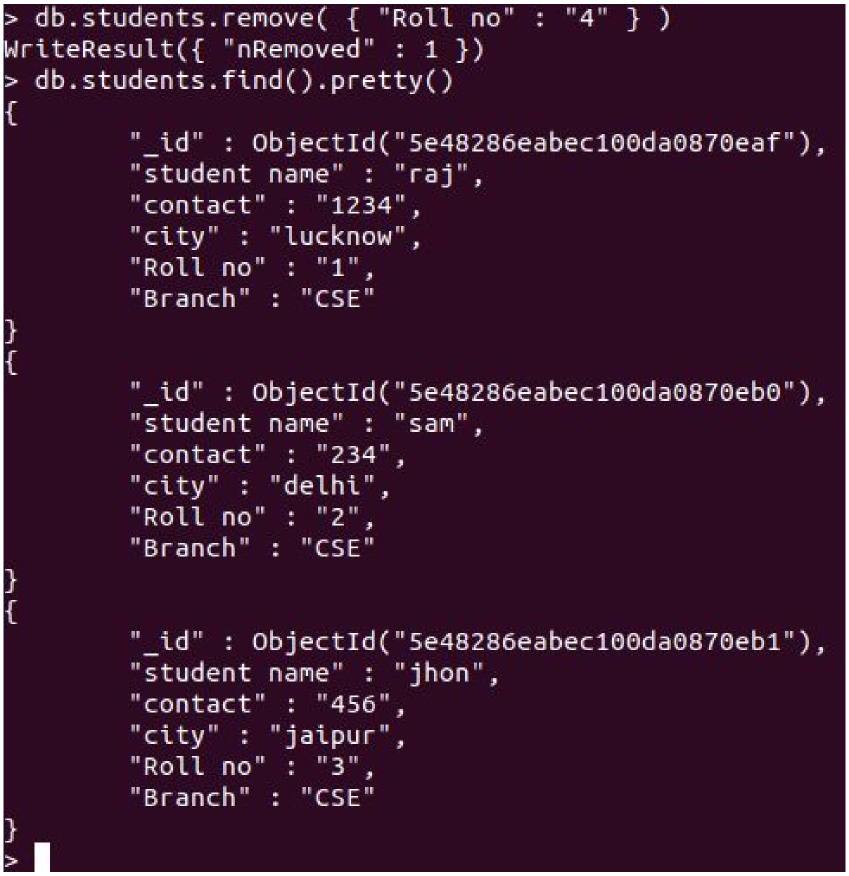
```
kaushlendra@kaushlendra:~ $ sudo mongodump --db student -o /home/kaushlendra/tan
[sudo] password for kaushlendra:
2020-02-16T00:18:16.391+0530    writing student.students to
2020-02-16T00:18:16.393+0530    done dumping student.students (5 documents)
kaushlendra@kaushlendra:~ $ cd tan
kaushlendra@kaushlendra:tan $ ls
student
```

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

Ans 7.



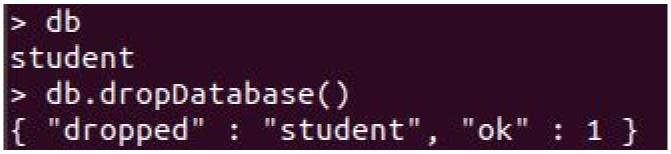
```
> db.students.remove(
... {
... "Roll no" : "5"
... }
... )
WriteResult({ "nRemoved" : 1 })
> db.students.find().pretty()
{
        "_id" : ObjectId("5e48286eabec100da0870eaf"),
        "student name" : "raj",
        "contact" : "1234",
        "city" : "lucknow",
        "Roll no" : "1",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb0"),
        "student name" : "sam",
        "contact" : "234",
        "city" : "delhi",
        "Roll no" : "2",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb1"),
        "student name" : "jhon",
        "contact" : "456",
        "city" : "jaipur",
        "Roll no" : "3",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb2"),
        "student name" : "harshit",
        "contact" : "567",
        "city" : "lucknow",
        "Roll no" : "4",
        "Branch" : "CSE"
```



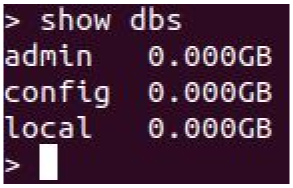
```
> db.students.remove( { "Roll no" : "4" } )
WriteResult({ "nRemoved" : 1 })
> db.students.find().pretty()
{
        "_id" : ObjectId("5e48286eabec100da0870eaf"),
        "student name" : "raj",
        "contact" : "1234",
        "city" : "lucknow",
        "Roll no" : "1",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb0"),
        "student name" : "sam",
        "contact" : "234",
        "city" : "delhi",
        "Roll no" : "2",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb1"),
        "student name" : "jhon",
        "contact" : "456",
        "city" : "jaipur",
        "Roll no" : "3",
        "Branch" : "CSE"
}
>
```

Ques 8. Drop the database

Ans 8.



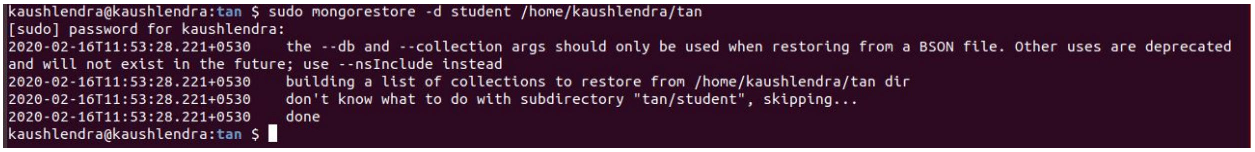
```
> db
student
> db.dropDatabase()
{ "dropped" : "student", "ok" : 1 }
```



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

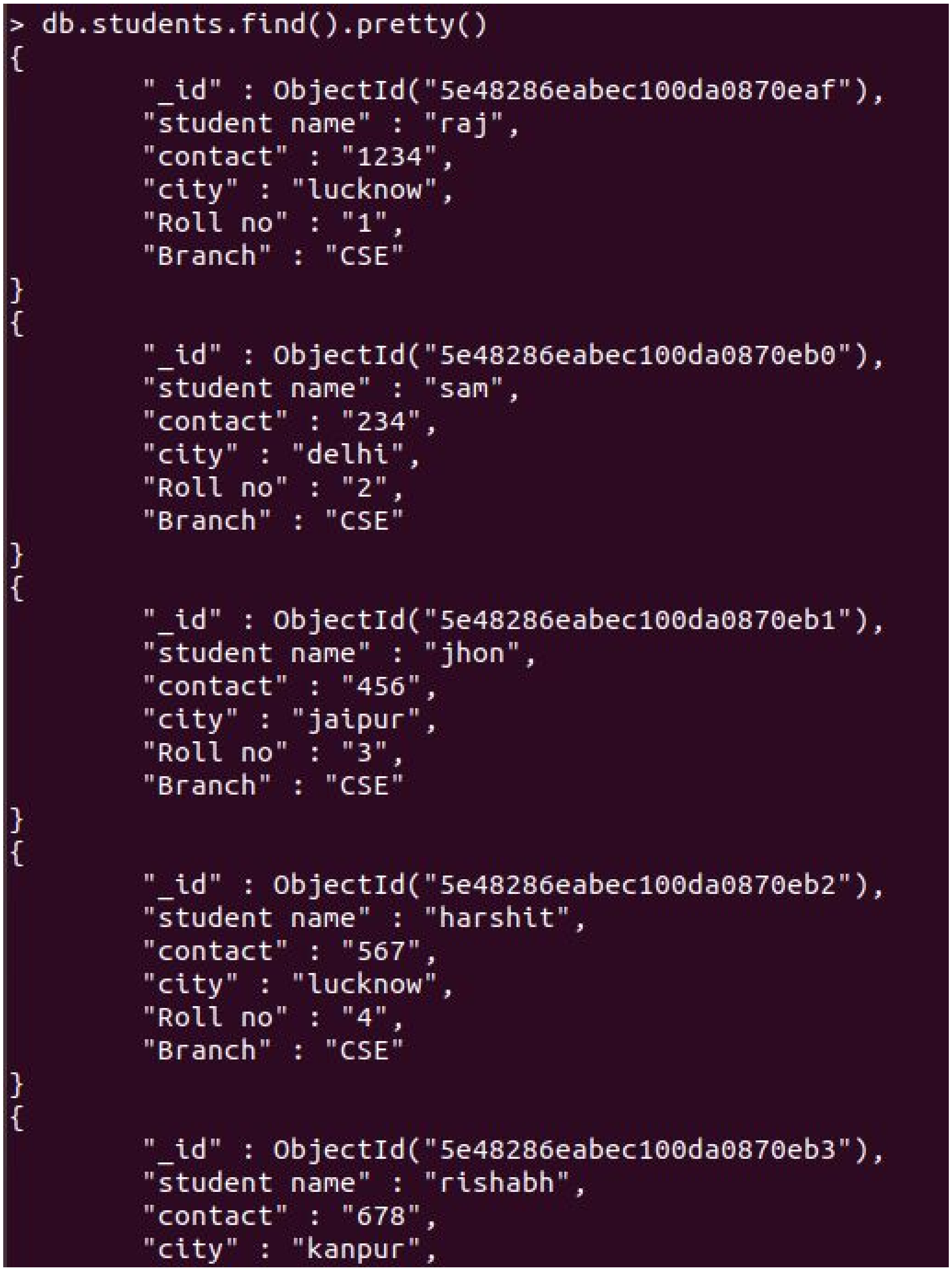
Ques 9. Restore the database again to have the full data

Ans 9.



```
kaushlendra@kaushlendra:tan $ sudo mongorestore -d student /home/kaushlendra/tan
[sudo] password for kaushlendra:
2020-02-16T11:53:28.221+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
2020-02-16T11:53:28.221+0530    building a list of collections to restore from /home/kaushlendra/tan dir
2020-02-16T11:53:28.221+0530    don't know what to do with subdirectory "tan/student", skipping...
2020-02-16T11:53:28.221+0530    done
kaushlendra@kaushlendra:tan $ 
```

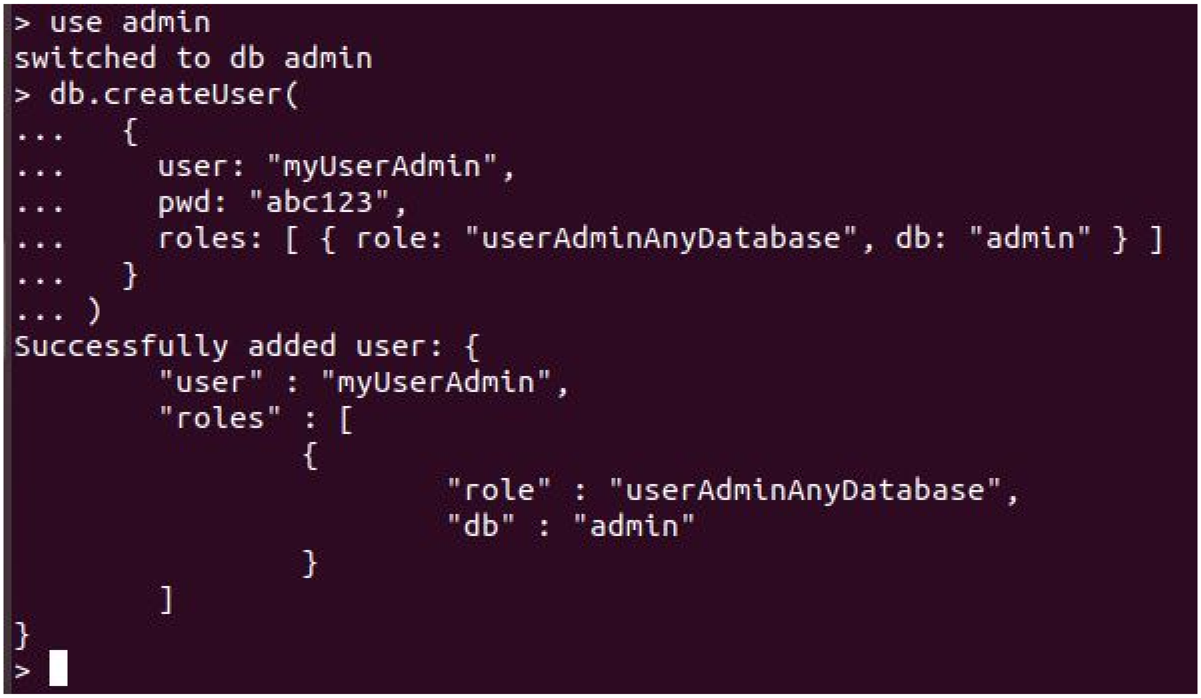
Ans 10.



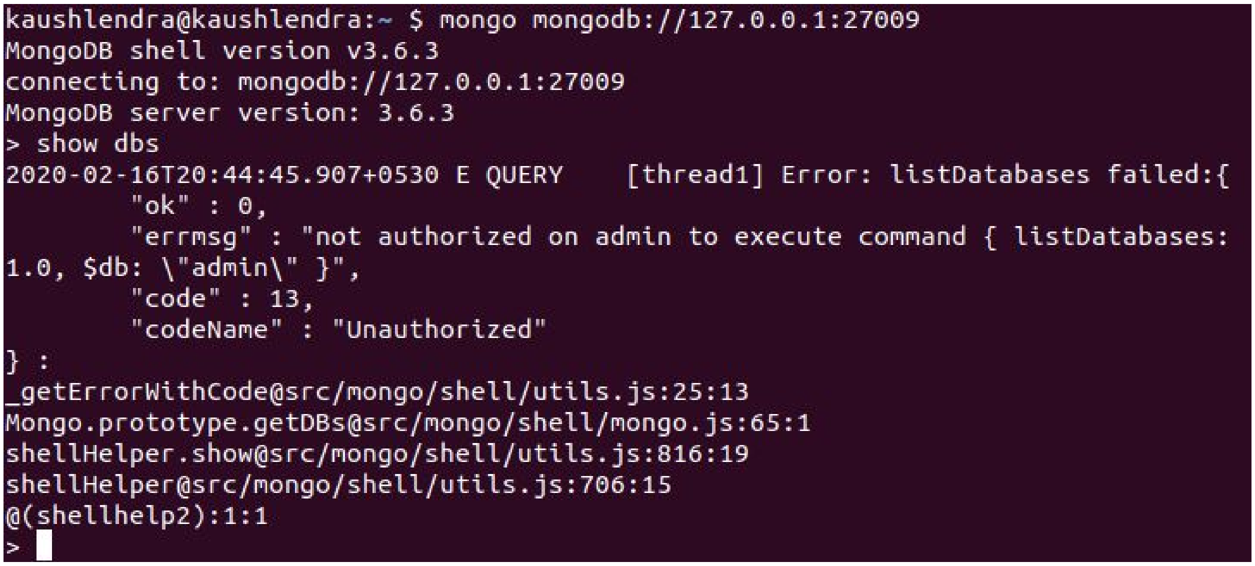
```
> db.students.find().pretty()
{
        "_id" : ObjectId("5e48286eabec100da0870eaf"),
        "student name" : "raj",
        "contact" : "1234",
        "city" : "lucknow",
        "Roll no" : "1",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb0"),
        "student name" : "sam",
        "contact" : "234",
        "city" : "delhi",
        "Roll no" : "2",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb1"),
        "student name" : "jhon",
        "contact" : "456",
        "city" : "jaipur",
        "Roll no" : "3",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb2"),
        "student name" : "harshit",
        "contact" : "567",
        "city" : "lucknow",
        "Roll no" : "4",
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e48286eabec100da0870eb3"),
        "student name" : "rishabh",
        "contact" : "678",
        "city" : "kanpur",
```

Ques 10. Enable authentication on the Mongo

Ans 10.



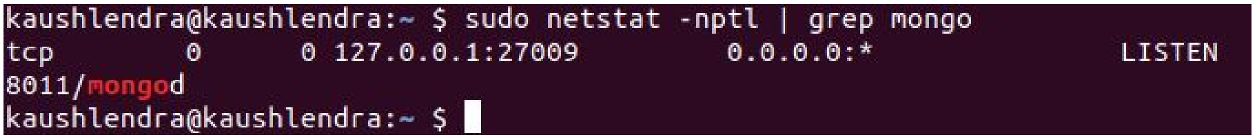
```
> use admin
switched to db admin
> db.createUser(
...   {
...     user: "myUserAdmin",
...     pwd: "abc123",
...     roles: [ { role: "userAdminAnyDatabase", db: "admin" } ]
...   }
... )
Successfully added user: {
        "user" : "myUserAdmin",
        "roles" : [
                {
                        "role" : "userAdminAnyDatabase",
                        "db" : "admin"
                }
        ]
}
> 
```



```
kaushlendra@kaushlendra:~ $ mongo mongodb://127.0.0.1:27009
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27009
MongoDB server version: 3.6.3
> show dbs
2020-02-16T20:44:45.907+0530 E QUERY    [thread1] Error: listDatabases failed:{
        "ok" : 0,
        "errmsg" : "not authorized on admin to execute command { listDatabases:
1.0, $db: \"admin\" }",
        "code" : 13,
        "codeName" : "Unauthorized"
} :
_getErrorWithCode@src/mongo/shell/utils.js:25:13
Mongo.prototype.getDBs@src/mongo/shell/mongo.js:65:1
shellHelper.show@src/mongo/shell/utils.js:816:19
shellHelper@src/mongo/shell/utils.js:706:15
@(shellhelp2):1:1
> 
```

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

Ans 11.



```
kaushlendra@kaushlendra:~ $ sudo netstat -nptl | grep mongo
tcp        0      0 127.0.0.1:27009         0.0.0.0:*               LISTEN
8011/mongod
kaushlendra@kaushlendra:~ $ 
```

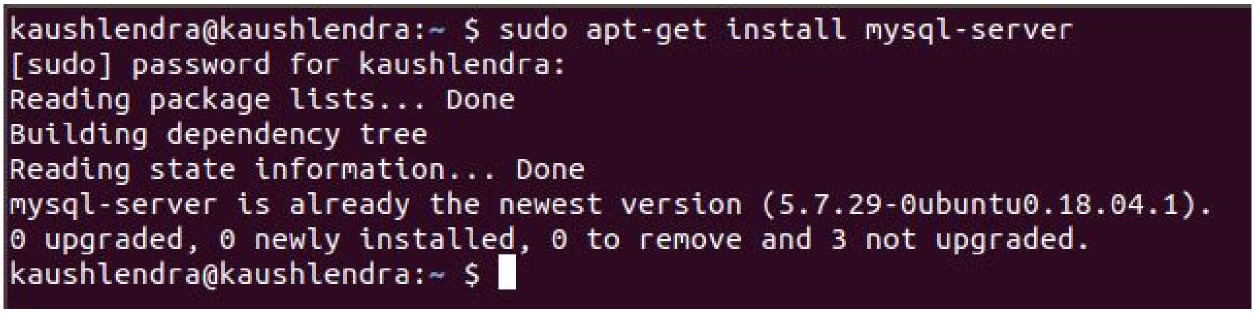
Ques 12. Create init service of Mongo installed later*

Ans 12 .

MYSQL

Ques 1. Install latest version of MYSQL from apt-get repository

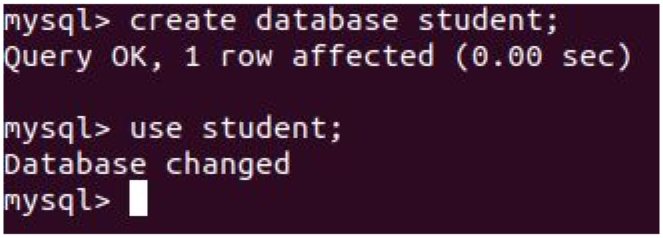
Ans 1.



```
kaushlendra@kaushlendra:~ $ sudo apt-get install mysql-server
[sudo] password for kaushlendra:
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 3 not upgraded.
kaushlendra@kaushlendra:~ $
```

Ques 2. Create a database student

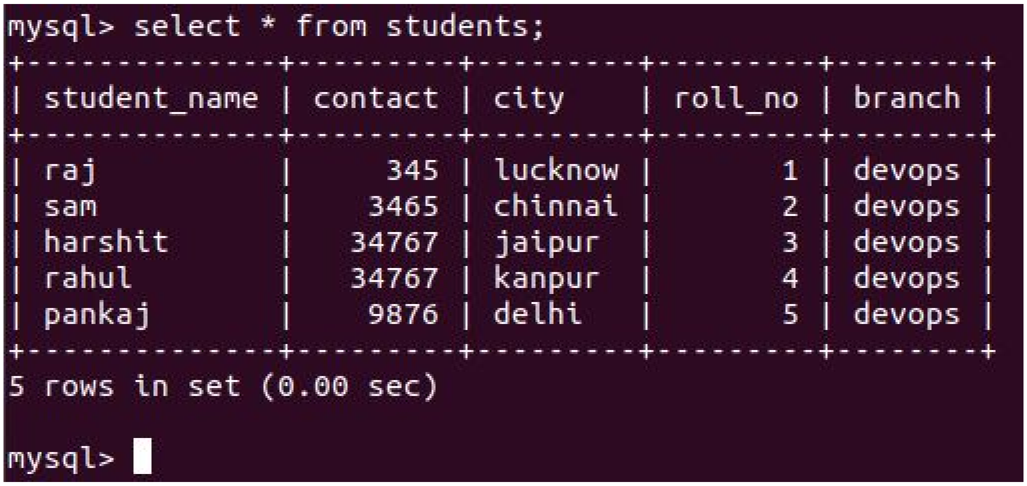
Ans 2.



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

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

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

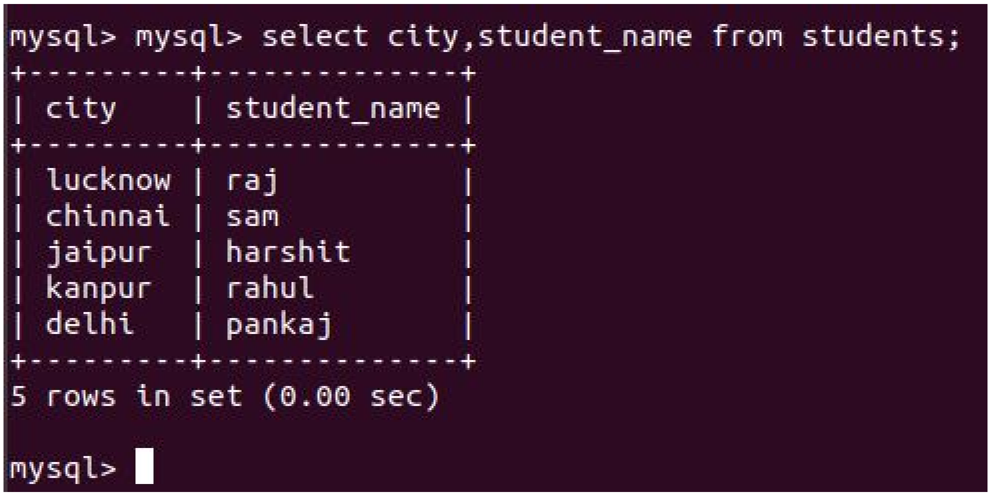
Ans 3.



```
mysql> select * from students;
+--------------+---------+---------+---------+--------+
| student_name | contact | city    | roll_no | branch |
+--------------+---------+---------+---------+--------+
| raj          |     345 | lucknow |       1 | devops |
| sam          |    3465 | chinnai |       2 | devops |
| harshit      |   34767 | jaipur  |       3 | devops |
| rahul        |   34767 | kanpur  |       4 | devops |
| pankaj       |    9876 | delhi   |       5 | devops |
+--------------+---------+---------+---------+--------+
5 rows in set (0.00 sec)

mysql> 
```

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

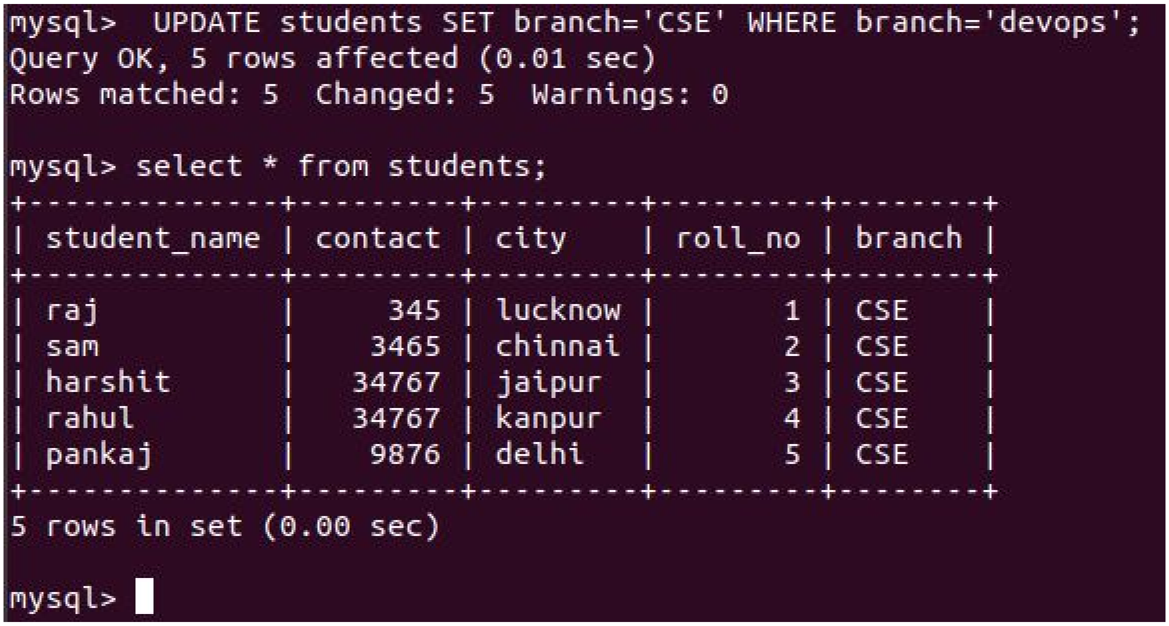
Ans 4.



```
mysql> mysql> select city,student_name from students;
+---------+--------------+
| city    | student_name |
+---------+--------------+
| lucknow | raj          |
| chinnai | sam          |
| jaipur  | harshit      |
| kanpur  | rahul        |
| delhi   | pankaj       |
+---------+--------------+
5 rows in set (0.00 sec)

mysql> 
```

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

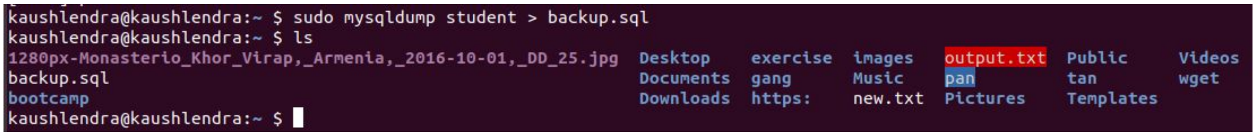
Ans 5.



```
mysql>  UPDATE students SET branch='CSE' WHERE branch='devops';
Query OK, 5 rows affected (0.01 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> select * from students;
+--------------+---------+---------+---------+--------+
| student_name | contact | city    | roll_no | branch |
+--------------+---------+---------+---------+--------+
| raj          |     345 | lucknow |       1 | CSE    |
| sam          |    3465 | chinnai |       2 | CSE    |
| harshit      |   34767 | jaipur  |       3 | CSE    |
| rahul        |   34767 | kanpur  |       4 | CSE    |
| pankaj       |    9876 | delhi   |       5 | CSE    |
+--------------+---------+---------+---------+--------+
5 rows in set (0.00 sec)

mysql> 
```

Ques 6. Take dump of the database

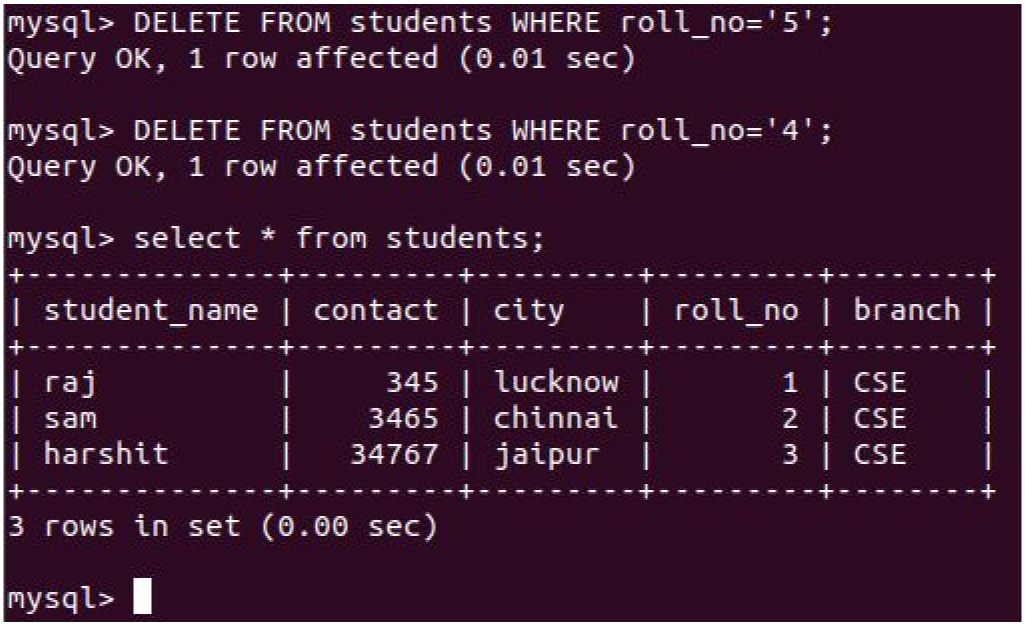
Ans 6.



```
kaushlendra@kaushlendra:~ $ sudo mysqldump student > backup.sql
kaushlendra@kaushlendra:~ $ ls
1280px-Monasterio_Khor_Virap,_Armenia,_2016-10-01,_DD_25.jpg  Desktop    exercise  images   output.txt  Public     Videos
backup.sql                                                    Documents  gang      Music    pan         tan        wget
bootcamp                                                      Downloads  https:    new.txt  Pictures    Templates
kaushlendra@kaushlendra:~ $ 
```

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

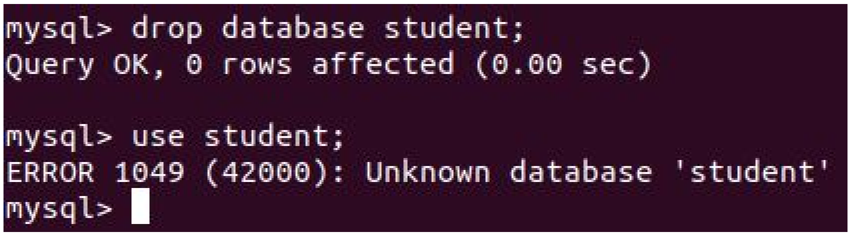
Ans 7.



```
mysql> DELETE FROM students WHERE roll_no='5';
Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM students WHERE roll_no='4';
Query OK, 1 row affected (0.01 sec)

mysql> select * from students;
+--------------+---------+---------+---------+--------+
| student_name | contact | city    | roll_no | branch |
+--------------+---------+---------+---------+--------+
| raj          |     345 | lucknow |       1 | CSE    |
| sam          |    3465 | chinnai |       2 | CSE    |
| harshit      |   34767 | jaipur  |       3 | CSE    |
+--------------+---------+---------+---------+--------+
3 rows in set (0.00 sec)

mysql> 
```

Ques 8. Drop the database

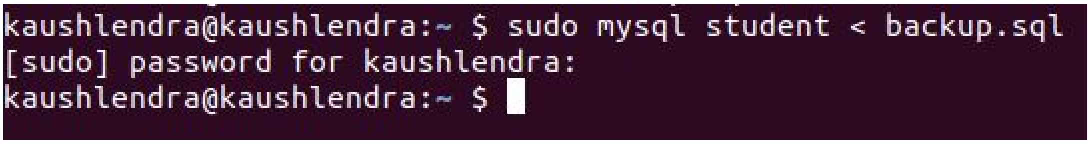
Ans 8 .



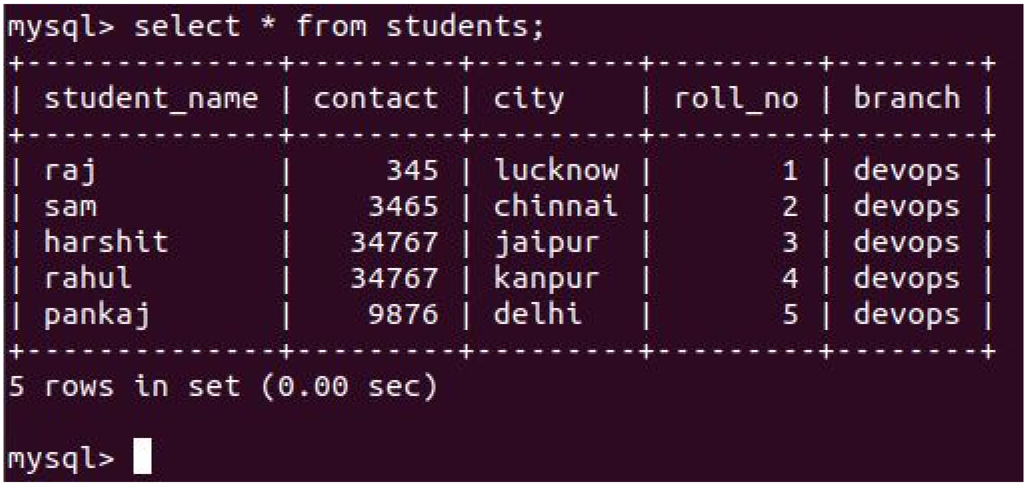
```
mysql> drop database student;
Query OK, 0 rows affected (0.00 sec)

mysql> use student;
ERROR 1049 (42000): Unknown database 'student'
mysql> 
```

Ques 9. Restore the database again to have the full data

Ans 9.



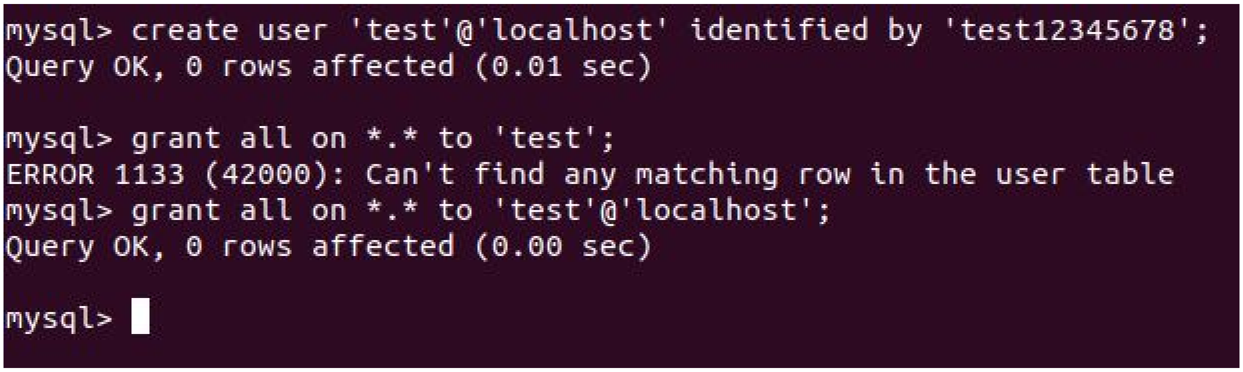
```
kaushlendra@kaushlendra:~ $ sudo mysql student < backup.sql
[sudo] password for kaushlendra:
kaushlendra@kaushlendra:~ $ 
```



```
mysql> select * from students;
+--------------+---------+----------+---------+--------+
| student_name | contact | city     | roll_no | branch |
+--------------+---------+----------+---------+--------+
| raj          |     345 | lucknow  |       1 | devops |
| sam          |    3465 | chinnai  |       2 | devops |
| harshit      |   34767 | jaipur   |       3 | devops |
| rahul        |   34767 | kanpur   |       4 | devops |
| pankaj       |    9876 | delhi    |       5 | devops |
+--------------+---------+----------+---------+--------+
5 rows in set (0.00 sec)

mysql> 
```

Ques 10. Enable authentication on the Mysql

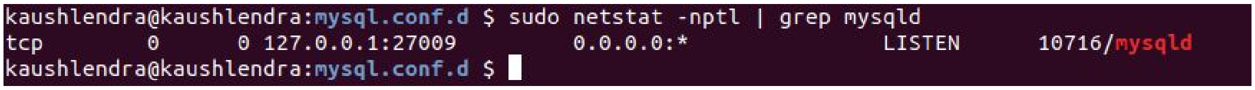
Ans 10.



```
mysql> create user 'test'@'localhost' identified by 'test12345678';
Query OK, 0 rows affected (0.01 sec)

mysql> grant all on *.* to 'test';
ERROR 1133 (42000): Can't find any matching row in the user table
mysql> grant all on *.* to 'test'@'localhost';
Query OK, 0 rows affected (0.00 sec)

mysql> 
```

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

Ans 11.



```
kaushlendra@kaushlendra:mysql.conf.d $ sudo netstat -nptl | grep mysqld
tcp        0      0 127.0.0.1:27009         0.0.0.0:*               LISTEN      10716/mysqld
kaushlendra@kaushlendra:mysql.conf.d $ 
```