Assessment -6

MongoDB & MySQL

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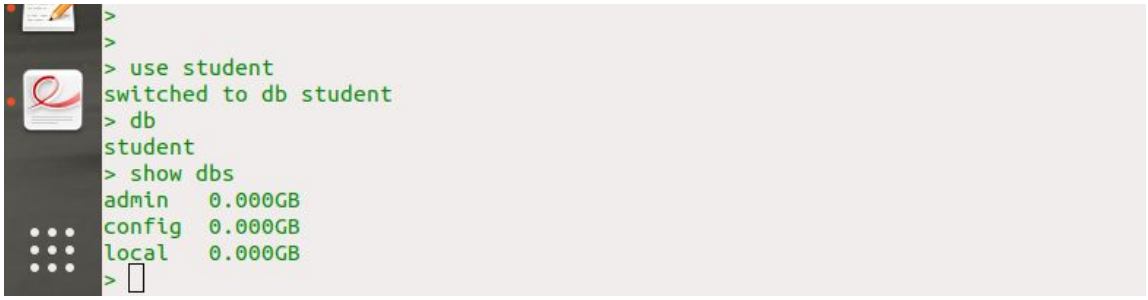
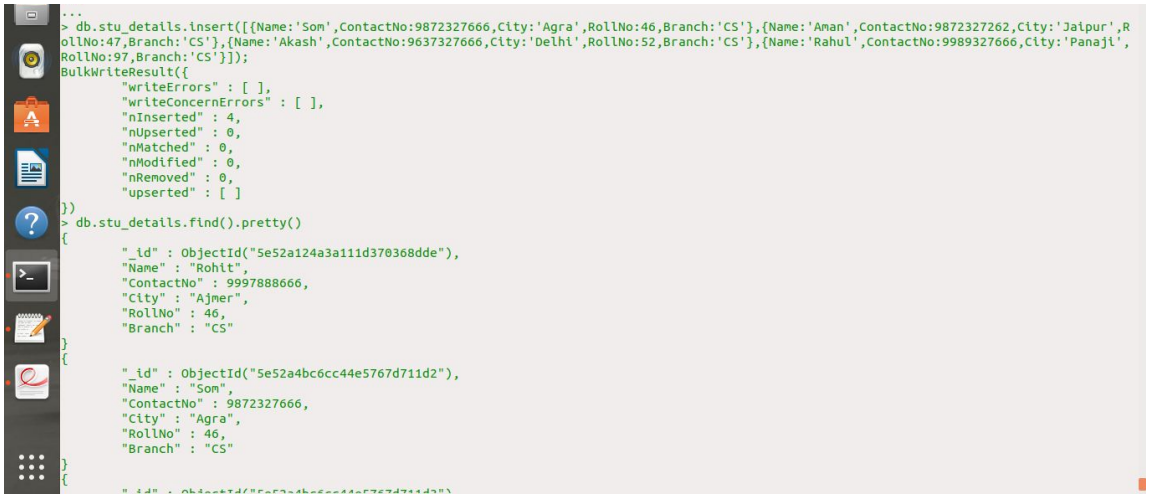
College: UPES

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

2. **Create a database student.**



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



```
})
> db.stu_details.find().pretty()
{
        "_id" : ObjectId("5e52a124a3a111d370368dde"),
        "Name" : "Rohit",
        "ContactNo" : 9997888666,
        "City" : "Ajmer",
        "RollNo" : 46,
        "Branch" : "CS"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d2"),
        "Name" : "Som",
        "ContactNo" : 9872327666,
        "City" : "Agra",
        "RollNo" : 46,
        "Branch" : "CS"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d3"),
        "Name" : "Aman",
        "ContactNo" : 9872327262,
        "City" : "Jaipur",
        "RollNo" : 47,
        "Branch" : "CS"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d4"),
        "Name" : "Akash",
        "ContactNo" : 9637327666,
        "City" : "Delhi",
        "RollNo" : 52,
        "Branch" : "CS"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d5"),
        "Name" : "Rahul",
```

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

```
>
>
> db.stu_details.find({"City":"Mumbai"}).pretty()
> ;
> db.stu_details.find({"City":"Agra"}).pretty()
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d2"),
        "Name" : "Som",
        "ContactNo" : 9872327666,
        "City" : "Agra",
        "RollNo" : 46,
        "Branch" : "CS"
}
>
```

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

```
...
> db.stu_details.updateMany({},{$set:{Branch:"CSE"}});
{ "acknowledged" : true, "matchedCount" : 5, "modifiedCount" : 5 }
> db.stu_details.find().pretty()
{
        "_id" : ObjectId("5e52a124a3a111d370368dde"),
        "Name" : "Rohit",
        "ContactNo" : 9997888666,
        "City" : "Ajmer",
        "RollNo" : 46,
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d2"),
        "Name" : "Som",
        "ContactNo" : 9872327666,
        "City" : "Agra",
        "RollNo" : 46,
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d3"),
        "Name" : "Aman",
        "ContactNo" : 9872327262,
        "City" : "Jaipur",
        "RollNo" : 47,
        "Branch" : "CSE"
}
{
        "_id" : ObjectId("5e52a4bc6cc44e5767d711d4"),
        "Name" : "Akash",
        "ContactNo" : 9637327666,
        "City" : "Delhi",
        "RollNo" : 52,
        "Branch" : "CSE"
}
```

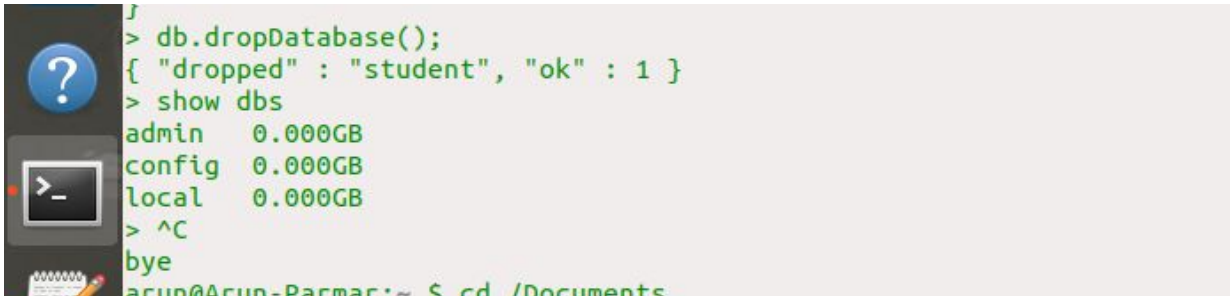
6. Take dump of the database.

```
>
>
> exit
bye
arun@Arun-Parmar:~ $ cd
arun@Arun-Parmar:~ $ sudo mongodump --db student --out /home/arun/Documents/mongoBackup/'date +"%m-%d-%y"'
[sudo] password for arun:
2020-02-23T22:04:03.582+0530    writing student.stu_details to
2020-02-23T22:04:03.583+0530    done dumping student.stu_details (5 documents)
arun@Arun-Parmar:~ $
```

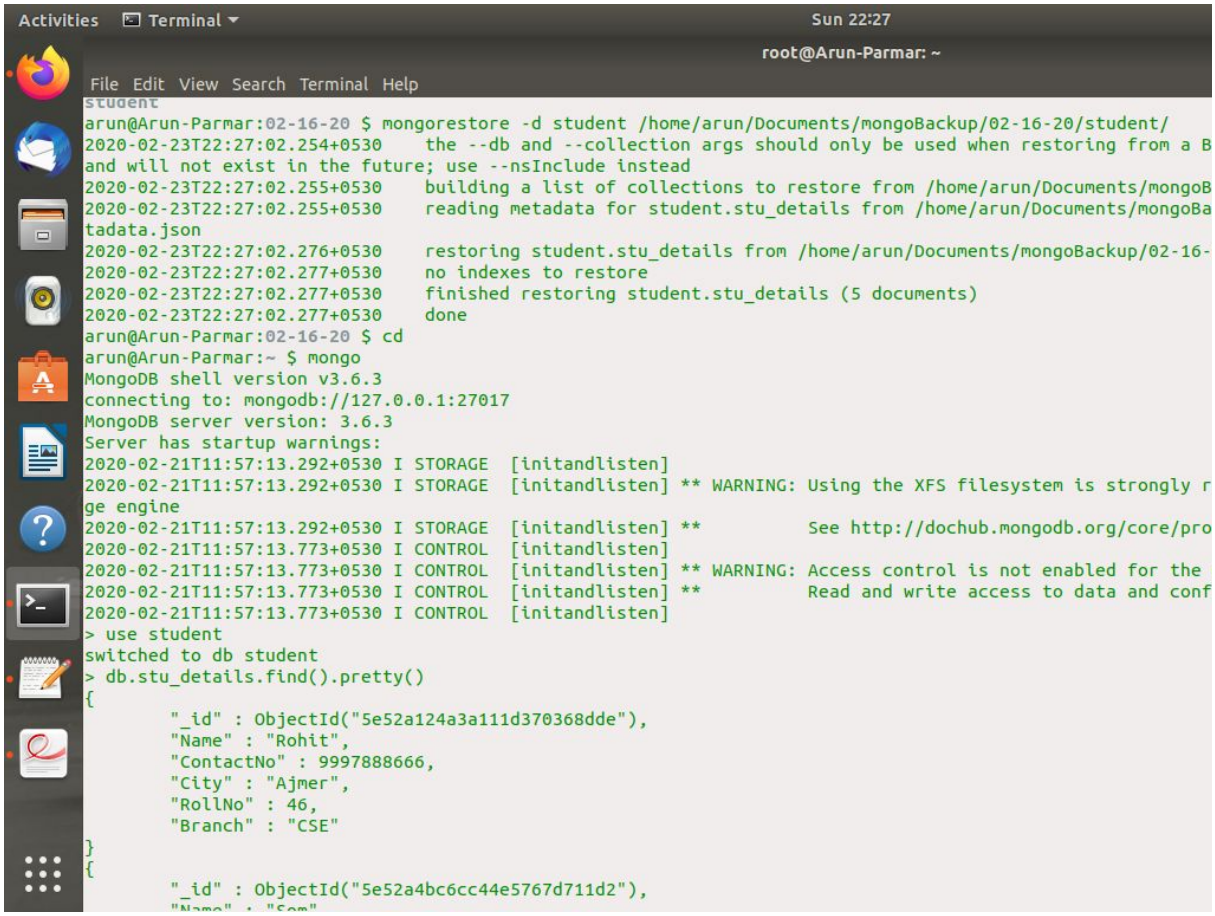
7. Delete operation : Delete the record of last 2 students according to the roll number

```
>
> use student
switched to db student
> db.stu_details.find().sort({RollNo:-1}).limit(2);
{ "_id" : ObjectId("5e52a4bc6cc44e5767d711d5"), "Name" : "Rahul", "ContactNo" : 9989327666, "City" : "Panaji", "RollNo" : 97, "Branch" : "CSE"
 }
{ "_id" : ObjectId("5e52a4bc6cc44e5767d711d4"), "Name" : "Akash", "ContactNo" : 9637327666, "City" : "Delhi", "RollNo" : 52, "Branch" : "CSE"
}
```

8. **Drop the database**

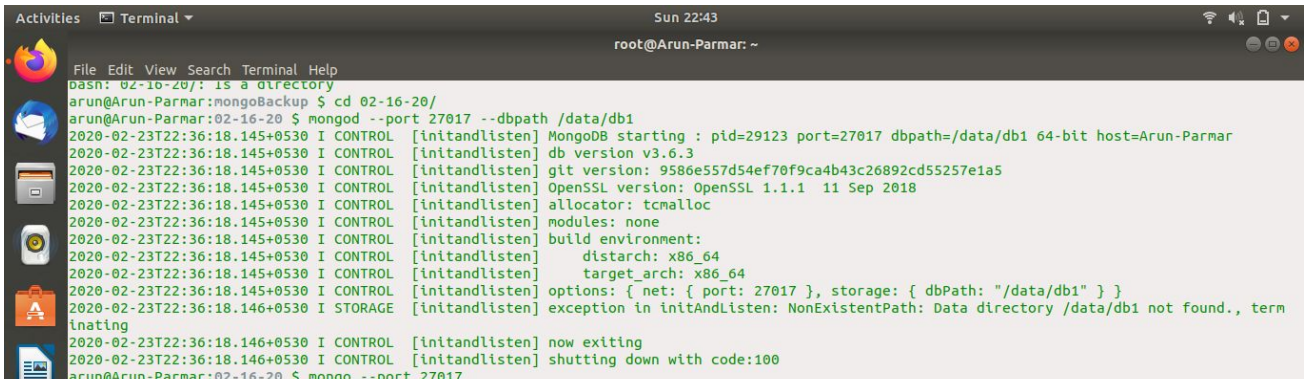


9. **Restore the database again to have the full data**



10. Enable authentication on the Mongo

a. Start MongoDB without access control

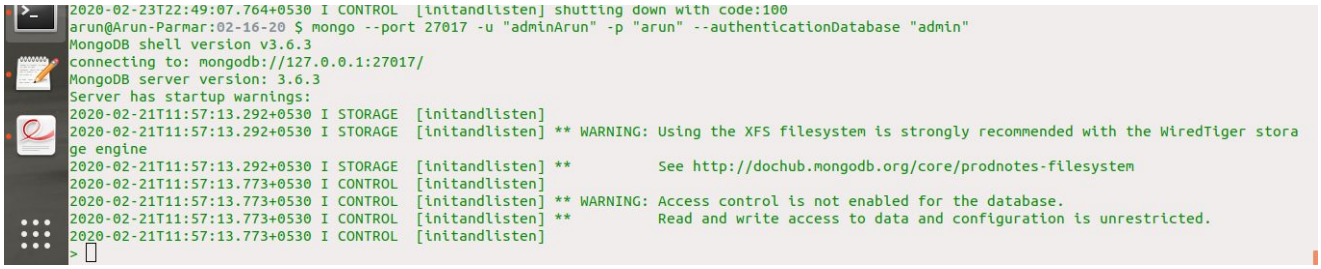


b. Connect to the instance

c. Create the user administrator.

d. Re-start the MongoDB instance with access control

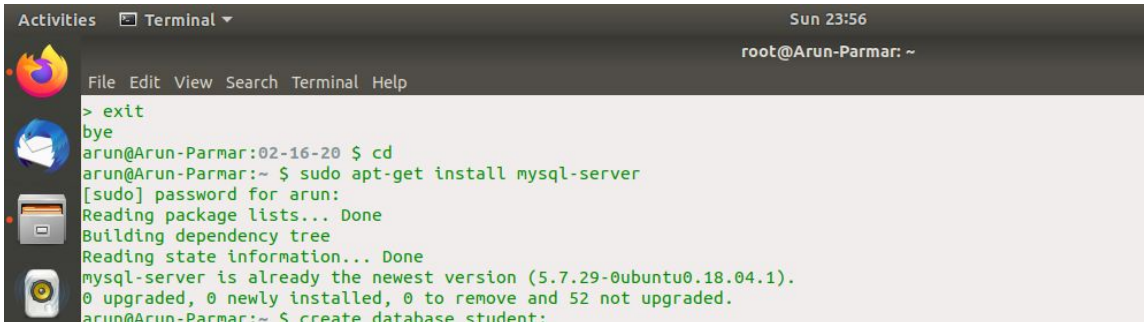
e. Connect and authenticate as the user administrator



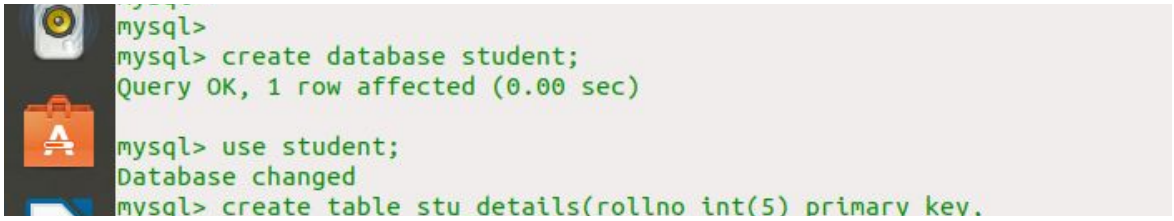
11. **Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009**
12. **Create init service of Mongo installed later.**

MySQL:

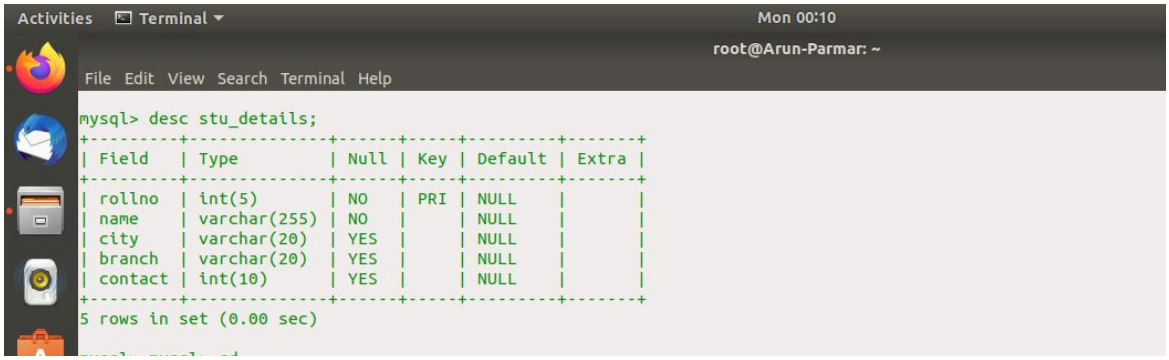
1. **Install latest version of MySQL from apt-get repository**



2. **Create a database student**



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



```
mysql> insert into stu_details values(1,"Aakash","New Delhi","CS",971979615);
Query OK, 1 row affected (0.01 sec)

mysql> insert into stu_details values(1,"Arun","Agra","CS",947899615);
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
mysql> insert into stu_details values(12,"Arun","Agra","CS",947899615);
Query OK, 1 row affected (0.01 sec)

mysql> insert into stu_details values(12,"Mikesh","Jaipur","CS",948299615);
ERROR 1062 (23000): Duplicate entry '12' for key 'PRIMARY'
mysql> insert into stu_details values(33,"Mikesh","Jaipur","CS",948299615);
Query OK, 1 row affected (0.01 sec)

mysql> insert into stu_details values(19,"Ekansh","Ajmer","CS",999299615);
Query OK, 1 row affected (0.01 sec)

mysql> insert into stu_details values(19,"Fahed","Panaji","CS",706299615);
ERROR 1062 (23000): Duplicate entry '19' for key 'PRIMARY'
mysql> insert into stu_details values(23,"Fahed","Panaji","CS",706299615);
Query OK, 1 row affected (0.01 sec)

mysql> select * from stu_details
    -> ;
+--------+--------+-----------+--------+-----------+
| rollno | name   | city      | branch | contact   |
+--------+--------+-----------+--------+-----------+
|      1 | Aakash | New Delhi | CS     | 971979615 |
|     12 | Arun   | Agra      | CS     | 947899615 |
|     19 | Ekansh | Ajmer     | CS     | 999299615 |
|     23 | Fahed  | Panaji    | CS     | 706299615 |
|     33 | Mikesh | Jaipur    | CS     | 948299615 |
+--------+--------+-----------+--------+-----------+
5 rows in set (0.01 sec)

mysql> ;
```

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

```
mysql>
mysql> select * from stu_details where city="agra";
+--------+------+------+--------+-----------+
| rollno | name | city | branch | contact   |
+--------+------+------+--------+-----------+
|     12 | Arun | Agra | CS     | 947899615 |
+--------+------+------+--------+-----------+
1 row in set (0.00 sec)
```

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

```
mysql>
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 | Aakash | New Delhi | CSE    | 971979615 |
|     12 | Arun   | Agra      | CSE    | 947899615 |
|     19 | Ekansh | Ajmer     | CSE    | 999299615 |
|     23 | Fahed  | Panaji    | CSE    | 706299615 |
|     33 | Mikesh | Jaipur    | CSE    | 948299615 |
+--------+--------+-----------+--------+-----------+
5 rows in set (0.00 sec)

mysql>
```

6. **Take dump of the database**

```
arun@Arun-Parmar:Documents $ sudo mysqldump student > /home/arun/Documents/dump.sql;
[sudo] password for arun:
arun@Arun-Parmar:Documents $ ls
 1665324.jpg   Assignments   FUns3Eu-1967-mustang-wallpaper.jpg  'Untitled 1.odt'                    wp1808944.jpg
 299072.jpg    dump.sql      mongoBackup                          uW7boRI-1967-mustang-wallpaper.jpg
arun@Arun-Parmar:Documents $
```

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

```
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> 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 | Aakash | New Delhi | CSE    | 971979615 |
|     12 | Arun   | Agra      | CSE    | 947899615 |
|     19 | Ekansh | Ajmer     | CSE    | 999299615 |
+--------+--------+-----------+--------+-----------+
3 rows in set (0.01 sec)

mysql>
```

8. **Drop the database**

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

mysql> exit
Bye
```

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

```
root@Arun-Parmar: ~
File  Edit  View  Search  Terminal  Help
bash: /home/arun/Documents/backup_name.sql: No such file or directory
root@Arun-Parmar:~# mysql -u root -p student < /home/arun/Documents/dump.sql
Enter password:
root@Arun-Parmar:~# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
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 tables
    -> ;
ERROR 1046 (3D000): No database selected
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| student            |
| sys                |
+--------------------+
5 rows in set (0.00 sec)
```

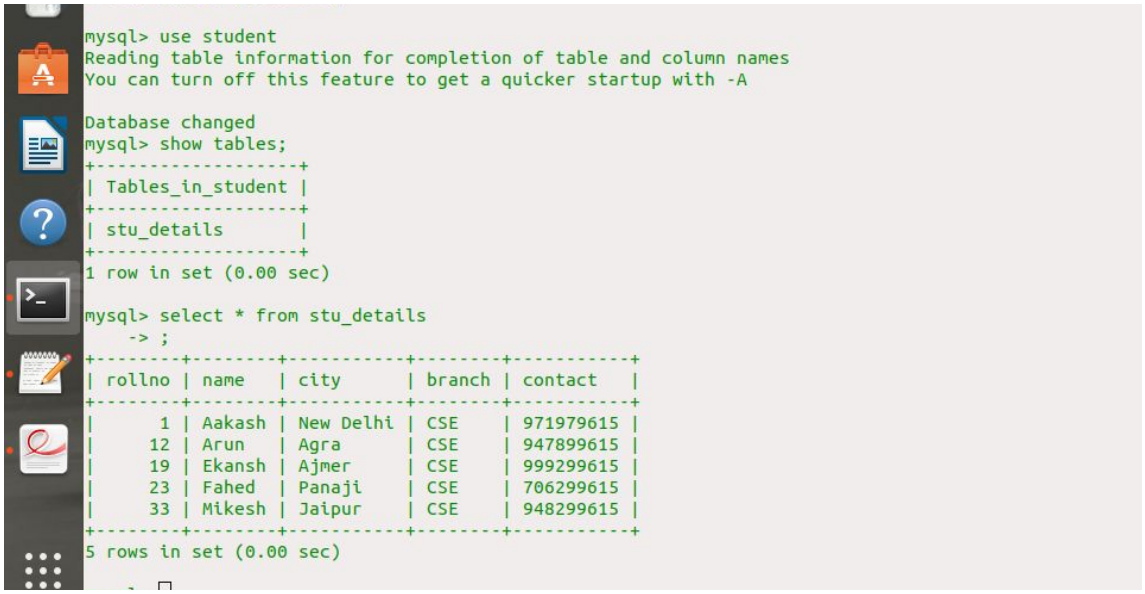

```
mysql> use student
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> 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 | Aakash | New Delhi | CSE    | 971979615 |
|     12 | Arun   | Agra      | CSE    | 947899615 |
|     19 | Ekansh | Ajmer     | CSE    | 999299615 |
|     23 | Fahed  | Panaji    | CSE    | 706299615 |
|     33 | Mikesh | Jaipur    | CSE    | 948299615 |
+--------+--------+-----------+--------+-----------+
5 rows in set (0.00 sec)
```

10. **Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009**
11. **Create init service of Mongo installed later***