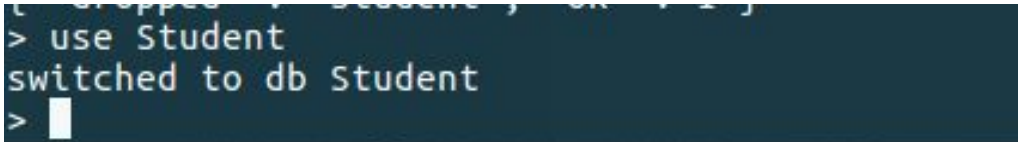
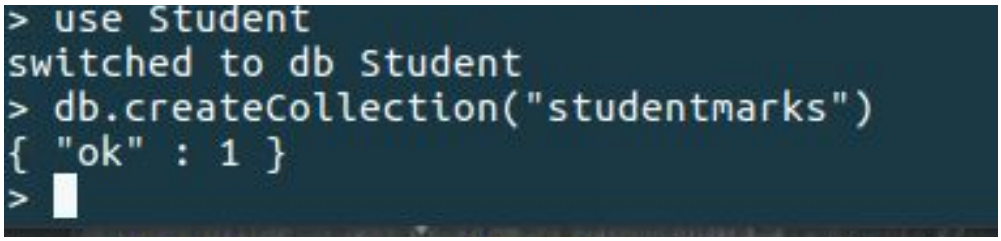
1) Create a Database called student

use Student
switched to db Student



2) Create a collection called studentmarks

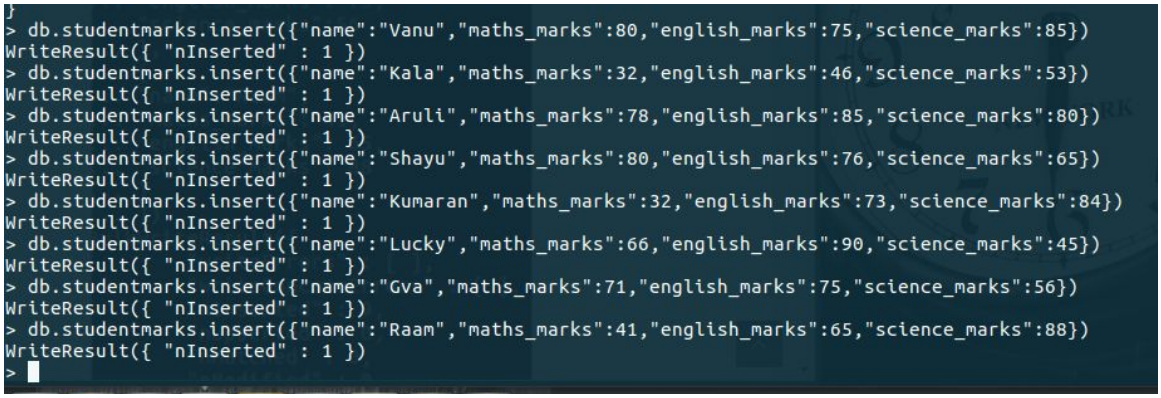
db.createCollection("studentmarks")
{ "ok" : 1 }



3) Create the documents listed in above table.

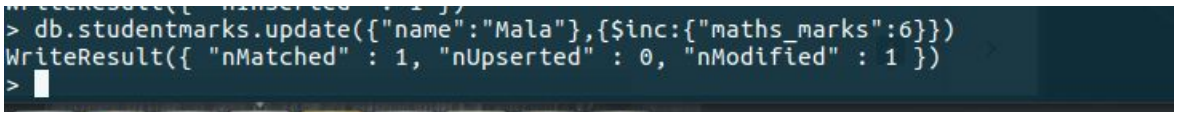
>
db.studentmarks.insert({"name":"Mala","maths_marks":45,"english_marks":53,"science_marks":72})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Vanu","maths_marks":80,"english_marks":75,"science_marks":85})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Kala","maths_marks":32,"english_marks":46,"science_marks":53})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Aruli","maths_marks":78,"english_marks":85,"science_marks":80})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Shayu","maths_marks":80,"english_marks":76,"science_marks":65})
WriteResult({ "nInserted" : 1 })

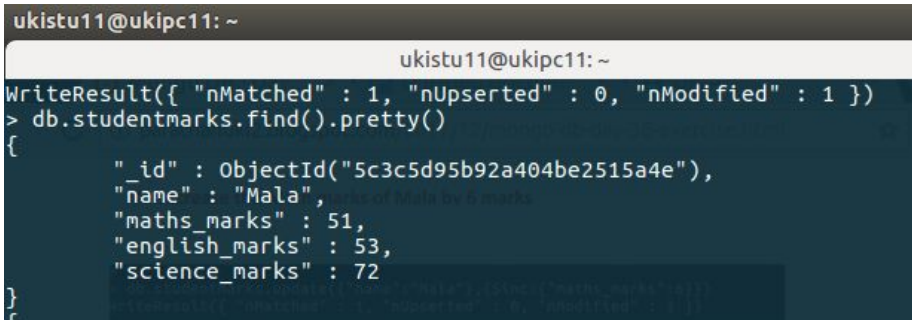
>
db.studentmarks.insert({"name":"Kumaran","maths_marks":32,"english_marks":73,"science_marks":84})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Lucky","maths_marks":66,"english_marks":90,"science_marks":45})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Gva","maths_marks":71,"english_marks":75,"science_marks":56})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Raam","maths_marks":41,"english_marks":65,"science_marks":88})
WriteResult({ "nInserted" : 1 })
>



4) Increase the maths marks of Mala by 6 marks

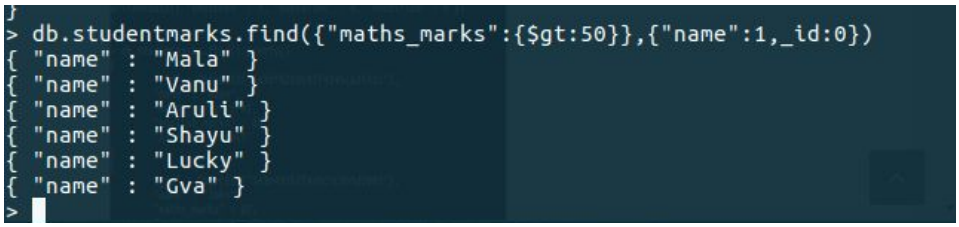
db.studentmarks.update({"name":"Mala"},{$inc:{"maths_marks":6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })



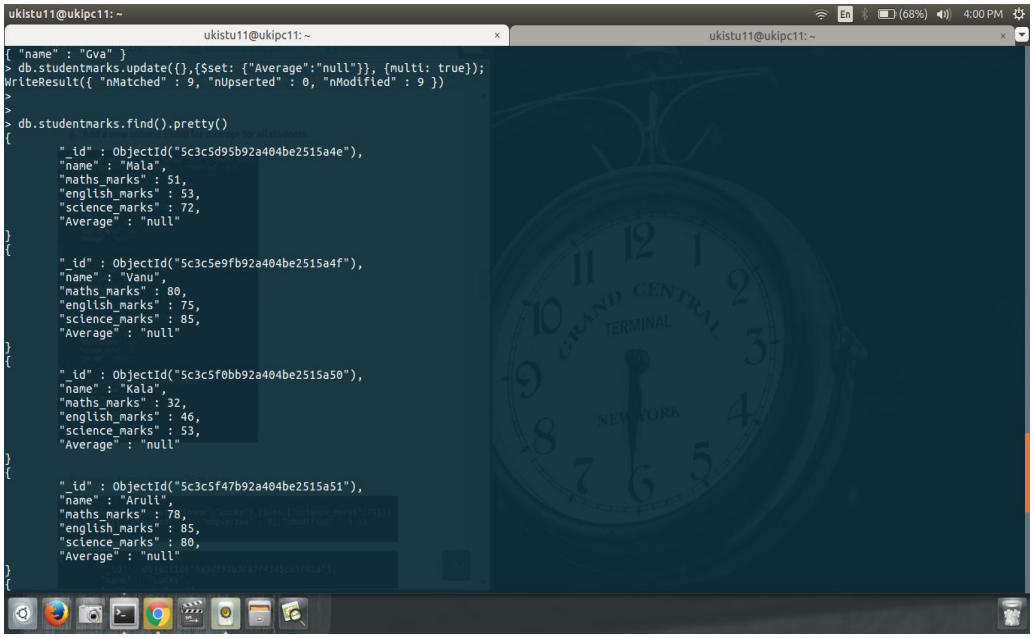


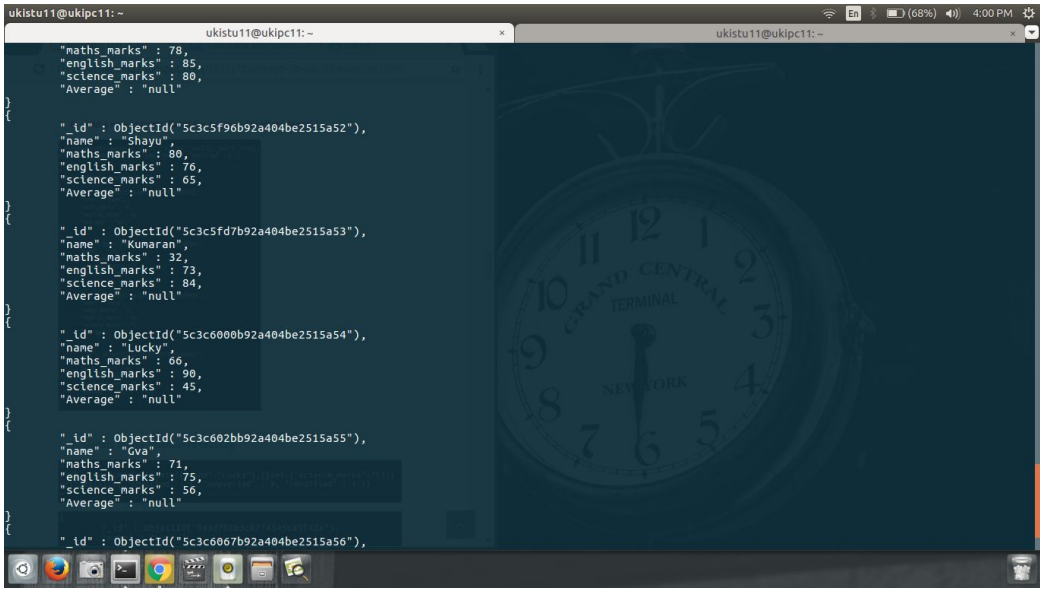
5) List the names of students who got more than 50 marks in Maths Subject.

db.studentmarks.find({"maths_marks":{$gt:50}},{"name":1,_id:0})
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }



6)Add a new column(field) for Average for all students.





7) Update Marks_Science=75 to Lucky .

db.studentmarks.update({"name":"Lucky"},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>

```
ukistu11@ukipc11: ~
ukistu11@ukipc11: ~
}
> db.studentmarks.update({"name":"Lucky"},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()
{
{
        "_id" : ObjectId("5c3c6000b92a404be2515a54"),
        "name" : "Lucky",
        "maths_marks" : 66,
        "english_marks" : 90,
        "science_marks" : 75,
        "Average" : "null"
}
```

8) List the names who got more than 50 marks in all subjects.

db.studentmarks.find({$and: [{"english_marks": {$gt:50}},{"science_marks": {$gt:50}},{"maths_marks": {$gt:50}}]},{"name":1,_id:0})
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
>

```
> db.studentmarks.find({$and: [{"english_marks": {$gt:50}},{"science_marks": {$gt:50}},{"maths_marks": {$gt:50}}]},{"name":1,_id:0})
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
>
```

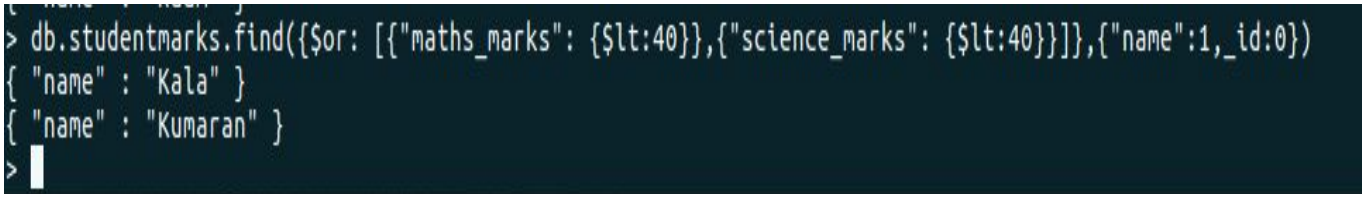
9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

db.studentmarks.find({$and: [{"english_marks": {$gt:50}},{"maths_marks": {$lt:50}}]},{"name":1,_id:0})
{ "name" : "Kumaran" }
{ "name" : "Raam" }
>

```
> db.studentmarks.find({$and: [{"english_marks": {$gt:50}},{"maths_marks": {$lt:50}}]},{"name":1,_id:0})
{ "name" : "Kumaran" }
{ "name" : "Raam" }
>
```

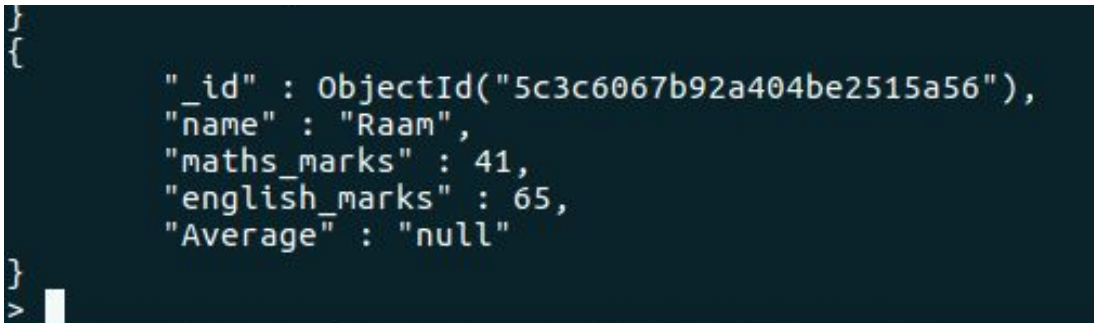
10) List the names who got less than 40 in both Maths and Science.

```
db.studentmarks.find({$or: [{"maths_marks": {$lt:40}},{"science_marks":
{$lt:40}}]},{"name":1,_id:0})
{ "name" : "Kala" }
{ "name" : "Kumaran" }
```



11) Remove Science column/field for Raam

```
db.studentmarks.update({"name":"Raam"},{$unset:{"science_marks":88}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```



12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.

```
db.studentmarks.update({ name: "John" }, {"name":"John", "maths_marks": 87,
"english_marks": 23}, { upsert: true })
WriteResult({
        "nMatched" : 0,
        "nUpserted" : 1,
        "nModified" : 0,
```

"_id" : ObjectId("5c3eea9fd07457c37012814b")

```
}
> db.studentmarks.update({ name: "John" }, {"name":"John", "maths_marks": 87, "english_marks": 23}, { upsert: true })
WriteResult({
        "nMatched" : 0,
        "nUpserted" : 1,
        "nModified" : 0,
        "_id" : ObjectId("5c3eea9fd07457c37012814b")
})
>
```

13) Rename the english_marks column/field for John to science_marks

db.studentmarks.update({"_id" :
ObjectId("5c3eea9fd07457c37012814b")},{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

```
> db.studentmarks.update({"_id" : ObjectId("5c3eea9fd07457c37012814b")},{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

14) Remove Kumaran's document from collection

db.studentmarks.remove({"name":"Kumaran"},{})
WriteResult({ "nRemoved" : 1 })

```
> db.studentmarks.remove({"name":"Kumaran"},{})
WriteResult({ "nRemoved" : 1 })
>
```

15) Find Kala's or Aruli's math_marks and science_marks

db.studentmarks.find({"name":"Kala"},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 32, "science_marks" : 53 }
> db.studentmarks.find({"name":"Aruli"},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 78, "science_marks" : 80 }

```
> db.studentmarks.find({"name":"Kala"},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 32, "science_marks" : 53 }
> db.studentmarks.find({"name":"Aruli"},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 78, "science_marks" : 80 }
>
```