1) Create a Database called student

```
> use Student
switched to db Student
> db
Student
```

2) Create a collection called studentmarks

```
> use student
switched to db student
> db.createCollection("studentmarks")
{ "ok" : 1 }
```

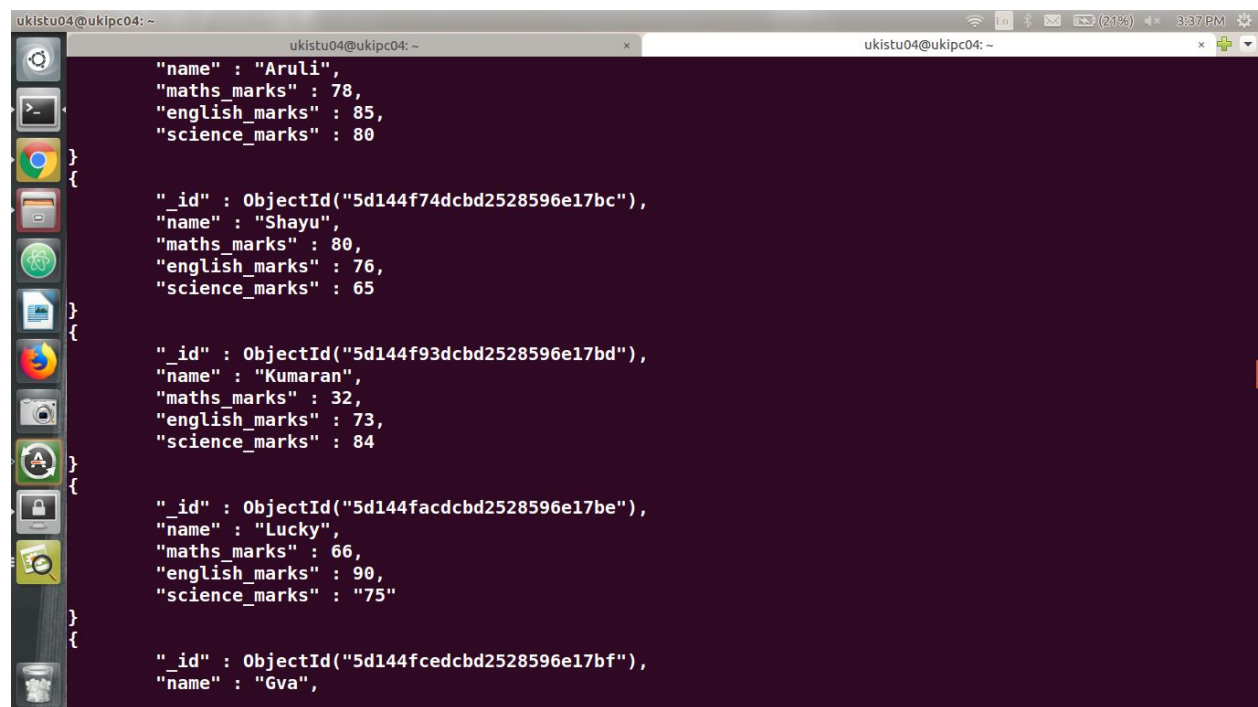3) Create the documents listed in above table.

```
> db
Student
> 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 })
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("5d1449cff0e4805b04cd2d8d"),
        "name" : "Mala",
        "maths_marks" : 45,
        "english_marks" : 53,
        "science_marks" : 72
}
```

```
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("5d1449cff0e4805b04cd2d8d"),
        "name" : "Mala",
        "maths_marks" : 51,
        "english_marks" : 53,
        "science_marks" : 72,
        "math" : 6,
        "maths" : 6
}
{

        "_id" : ObjectId("5d144eb3dcbd2528596e17b9"),
        "name" : "Vanu",
        "maths_marks" : 80,
        "english_marks" : 75,
        "science_marks" : 85
}
{

        "_id" : ObjectId("5d144ed7dcbd2528596e17ba"),
        "name" : "Kala",
        "maths_marks" : 32,
        "english_marks" : 46,
        "science_marks" : 53
}
{

        "_id" : ObjectId("5d144f18dcbd2528596e17bb"),
        "name" : "Aruli",
        "maths_marks" : 78,
```

```
{
        "_id" : ObjectId("5d144fcedcbd2528596e17bf"),
        "name" : "Gva",
        "maths_marks" : 71,
        "english_marks" : 75,
        "science_marks" : 56
}
{

        "_id" : ObjectId("5d144feadcbd2528596e17c0"),
        "name" : "Raam",
        "maths_marks" : 41,
        "english_marks" : 65,
        "science_marks" : 88
}
{

        "_id" : ObjectId("5d146a09dcbd2528596e17c1"),
        "name" : "Kumaran",
        "maths_marks" : 32,
        "english_marks" : 73,
        "science_marks" : 84
}
```

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```
        "name" : "Aruli",
        "maths_marks" : 78,
        "english_marks" : 85,
        "science_marks" : 80
}
{

        "_id" : ObjectId("5d144f74dcbd2528596e17bc"),
        "name" : "Shayu",
        "maths_marks" : 80,
        "english_marks" : 76,
        "science_marks" : 65
}
{

        "_id" : ObjectId("5d144f93dcbd2528596e17bd"),
        "name" : "Kumaran",
        "maths_marks" : 32,
        "english_marks" : 73,
        "science_marks" : 84
}
{

        "_id" : ObjectId("5d144facdcbd2528596e17be"),
        "name" : "Lucky",
        "maths_marks" : 66,
        "english_marks" : 90,
        "science_marks" : "75"
}
{

        "_id" : ObjectId("5d144fcedcbd2528596e17bf"),
        "name" : "Gva",
```

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 })
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("5d1449cff0e4805b04cd2d8d"),
        "name" : "Mala",
        "maths_marks" : 51,
        "english_marks" : 53,
        "science_marks" : 72,
        "math" : 6,
        "maths" : 6
}
```

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

```
> db.studentmarks.find({maths_marks:{$gt:50}},{_id:0,maths_marks:0,english_mar
ks:0,science_marks:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
```

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

```
> db.studentmarks.update({},{$set:{Average:""}},false,true)
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
```

7) Update Marks_Science=75 to Lucky .

```
> db.studentmarks.update({"_id" : ObjectId("5d144facdcbd2528596e17be")},{$set:{science_marks:"75"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()
{
```

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

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

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

```
> db.studentmarks.find({$and:[{maths_marks:{$lt:40}},{science_marks:{$lt:40}}]
},{_id:0,maths_marks:0,english_marks:0,science_marks:0}).pretty()
```

11) Remove Science column/field for Raam

```
> db.studentmarks.update({"_id" : ObjectId("5d144feadcbd2528596e17c0")},
{$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.insert({name:"Jhon",maths_marks:87,english_marks:23})
WriteResult({ "nInserted" : 1 })
```

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

```
> db.studentmarks.update({_id:ObjectId("5d1491b81e36e90f6f2b1abe")},{$rename:{'english_marks':'science_marks'}},{upsert:true})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 0 })
```

14) Remove Kumaran's document from collection

```
> db.studentmarks.remove({"_id" : ObjectId("5d144f93dcbd2528596e17bd")})
WriteResult({ "nRemoved" : 1 })
```

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

```
> db.studentmarks.find({$or:[{name:"Kala"},{name:"Aruli"}]},{_id:0,english_marks:0}).pretty()
{ "name" : "Kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "Aruli", "maths_marks" : 78, "science_marks" : 80 }
```