

## 1. Create a Database called the student

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

## 2. Create a collection called studentmarks

## 3. Create the documents listed in above table.

```
> db.studentmarks.find().pretty()
{
  "_id" : ObjectId("5d0362732f947074e9009f8b"),
  "name" : "Mala",
  "maths_marks" : 51,
  "english_marks" : 53,
  "science_marks" : 72
}
{
  "_id" : ObjectId("5d0362732f947074e9009f8c"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85
}
{
  "_id" : ObjectId("5d0362732f947074e9009f8d"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53
}
{
  "_id" : ObjectId("5d0362732f947074e9009f8e"),
  "name" : "Aruli",
  "maths_marks" : 78,
  "english_marks" : 85,
  "science_marks" : 80
}
```

```

{
  "_id" : ObjectId("5d0362732f947074e9009f8f"),
  "name" : "shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65
}
{
  "_id" : ObjectId("5d0362732f947074e9009f90"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84
}
{
  "_id" : ObjectId("5d0362732f947074e9009f91"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 75
}
{
  "_id" : ObjectId("5d0362732f947074e9009f92"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56
}
{
  "_id" : ObjectId("5d0362732f947074e9009f93"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88
}
>
```

## 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.update({"name":"Mala"},{$inc:{"maths_marks":6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find({"maths_marks":{$gt:50},"name":1,_id: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.aggregate({$addFields:{avg:{$avg:[$maths_marks,$english_marks,$science_marks]}}})
{ "_id" : ObjectId("5d0362732f947074e9009f8b"), "name" : "Mala", "maths_marks" : 57, "english_marks" : 53, "science_marks" : 72, "average" : 55 }
{ "_id" : ObjectId("5d0362732f947074e9009f8c"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" : 77.5 }
{ "_id" : ObjectId("5d0362732f947074e9009f8d"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53, "average" : 39 }
{ "_id" : ObjectId("5d0362732f947074e9009f8e"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80, "average" : 81.5 }
{ "_id" : ObjectId("5d0362732f947074e9009f8f"), "name" : "shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" : 78 }
{ "_id" : ObjectId("5d0362732f947074e9009f90"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" : 52.5 }
{ "_id" : ObjectId("5d0362732f947074e9009f91"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75, "average" : 78 }
{ "_id" : ObjectId("5d0362732f947074e9009f92"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" : 73 }
{ "_id" : ObjectId("5d0362732f947074e9009f93"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "science_marks" : 88, "average" : 53 }
> []
```

## 7. Update Marks\_Science=75 to Lucky.

```
> db.studentmarks.update("science_marks" : 45,{$set: {"name" : "Lucky","maths_marks" : 66,"english_marks" : 90,"science_marks" : 75}})
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
> []
```

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

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

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

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

## 11. Remove Science column/field for Raam

```
> db.studentmarks.update({"_id" : ObjectId("5cfeab8edbbb15d418e074a5")}, {$unset: {"science_marks":1}}, false, true)
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
> []
```

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

```
> db.studentmarks.update({name: "John"},{$set: {"maths_marks" : 87,"english_marks" : 23}},{upsert:true})
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5d0897aa306e32f29720f498")
})
```

## 13. Rename the english\_marks column/field for John to science\_marks

```
> db.studentmarks.update({"_id":ObjectId("5d0897aa306e32f29720f498")},{ $rename: {"english_marks":"science_marks" }})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> []
```

## 14. Remove Kumaran's document from the collection

```
> db.studentmarks.remove ( {"_id" : ObjectId("5d0362732f947074e9009f90")})
WriteResult({ "nRemoved" : 1 })
>
```

## 15. Find Kala's or Aruli's math\_marks and science\_marks

```
> db.studentmarks.find({"_id" : ObjectId("5d0362732f947074e9009f8d")},{ "maths_marks" : 1,"science_marks" : 1}).pretty()
{
  "_id" : ObjectId("5d0362732f947074e9009f8d"),
  "maths_marks" : 32,
  "science_marks" : 53
}
> []
```