

### 1. Create a Database called the student

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

### 2. Create a collection called studentmarks

- db.createCollection(studentmarks)

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

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

- db.studentmarks.insert( [ { 01 }, { 02 }, { 03 }, { 04 }, { 05 }, { 06 }, { 07 }, { 08 }, { 09 } ] )

```
> db.studentmarks.insert([{"name":"Mala","maths_marks":45,"english_marks":53,"science_marks":72}, {"name":"Vanu","maths_marks":80,"english_marks":75,"science_marks":85}, {"name":"Kala","maths_marks":32,"english_marks":46,"science_marks":53}, {"name":"Aruli","maths_marks":78,"english_marks":85,"science_marks":80}, {"name":"Shaya","maths_marks":80,"english_marks":76,"science_marks":65}, {"name":"Kumaran","maths_marks":32,"english_marks":73,"science_marks":84}, {"name":"Lucky","maths_marks":66,"english_marks":90,"science_marks":45}, {"name":"Gva","maths_marks":71,"english_marks":75,"science_marks":56}, {"name":"Raam","maths_marks":41,"english_marks":65,"science_marks":88}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 9,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
>
```

### 4. Increase the maths marks of Mala by 6 marks

- db.studentmarks.update({"name" : "Mala"}, { \$inc: {"maths\_marks" : 6} })

```
> 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} ).pretty()

```
> db.studentmarks.find( { "maths_marks" : { $gt:50 }},{ "name": 1, _id:0 } ).pretty()
{ "name" : "MaLa" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shaya" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
>
```

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

- `db.studentmarks.aggregate( [ { $group : { _id: "id", Average : { $avg : "$maths_marks" } } } ] )`

```
> db.studentmarks.aggregate( [ { $group : { _id: "id", Average : { $avg : "$maths_marks" } } } ] )
{ "_id" : "id", "Average" : 59 }
>
```

#### 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}})`

```
> db.studentmarks.update({"science_marks" : 45},{ $set: {"name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

#### 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()`

```
> 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" : "Shaya" }
{ "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()`

```
> 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()`

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

```
> 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})`

```
> db.studentmarks.update({name: "John"}, {$set: {"maths_marks" : 87, "english_marks" : 23}}, {upsert: true})
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5d08a1e2e2e492f530616844")
})
>
```

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

- `db.studentmarks.update( {"_id" : ObjectId("--jhon id--") }, { $rename: {"english_marks" : "science_marks" } } )`

```
> db.studentmarks.update( {"_id" : ObjectId("5d089ce65ae711cfb508053c") }, { $rename: {"english_marks" : "science_marks" } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

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

- `db.cows.remove ( {"_id" : ObjectId("5cfeab8edbbb15d418e074a2")})`

```
> db.cows.remove ( {"_id" : ObjectId("5cfeab8edbbb15d418e074a2")})
WriteResult({ "nRemoved" : 0 })
>
```

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

- `db.studentmarks.find({"_id" : ObjectId(----id no----)}, {"maths_marks" : 1, "science_marks" : 1}).pretty()`

```
> db.studentmarks.find({"_id" : ObjectId(----id no----)},{
"maths_marks" : 1,"science_marks" : 1}).pretty()
2019-06-18T14:07:08.703+0530 E QUERY [js] SyntaxError:
expected expression, got '--' @(shell):1:41
>
>
```