

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.find().pretty()
```

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()
```

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

```
ukistu09@UKIPC09: ~
> db.studentmarks.find({"maths_marks":{$gt:50}}).pretty()
{
  "_id" : ObjectId("5d140bc567f8f337605d2f7c"),
  "name" : "Mala",
  "maths_marks" : 51,
  "english_marks" : 53,
  "science_marks" : 72
}
{
  "_id" : ObjectId("5d140c9167f8f337605d2f7d"),
  "name" : "Yanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85
}
{
  "_id" : ObjectId("5d140cd467f8f337605d2f7f"),
  "name" : "Aruli",
  "maths_marks" : 78,
  "english_marks" : 85,
  "science_marks" : 80
}
{
  "_id" : ObjectId("5d140d0167f8f337605d2f80"),
  "name" : "Shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65
}
{
  "_id" : ObjectId("5d140d4e67f8f337605d2f82"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 45
}
{
  "_id" : ObjectId("5d140d7167f8f337605d2f83"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 88
}
```

Name	Maths	English	Science
Mala	45	53	72
Yanu	80	75	85
Kumaran	52	73	84
Aruli	68	90	45
Gva	71	75	88
Noam	41	65	88

ukistu09@UKIPC09: ~

- 1) Create a database called student
- 2) Create a collection called studentmarks
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks Science=75 to Lucky
- 8) List the names who got more than 50 marks in all subjects.
- 9) Add a new column(field) for Average for all students.
- 10) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 11) Remove Science column(field) for Noam
- 12) Update John's Maths mark as 87 and English mark as 23, if john not available upsert.
- 13) Add Maths column(field) for John to science_marks
- 14) Remove Kumaran's document from the collection
- 15) Find Marks of Aruli's marks in Maths Subject

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

```
> db.studentmarks.update({},{$inc:{"Average":1}},false,true)
WriteResult({ "nMatched" : 12, "nUpserted" : 0, "nModified" : 12 })
```

7) Update Marks_Science=75 to Lucky

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

```
"_id" : ObjectId("5d14678667f8f337605d2f8b"),
"name" : "Lucky",
"maths_marks" : 66,
"english_marks" : 90,
"science_marks" : 75
```

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

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

11) Remove Science column/field for Raam

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

```
"_id" : ObjectId("5d14679f67f8f337605d2f8d"),
"name" : "Raam",
"maths_marks" : 41,
"english_marks" : 65
```

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

```
> db.studentmarks.insert({name:"john",maths_marks:87,english_marks:23},{upsert:true})
WriteResult({ "nInserted" : 1 })
```

```
{ "_id" : ObjectId("5d1482c896e0eabdc53c386e"),
  "name" : "john",
  "maths_marks" : 87,
  "english_marks" : 23 }
```

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

```
> db.studentmarks.update({"_id" : ObjectId("5d14914996e0eabdc53c3874")},{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
{ "_id" : ObjectId("5d14914996e0eabdc53c3874"),
  "name" : "john",
  "maths_marks" : 87,
  "science_marks" : 23 }
```

14) Remove Kumaran's document from collection

```
> db.studentmarks.remove({name:"Kumaran"})
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,name:1,maths_marks:1,science_marks:1}).pretty()
{ "name" : "Kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "Aruli", "maths_marks" : 78, "science_marks" : 80 }
```

