

### Ques1

Create a Database called student

```
> use students  
switched to db students
```

### Ques2

Create a collection called studentmarks

```
> db.createCollection("studentmarks")  
{ "ok" : 1 }  
> show collections  
studentmarks  
system.indexes
```

### Ques3

Create the documents listed in above table.

```
> db.studentmarks.insert([{"name":"Kumaran",maths_marks:32,english_marks:73,science_marks:84}, {"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:75,english_marks:85,science_marks:80}, {"name":"Shayu",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" : 10,  
  "nUpserted" : 0,  
  "nMatched" : 0,  
  "nModified" : 0,  
  "nRemoved" : 0,  
  "upserted" : [ ]  
})
```

```
> db.studentmarks.find().pretty()
{
  "_id" : ObjectId("5d1435b8bf65d65ef09e748"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84
}
{
  "_id" : ObjectId("5d1435b8bf65d65ef09e749"),
  "name" : "Mala",
  "maths_marks" : 45,
  "english_marks" : 53,
  "science_marks" : 72
}
{
  "_id" : ObjectId("5d1435b8bf65d65ef09e74a"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85
}
{
  "_id" : ObjectId("5d1435b8bf65d65ef09e74b"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53
}
{
  "_id" : ObjectId("5d1435b8bf65d65ef09e74c"),
  "name" : "Aruli",
  "maths_marks" : 75,
  "english_marks" : 85,
  "science_marks" : 80
}
```

```
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74d"),
  "name" : "Shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74e"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74f"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 45
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e750"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e751"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88
}
```

#### Ques4

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("5d1435b8bfb65d65ef09e748"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e749"),
  "name" : "Mala",
  "maths_marks" : 51,
  "english_marks" : 53,
  "science_marks" : 72
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74a"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74b"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74c"),
  "name" : "Aruli",
  "maths_marks" : 75,
  "english_marks" : 85,
  "science_marks" : 80
}
```

### Ques5

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

```
2019-08-27T15:01:10.003Z mongo> db.studentmarks.find({"maths_marks":{"$gt":50}},{_id:0,maths_marks:0,english_marks:0,science_marks:0,average:0}).pretty()
{
  "name" : "Mala" }
{
  "name" : "Vanu" }
{
  "name" : "Aruli" }
{
  "name" : "Shayu" }
{
  "name" : "Lucky" }
{
  "name" : "Gva" }
}
```

### Ques6

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

```
> db.studentmarks.update({},{$set:{"average":1}},false,true)
WriteResult({ "nMatched" : 10, "nUpserted" : 0, "nModified" : 0 })
> db.studentmarks.find().pretty()
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e748"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e749"),
  "name" : "Mala",
  "maths_marks" : 51,
  "english_marks" : 53,
  "science_marks" : 72,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74a"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74b"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53,
  "average" : 1
}
```



```

{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74d"),
  "name" : "Shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65,
  "average" : 1
},
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74e"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84,
  "average" : 1
},
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74f"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 45,
  "average" : 1
},
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e750"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56,
  "average" : 1
},
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e751"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88,
  "average" : 1
}
}

```

Ques7

Update Marks\_Science=75 to Lucky .

```

> db.studentmarks.update({"_id" : ObjectId("5d1435b8bfb65d65ef09e74f")},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()

```

### Ques8

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, maths_marks:0, english_marks:0, science_marks:0, average:0} )
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
```

### Ques9

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, maths_marks:0, english_marks:0, science_marks:0, average:0} )
{ "name" : "Kumaran" }
{ "name" : "Raam" }
```

### Ques10

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

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

## Ques11

Remove Science column/field for Raam

```
> db.studentmarks.update({name:"Raam"},{$unset:{science_marks:88}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find()
{ "_id" : ObjectId("5d1435b8fb65d65ef09e748"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e749"), "name" : "Mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 72, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74a"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74b"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74c"), "name" : "Aruli", "maths_marks" : 75, "english_marks" : 85, "science_marks" : 80, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74d"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74e"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74f"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e750"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e751"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "average" : 1 }
>
```



## Ques12

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

```
> db.studentmarks.update({name:"Jhone"},{name:"Jhone",maths_marks:87,english_marks:23},{upsert:true})
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5d1586cab0a2db186ca94051")
})
```

```
> db.studentmarks.find().pretty()
{ "_id" : ObjectId("5d1435b8bfb65d65ef09e749"), "upsert" : true }
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74a"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74b"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74c"),
  "name" : "Aruli",
  "maths_marks" : 75,
  "english_marks" : 85,
  "science_marks" : 80,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74d"),
  "name" : "Shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65,
  "average" : 1
}
```

```

{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74f"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 75,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e750"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56,
  "average" : 1
}
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e751"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "average" : 1
}
{
  "_id" : ObjectId("5d1586cab0a2db186ca94051"),
  "name" : "Jhone",
  "maths_marks" : 87,
  "english_marks" : 23
}

```

Ques13

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

```
> db.studentmarks.update({"_id" : ObjectId("5d1490c3bfb65d65ef09e755")},{$rename:{"science_marks":"english_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

```
"_id" : ObjectId("5d1435b8bfb65d65ef09e749"),
"name" : "Mala",
"maths_marks" : 51,
"english_marks" : 53,
"science_marks" : 72,
"average" : 1
```

```
"_id" : ObjectId("5d1435b8bfb65d65ef09e74a"),
"name" : "Vanu",
"maths_marks" : 80,
"english_marks" : 75,
"science_marks" : 85,
"average" : 1
```

```
"_id" : ObjectId("5d1435b8bfb65d65ef09e74b"),
"name" : "Kala",
"maths_marks" : 32,
"english_marks" : 46,
"science_marks" : 53,
"average" : 1
```

```
"_id" : ObjectId("5d1435b8bfb65d65ef09e74c"),
"name" : "Aruli",
"maths_marks" : 75,
"english_marks" : 85,
"science_marks" : 80,
"average" : 1
```

```
"_id" : ObjectId("5d1435b8bfb65d65ef09e74d"),
"name" : "Shayu",
"maths_marks" : 80,
"english_marks" : 76,
"science_marks" : 65,
"average" : 1
```

```
{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e74f"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 75,
  "average" : 1
}

{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e750"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56,
  "average" : 1
}

{
  "_id" : ObjectId("5d1435b8bfb65d65ef09e751"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "average" : 1
}

{
  "_id" : ObjectId("5d1490c3bfb65d65ef09e755"),
  "name" : "Jhone",
  "maths_marks" : 87,
  "science_marks" : 23
}
```

#### Ques14

Remove Kumaran's document from collection

```
{ "name": "Kumaran" }
> db.studentmarks.remove({name:"Kumaran"},1)
WriteResult({ "nRemoved" : 1 })
> db.studentmarks.find()
{ "_id" : ObjectId("5d1435b8fb65d65ef09e749"), "name" : "Mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 72, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74a"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74b"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74c"), "name" : "Aruli", "maths_marks" : 75, "english_marks" : 85, "science_marks" : 80, "average" : 1 }
}
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74d"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e74f"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e750"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" : 1 }
{ "_id" : ObjectId("5d1435b8fb65d65ef09e751"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "average" : 1 }
>
```



Ques15

Find Kala's or Aruli's math\_marks and science\_marks

```
> db.studentmarks.find({$or:[{name:"Kala"},{name:"Aruli"}]}, {_id:0,english_marks:0,average:0}).pretty()
{ "name" : "Kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "Aruli", "maths_marks" : 75, "science_marks" : 80 }
>
```