

## Node js exercise 3

1) Create a Database called student

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   console.log("Database created!");
7   db.close();
8 });
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-1
Database created!
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

2) Create a collection called studentmarks

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var ram = db.db("student");
7   ram.createCollection("studentmarks", function(err, res) {
8     if (err) throw err;
9     console.log("Collection created!");
10    db.close();
11  });
12 });
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-2
Collection created!
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

3) Create the documents listed in above table.

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var myobj = [
    {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 : "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 }
  ];

  var ram = db.db("student")
  ram.collection("studentmarks").insertMany(myobj, function(err, res) {
    if (err) throw err;
    console.log("Number of documents inserted: " + res.insertedCount);
    db.close();
  });
});
```

collection created:

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-3
Number of documents inserted: 9
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

4) Increase the maths marks of Mala by 6 marks

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student")
  var myquery = { name: "Maala" };
  var newvalues = {$inc: {maths_marks: 6} };
  ram.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
    if (err) throw err;
    console.log("1 document updated");
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-4
1 document updated
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  ram.collection("studentmarks").find({maths_marks:{$gt: 50}},
    {name: true, _id: false}).toArray(function(err, result) {
    if (err) throw err;
    console.log(result);
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-5
[ { _id: 5a569123ec627d13d047fd61,
  name: 'Maala',
  maths_marks: 51,
  english_marks: 53,
  science_marks: 72 },
  { _id: 5a569123ec627d13d047fd62,
  name: 'Vanu',
  maths_marks: 80,
  english_marks: 75,
  science_marks: 85 },
  { _id: 5a569123ec627d13d047fd64,
  name: 'Aruli',
  maths_marks: 78,
  english_marks: 85,
  science_marks: 80 },
  { _id: 5a569123ec627d13d047fd65,
  name: 'Shayu',
  maths_marks: 80,
  english_marks: 76,
  science_marks: 65 },
  { _id: 5a569123ec627d13d047fd67,
  name: 'Lucky',
  maths_marks: 66,
  english_marks: 90,
  science_marks: 45 },
  { _id: 5a569123ec627d13d047fd68,
  name: 'Gva',
  maths_marks: 71,
  english_marks: 75,
  science_marks: 56 } ]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```



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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  var myquery = {};
  var newvalues = {$set: {Average: ""}};
  ram.collection("studentmarks").updateMany(myquery, newvalues, function(err, res) {
    if (err) throw err;
    console.log(res.result.nModified + " document(s) updated");
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-6
9 document(s) updated
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

```
> db.studentmarks.find()
{ "_id" : ObjectId("5a569123ec627d13d047fd61"), "name" : "Maala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 72, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd62"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd63"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd64"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd65"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd66"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd67"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 45, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd68"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "Average" : "" }
{ "_id" : ObjectId("5a569123ec627d13d047fd69"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "science_marks" : 88, "Average" : "" }
```

7) Update Marks\_Science=75 to Lucky .

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  var myquery = { name: "Lucky" };
  var newvalues = {$set: {science_marks: 75}};
  ram.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
    if (err) throw err;
    console.log("1 document updated");
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-7
1 document updated
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  ram.collection("studentmarks").find({maths_marks:{$gt: 50},
    english_marks:{$gt: 50}, science_marks:{$gt: 50}},
    {name: true, _id: false}).toArray(function(err, result) {
      if (err) throw err;
      console.log(result);
      db.close();
    });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-8
[ { _id: 5a569123ec627d13d047fd61,
  name: 'Maala',
  maths_marks: 51,
  english_marks: 53,
  science_marks: 72,
  Average: '' },
  { _id: 5a569123ec627d13d047fd62,
  name: 'Vanu',
  maths_marks: 80,
  english_marks: 75,
  science_marks: 85,
  Average: '' },
  { _id: 5a569123ec627d13d047fd64,
  name: 'Aruli',
  maths_marks: 78,
  english_marks: 85,
  science_marks: 80,
  Average: '' },
  { _id: 5a569123ec627d13d047fd65,
  name: 'Shayu',
  maths_marks: 80,
  english_marks: 76,
  science_marks: 65,
  Average: '' },
  { _id: 5a569123ec627d13d047fd67,
  name: 'Lucky',
  maths_marks: 66,
  english_marks: 90,
  science_marks: 75,
  Average: '' },
  { _id: 5a569123ec627d13d047fd68,
  name: 'Gva',
  maths_marks: 71,
  english_marks: 75,
  science_marks: 56,
  Average: '' } ]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var ram = db.db("student");
7   ram.collection("studentmarks").find({maths_marks:{$lt: 50},
8     english_marks:{$gt: 50}},
9     {name: true, _id: false}).toArray(function(err, result) {
10    if (err) throw err;
11    console.log(result);
12    db.close();
13  });
14 });
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-9
[ { _id: 5a569123ec627d13d047fd66,
  name: 'Kumaran',
  maths_marks: 32,
  english_marks: 73,
  science_marks: 84,
  Average: '' },
  { _id: 5a569123ec627d13d047fd69,
  name: 'Raam',
  maths_marks: 41,
  english_marks: 65,
  science_marks: 88,
  Average: '' } ]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```



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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  ram.collection("studentmarks").find({maths_marks:{$lt: 40},
    science_marks:{$lt: 40}},
    {name: true, _id: false}).toArray(function(err, result) {
      if (err) throw err;
      console.log(result);
      db.close();
    });
});
```

```
Average:    } ]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-10
[]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-10
```

11) Remove Science column/field for Raam

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  var myquery = { name: "Raam" };
  var newvalues = {$unset:{ science_marks: 75 }};
  ram.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
    if (err) throw err;
    console.log("1 document updated");
    db.close();
  });
});
```

```
de process: c:\node\node.js\lib\process.js:100:5)
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-11
1 document updated
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```



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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://127.0.0.1:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  var myobj = { name: "Jhon", maths_marks: 87, english_marks: 27};
  ram.collection("studentmarks").insertOne(myobj, function(err, res) {
    if (err) throw err;
    console.log("1 document inserted");
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-12
1 document inserted
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

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

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var ram = db.db("student")
7   var myquery = { name: "Jhon"};
8   var newvalues = {$rename: {english_marks: "science_marks"} };
9   ram.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12     db.close();
13   });
14 });
15
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-13
1 document updated
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

14) Remove Kumaran's document from collection

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var ram = db.db("student")
7   var myquery = { name:"Kumaran" };
8   ram.collection("studentmarks").deleteOne(myquery, function(err, obj) {
9     if (err) throw err;
10    console.log("1 document deleted");
11    db.close();
12  });
13 });
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-14
1 document deleted
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```

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

```
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/student";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var ram = db.db("student");
  ram.collection("studentmarks").find({$or:[{name:"Aruli"},{name:"Kala"}]} ,
  [{maths_marks: true, science_marks: true}]).toArray(function(err, result) {
    if (err) throw err;
    console.log(result);
    db.close();
  });
});
```

```
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$ node q-15
[ { _id: 5a569123ec627d13d047fd63,
  name: 'Kala',
  maths_marks: 32,
  english_marks: 46,
  science_marks: 53,
  Average: '' },
  { _id: 5a569123ec627d13d047fd64,
  name: 'Aruli',
  maths_marks: 78,
  english_marks: 85,
  science_marks: 80,
  Average: '' } ]
ukistu05@UKIPC05:~/Documents/uki2/coding/nodejs/node js ex 3$
```