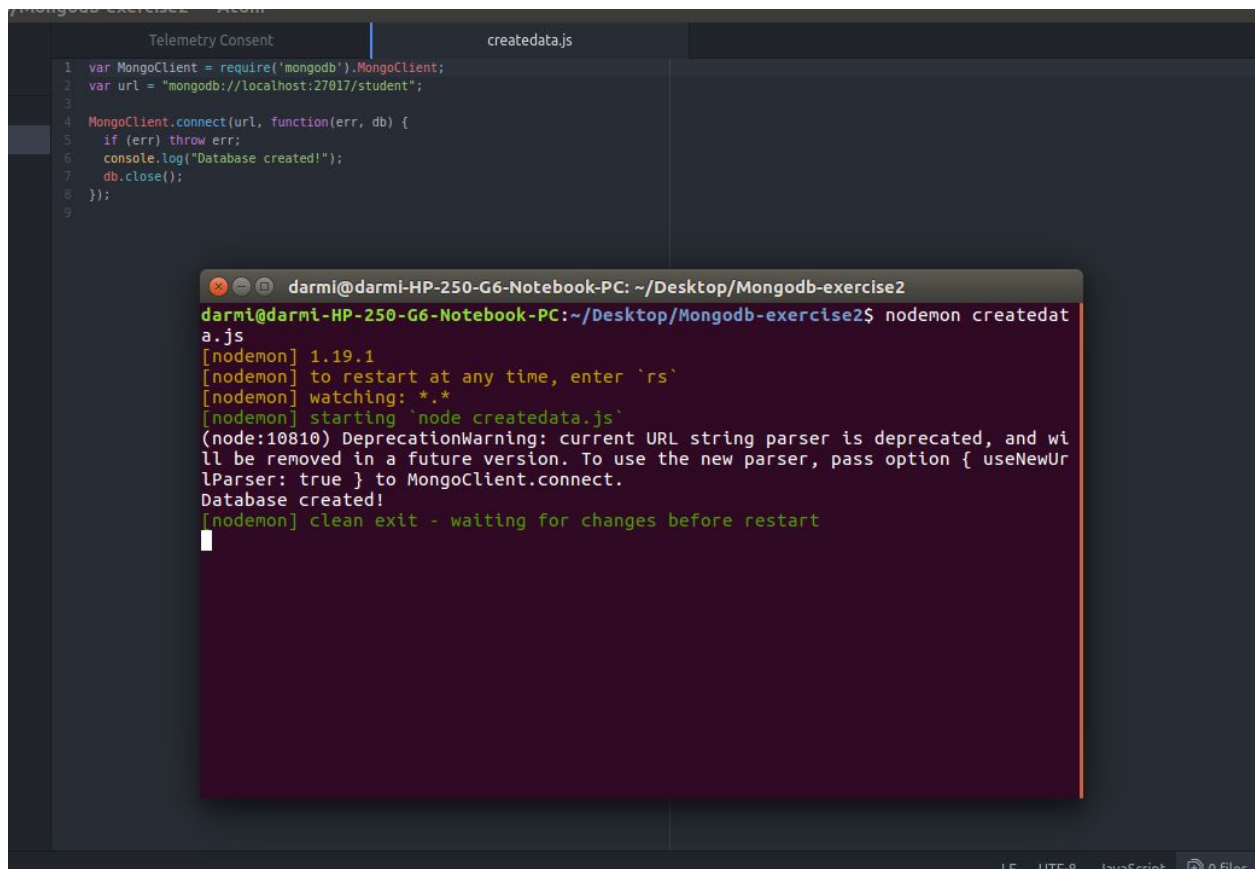


1) Create a Database called student



The screenshot shows a code editor with a file named `createdata.js` and a terminal window running `nodemon`. The code in the editor connects to a MongoDB instance at `localhost:27017/student` and logs "Database created!". The terminal output shows the `nodemon` process starting, displaying version `1.19.1`, and successfully running the `createdata.js` script. A deprecation warning is also visible in the terminal output.

```
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 });
9
```

```
darmi@darmi-HP-250-G6-Notebook-PC: ~/Desktop/Mongodb-exercise2
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon createdata.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node createdata.js`
(node:10810) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
Database created!
[nodemon] clean exit - waiting for changes before restart
```

2) Create a collection called studentmarks

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon createcollection.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node createcollection.js`
(node:11665) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
Collection created!
[nodemon] clean exit - waiting for changes before restart
```

Project	createdata.js	createcollection.js
exercise2	1 var MongoClient = require('mongodb').MongoClient; 2 var url = "mongodb://localhost:27017/"; 3 4 MongoClient.connect(url, function(err, db) { 5 if (err) throw err; 6 var dbo = db.db("student"); 7 dbo.createCollection("studentmarks", function(err, res) { 8 if (err) throw err; 9 console.log("Collection created!"); 10 db.close(); 11 }); 12 }); 13	

3) Create the documents listed in above table.

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon insert.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node insert.js`
(node:11769) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
Number of documents inserted: 9
[nodemon] clean exit - waiting for changes before restart
```

```
createdata.js  insert.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myobj = [
8
9     {name:"Mala",maths_marks:45,english_marks:53,science_marks:72},
10    {name:"Vanu",maths_marks:80,english_marks:75,science_marks:85},
11    {name:"Kala",maths_marks:32,english_marks:46,science_marks:53},
12    {name:"Aruli",maths_marks:75,english_marks:85,science_marks:80},
13    {name:"Shayu",maths_marks:80,english_marks:76,science_marks:65},
14    {name:"Kumaran",maths_marks:32,english_marks:73,science_marks:84},
15    {name:"Lucky",maths_marks:66,english_marks:90,science_marks:45},
16    {name:"Gva",maths_marks:71,english_marks:75,science_marks:56},
17    {name:"Raam",maths_marks:41,english_marks:65,science_marks:88}
18  ];
19  dbo.collection("studentmarks").insertMany(myobj, function(err, res) {
20    if (err) throw err;
21    console.log("Number of documents inserted: " + res.insertedCount);
22    db.close();
23  });
24 });
```

4) Increase the maths marks of Mala by 6 marks

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon increase.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node increase.js`
(node:12671) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document updated
[nodemon] clean exit - waiting for changes before restart
```

createdata.js	increase.js	untitled
<pre>1 var MongoClient = require('mongodb').MongoClient; 2 var url = "mongodb://127.0.0.1:27017/"; 3 4 MongoClient.connect(url, function(err, db) { 5 if (err) throw err; 6 var dbo = db.db("student"); 7 var myquery = { name: "Mala" }; 8 var newvalues = { \$inc: { maths marks: 6 } }; 9 dbo.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</pre>		

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

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon more50.js
```

```
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node more50.js`
(node:12851) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
[ { name: 'Mala', maths_marks: 63 },
  { name: 'Vanu', maths_marks: 80 },
  { name: 'Aruli', maths_marks: 75 },
  { name: 'Shayu', maths_marks: 80 },
  { name: 'Lucky', maths_marks: 66 },
  { name: 'Gva', maths_marks: 71 } ]
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var query = {"maths_marks":{"$gt":50}};
8   dbo.collection("studentmarks").find(query, { projection: { _id:0,science_marks:0,english_marks:0 } }).toArray(function(err, result) {
9     if (err) throw err;
10    console.log(result);
11    db.close();
12  });
13 });
14
```

LF UTF-8 JavaScript 0 Fi

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

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon average.js
S
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node average.js`
(node:13110) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document updated
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { };
8   var newvalues = { $set: {average: "" } };
9   dbo.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
```


7) Update Marks_Science=75 to Lucky .

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon updtae.js

[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node updtae.js`
(node:13259) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document updated
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { name: "Lucky" };
8   var newvalues = { $set: {science_marks:75 } };
9   dbo.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
```

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

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon morethan1.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node morethan1.js`
(node:13392) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
[ { name: 'Mala', average: '' },
  { name: 'Vanu' },
  { name: 'Aruli' },
  { name: 'Shayu' },
  { name: 'Lucky' },
  { name: 'Gva' } ]
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var query = {$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}];
8   dbo.collection("studentmarks").find(query, { projection: {_id:0,science_marks:0,english_marks:0,maths_marks:0} }).toArray(function(err, result) {
9     if (err) throw err;
10    console.log(result);
11    db.close();
12  });
13 });
14
```


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

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon morethan2.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node morethan2.js`
(node:3624) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
[ { name: 'Kumaran' }, { name: 'Raam' } ]
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$and:[{maths_marks:{<50}}, {english_marks:{>50}}]}, { projection: { _id: 0, name: 1 } }).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
```

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

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon lessthan.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node lessthan.js`
(node:7176) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
[]
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$and:[{maths_marks:{$lt:40}},{science_marks:{$lt:40}}]}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13 |
```

11) Remove Science column/field for Raam

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon unset.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node unset.js`
(node:4668) DeprecationWarning: current URL string parser is deprecated, and will
be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document updated
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = {name: 'Raam' };
8   var newvalues = {$unset:{science_marks:88}};
9   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12     db.close();
13   });
14 });
```

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

```
harmi@dermi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon update1.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting 'node update1.js'
(node:8450) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document upserted
[nodemon] clean exit - waiting for changes before restart
```

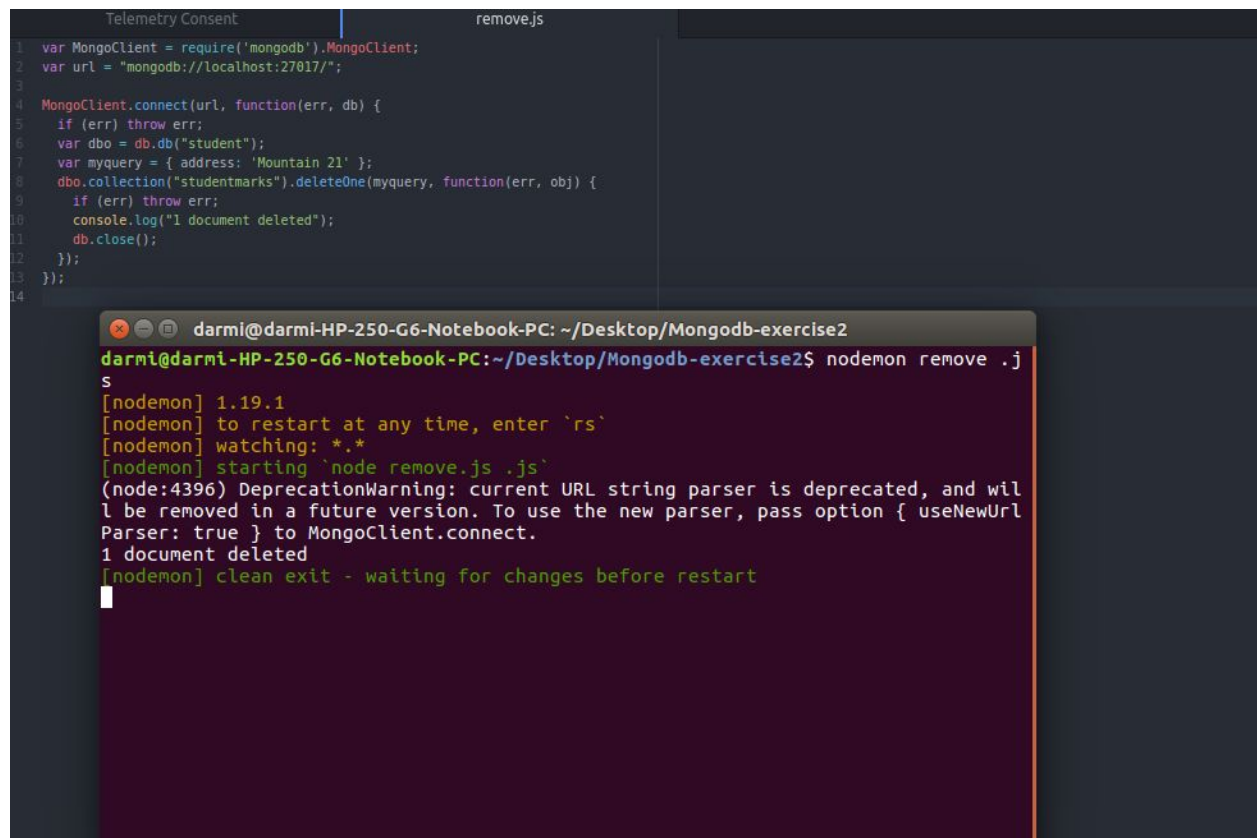
```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myobj = { name: "John", maths_marks: 87, english_marks: 23 };
8   dbo.collection("studentmarks").insertOne(myobj, {upsert: true, safe: false}, function(err, res) {
9     if (err) throw err;
10    console.log("1 document upserted");
11    db.close();
12  });
13 });
14 |
```

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

```
^Cdarmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon rename.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter 'rs'
[nodemon] watching: *.*
[nodemon] starting 'node rename.js'
(node:8895) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document updated
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { _id: "Lucky" };
8   var newvalues = { $rename: { "english_marks": "science_marks" } };
9   dbo.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
```

14) Remove Kumaran's document from collection



The screenshot shows a code editor with a file named `remove.js` and a terminal window running Node.js with the `nodemon` package manager.

remove.js

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { address: 'Mountain 21' };
8   dbo.collection("studentmarks").deleteOne(myquery, function(err, obj) {
9     if (err) throw err;
10    console.log("1 document deleted");
11    db.close();
12  });
13 });
14
```

Terminal Output:

```
darmi@darmi-HP-250-G6-Notebook-PC: ~/Desktop/Mongodb-exercise2
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon remove.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node remove.js .js`
(node:4396) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
1 document deleted
[nodemon] clean exit - waiting for changes before restart
```


15) Find Kala's or Aruli's math_marks and science_marks

```
darmi@darmi-HP-250-G6-Notebook-PC:~/Desktop/Mongodb-exercise2$ nodemon find.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node find.js`
(node:4540) DeprecationWarning: current URL string parser is deprecated, and will be removed in a future version. To use the new parser, pass option { useNewUrlParser: true } to MongoClient.connect.
[ { name: 'Kala', maths_marks: 32, science_marks: 53 },
  { name: 'Aruli', maths_marks: 75, science_marks: 80 } ]
[nodemon] clean exit - waiting for changes before restart
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$or:[{name:"Aruli"},{name:"Kala"}]}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```