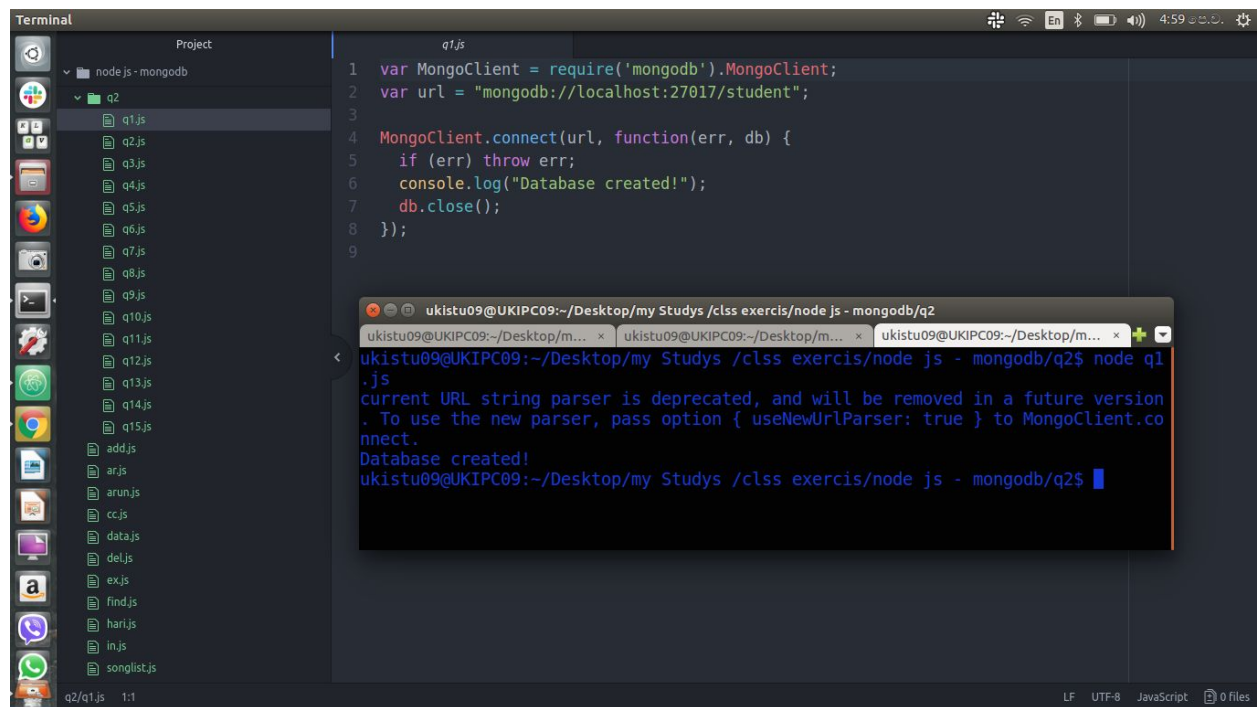


## 1) Create a Database called student



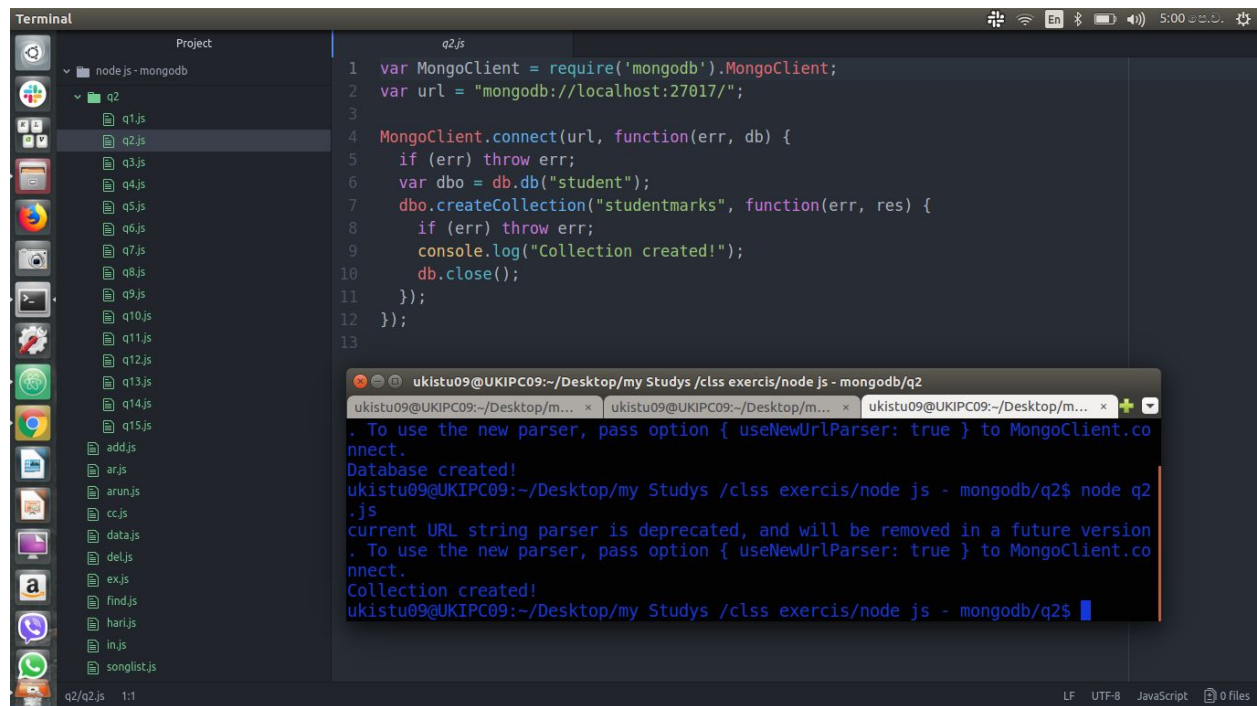
```
q1.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   console.log("Database created!");
7   db.close();
8 });
9
```

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q1.js

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!  
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$

## 2) Create a collection called studentmarks



```
q2.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   dbo.createCollection("studentmarks", function(err, res) {
8     if (err) throw err;
9     console.log("Collection created!");
10    db.close();
11  });
12 });
13
```

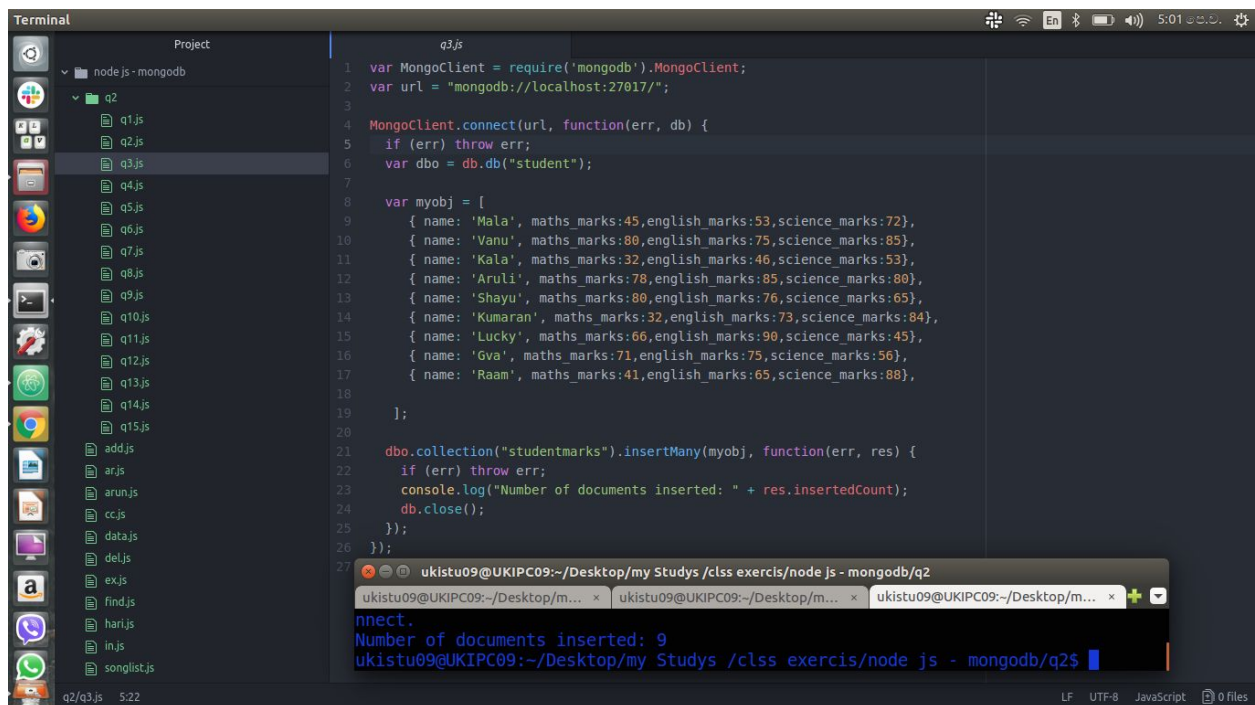
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q2.js

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!  
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q2.js

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!  
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$

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



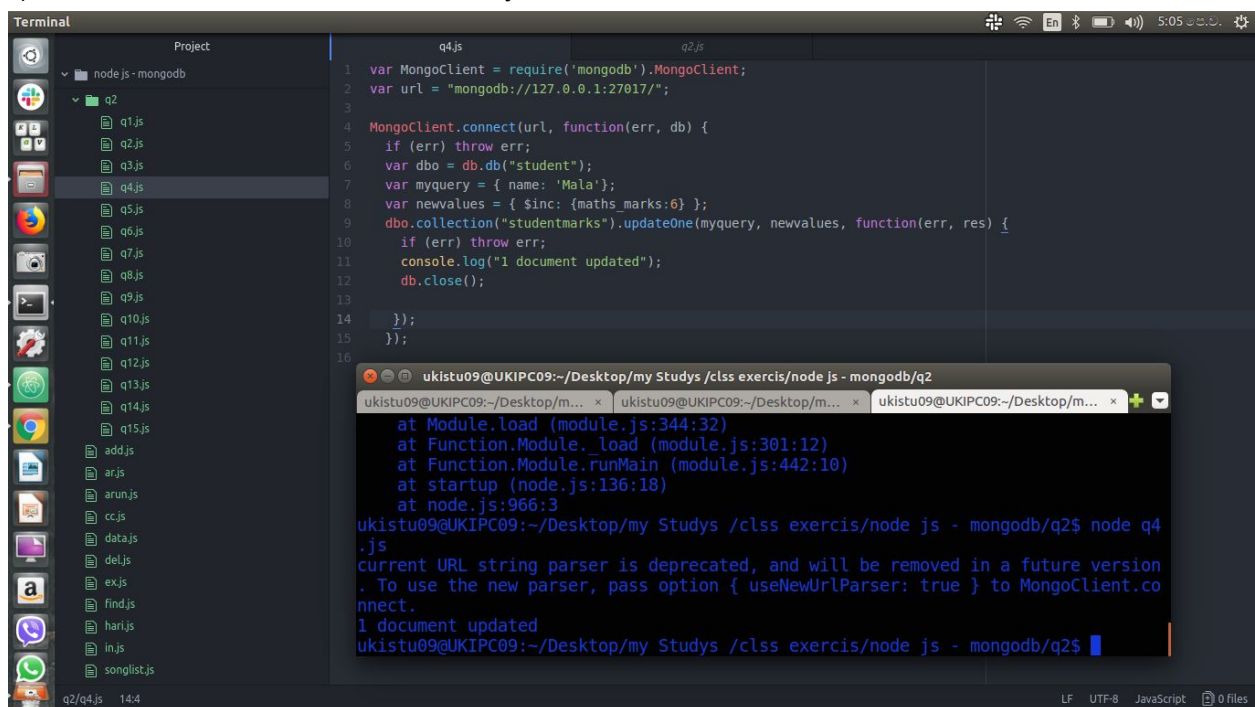
The screenshot shows a VS Code editor with a project named 'node.js - mongodb'. The file explorer on the left shows a directory 'q2' containing files q1.js through q15.js, and other files like add.js, ar.js, arun.js, cc.js, data.js, del.js, ex.js, find.js, hari.js, in.js, and songlist.js. The main editor shows the content of 'q3.js', which is a Node.js script that connects to a MongoDB instance at localhost:27017, uses the 'student' database, and inserts an array of student documents into the 'studentmarks' collection. The terminal at the bottom shows the command 'node q3.js' being executed, resulting in the message 'Number of documents inserted: 9'.

```
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
8   var myobj = [
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:78,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
20
21  dbo.collection("studentmarks").insertMany(myobj, function(err, res) {
22    if (err) throw err;
23    console.log("Number of documents inserted: " + res.insertedCount);
24    db.close();
25  });
26 });
```

Terminal output:

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q3.js
Number of documents inserted: 9
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

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



The screenshot shows the same VS Code editor setup as before. The main editor now shows the content of 'q4.js', which is a Node.js script that connects to a MongoDB instance at 127.0.0.1:27017, uses the 'student' database, and updates the 'maths\_marks' of the student named 'Mala' by 6 marks. The terminal at the bottom shows the command 'node q4.js' being executed, resulting in the message '1 document updated'.

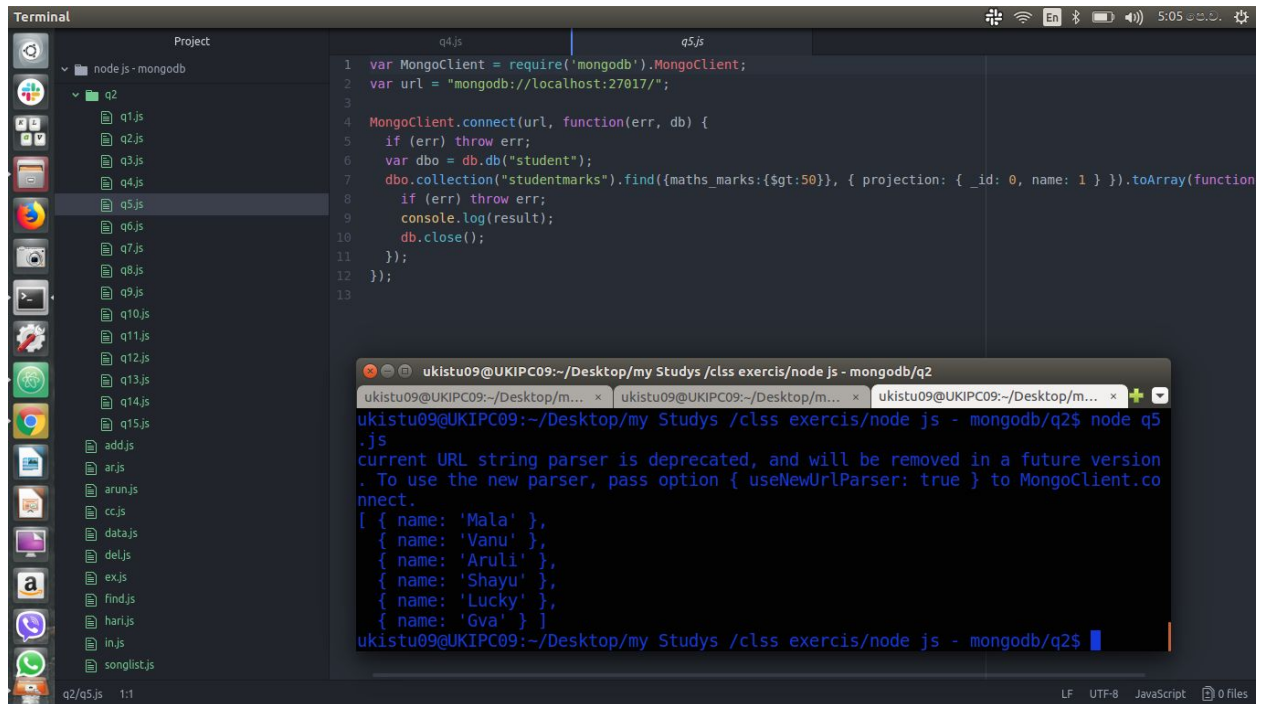
```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { name: 'Mala'};
8   var newvalues = { $inc: {maths_marks:6} };
9   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12     db.close();
13   });
14 });
15
16 });
```

Terminal output:

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q4.js
at Module.load (module.js:344:32)
at Function.Module._load (module.js:301:12)
at Function.Module.runMain (module.js:442:10)
at startup (node.js:136:18)
at node.js:966:3
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q4.js
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
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

```
"_id" : ObjectId("5d26751c7f6de51330a37245"),
"name" : "Mala",
"maths_marks" : 57,
"english_marks" : 53,
"science_marks" : 72
```

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

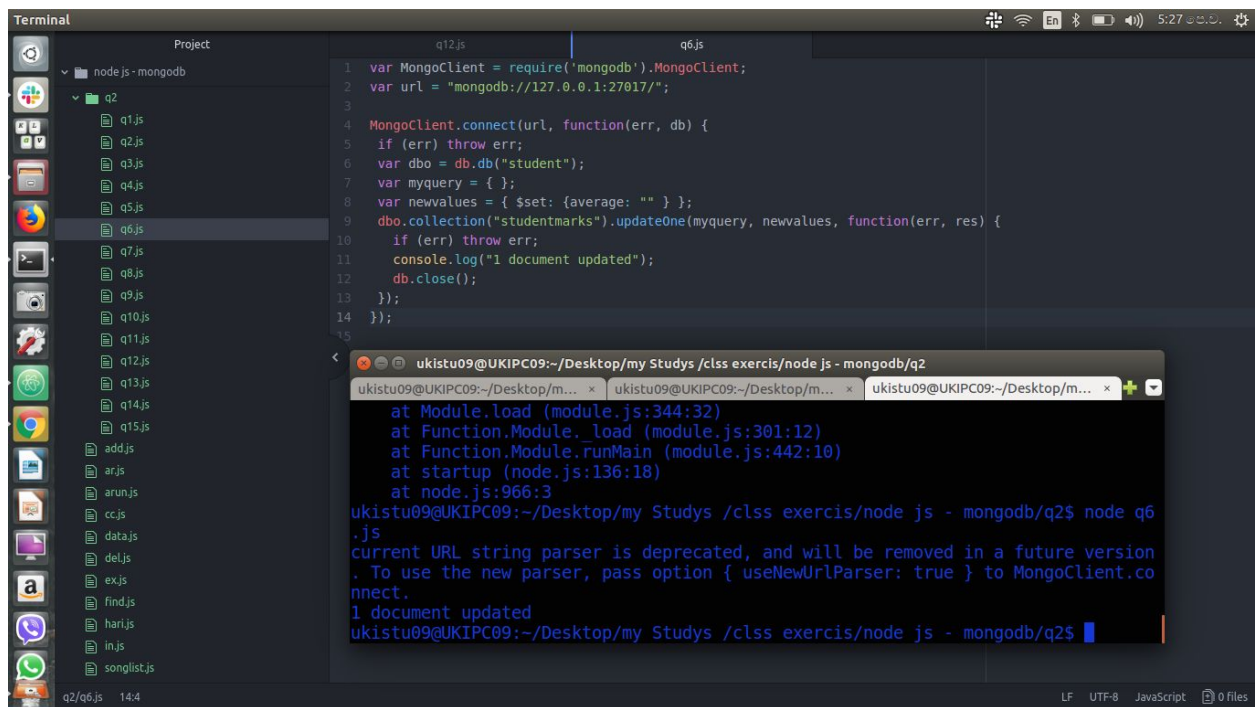


```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({maths_marks:{$gt:50}}, { projection: { _id: 0, name: 1 }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

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q5.js
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.co
nnect.
[ { name: 'Mala' },
  { name: 'Vanu' },
  { name: 'Aruli' },
  { name: 'Shayu' },
  { name: 'Lucky' },
  { name: 'Gva' } ]
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```



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

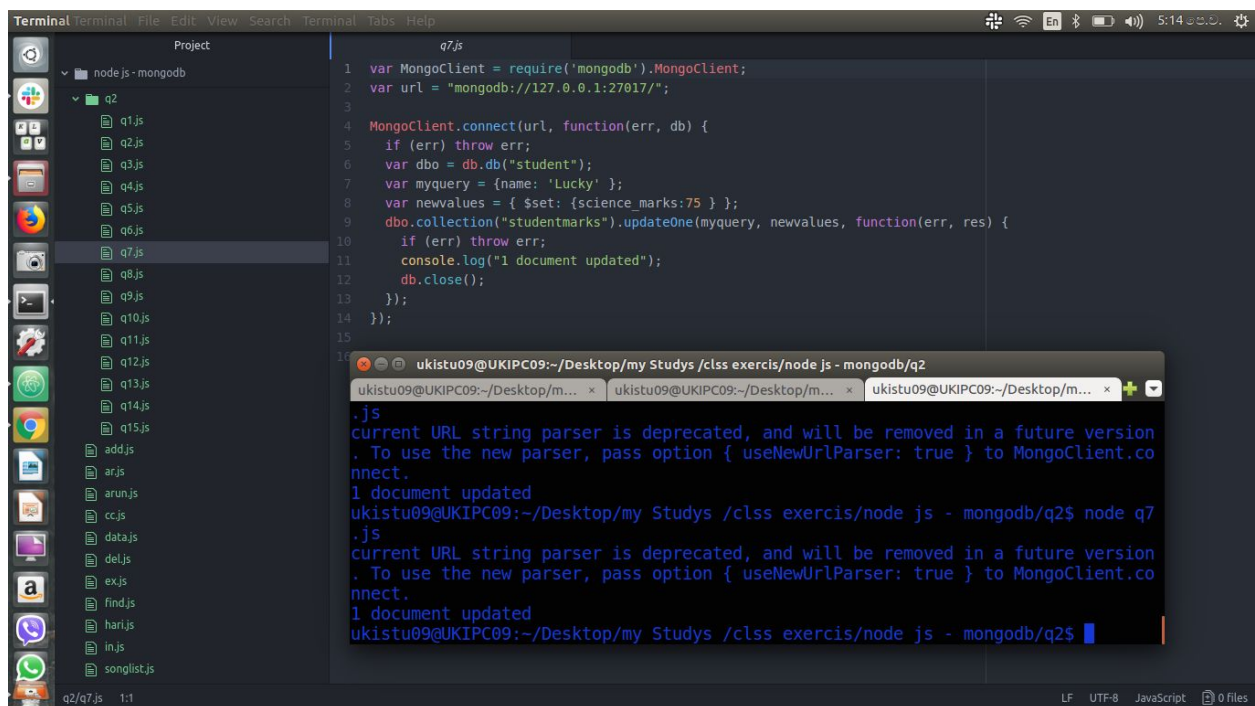


The screenshot shows a VS Code editor with a project named 'node.js - mongodb'. The file explorer on the left shows a directory 'q2' containing files q1.js through q15.js. The main editor shows a file named 'q6.js' with the following JavaScript code:

```
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 });
```

Below the code, a terminal window shows the command to run the script: `node q6.js`. The output indicates that the current URL string parser is deprecated and that the document was successfully updated.

7) Update Marks\_Science=75 to Lucky .



The screenshot shows a VS Code editor with the same project. The file explorer shows the 'q2' directory. The main editor shows a file named 'q7.js' with the following JavaScript code:

```
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 });
```

Below the code, a terminal window shows the command to run the script: `node q7.js`. The output indicates that the current URL string parser is deprecated and that the document was successfully updated.

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

The screenshot shows a VS Code editor with a project named 'node.js - mongodb'. The file 'q8.js' is open, containing a MongoDB query. The terminal output shows the result of the query, which is an array of student names.

```
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({$and: [{maths_marks:{$gt:50}}, {english_marks:{$gt:50}}, {science_marks:{$gt:50}}]
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q8.js
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' },
  { name: 'Vanu' },
  { name: 'Aruli' },
  { name: 'Shayu' },
  { name: 'Lucky' },
  { name: 'Gva' } ]
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

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

The screenshot shows a VS Code editor with a project named 'node.js - mongodb'. The file 'q9.js' is open, containing a MongoDB query. The terminal output shows the result of the query, which is an array of student names.

```
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:50}}, {english_marks:{$gt:50}}]}, { projection: { _id
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q9.js
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' } ]
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

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

The screenshot shows a VS Code editor with a project named 'node.js - mongodb'. The file explorer on the left lists files from q1.js to q15.js. The main editor displays the code in q10.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   dbo.collection("studentmarks").find({$and:[{maths_marks:{$lt:40}}, {science_marks:{$lt:40}}]}, { projection: { _id
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
```

A terminal window is open, showing the command `node q10.js` and its output:

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q10.js
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' } ]
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

## 11) Remove Science column/field for Raam

The screenshot shows a VS Code editor with the same project. The main editor displays the code in q11.js:

```
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 });
```

A terminal window is open, showing the command `node q11.js` and its output:

```
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q11.js
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.
[ ]
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$ node q11.js
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
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2$
```

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



```
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 });
```

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q12.js

nodemonq12.js: command not found

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q12.js

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

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$

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

```
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: "John" };
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 });
```

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q13.js

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

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$

14) Remove Kumaran's document from collection

```
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 = { name: 'Kumaran' };
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
```

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

2.js  
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 inserted  
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q14.js  
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  
ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$

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

```
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"}]}), { projection: { _id: 0, name: 1 ,maths_m
8   if (err) throw err;
9   console.log(result);
10  db.close();
11 });
12 });
13
```

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2

ukistu09@UKIPC09:~/Desktop/my Studys /clss exercis/node js - mongodb/q2\$ node q12.js  
/home/ukistu09/Desktop/my Studys /clss exercis/node js - mongodb/q2/q12.js:3  
^  
SyntaxError: Unexpected token ILLEGAL  
 at exports.runInThisContext (vm.js:53:16)  
 at Module.compile (module.js:374:25)  
 at Object.Module.\_extensions..js (module.js:417:10)  
 at Module.load (module.js:344:32)  
 at Function.Module.\_load (module.js:301:12)