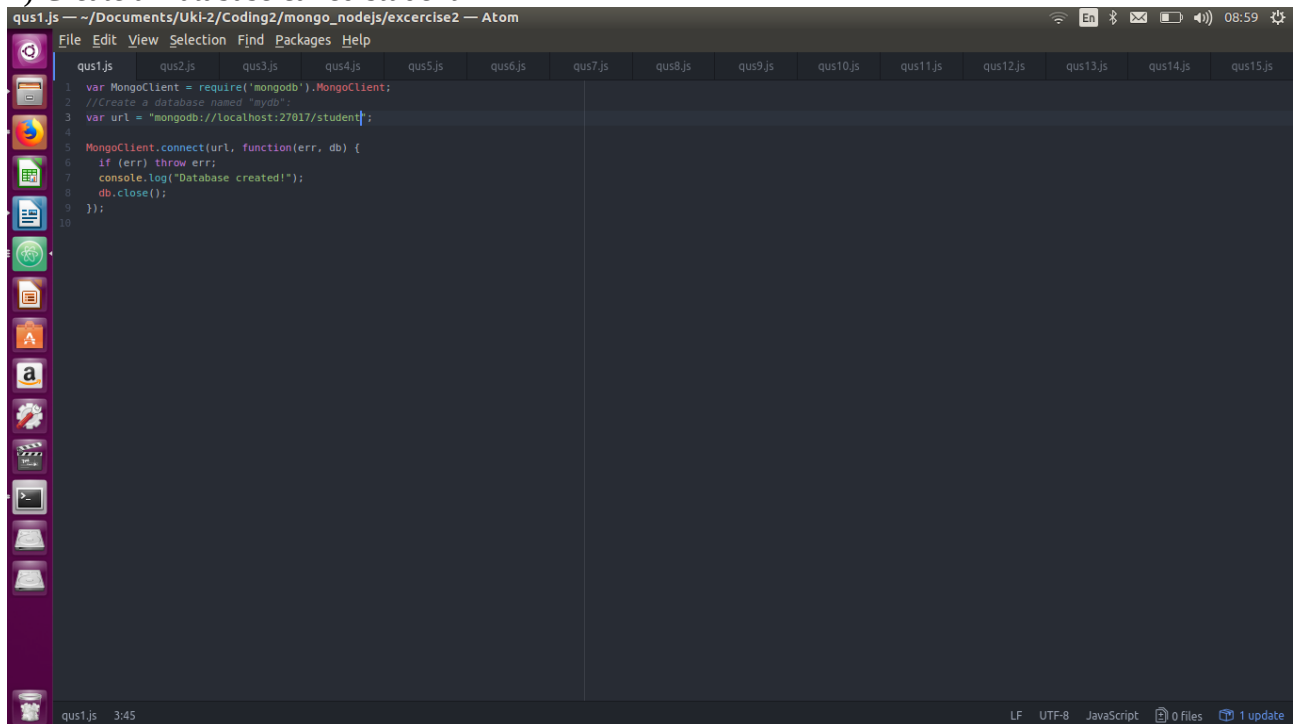


1) Create a Database called student

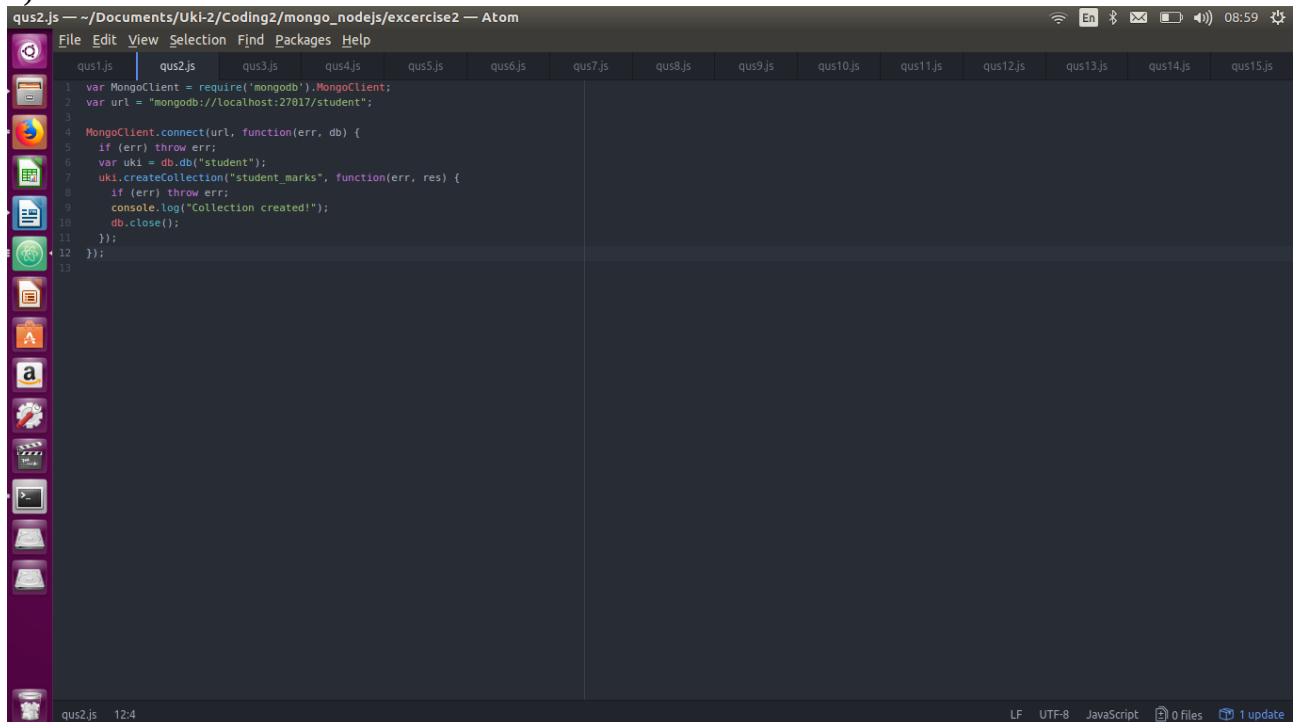


The screenshot shows the Atom editor with a file named `qus1.js` open. The code in the editor is as follows:

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

The status bar at the bottom indicates the file is `qus1.js`, 3:45 lines, using LF line endings, UTF-8 encoding, JavaScript syntax, 0 files, and 1 update.

2) Create a collection called studentmarks



The screenshot shows the Atom editor with a file named `qus2.js` open. The code in the editor is as follows:

```
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 uki = db.db("student");
7   uki.createCollection("student_marks", function(err, res) {
8     if (err) throw err;
9     console.log("Collection created!");
10    db.close();
11  });
12 });
```

The status bar at the bottom indicates the file is `qus2.js`, 12:4 lines, using LF line endings, UTF-8 encoding, JavaScript syntax, 0 files, and 1 update.

3) Create the documents listed in above table.

```
qus3.js — ~/Documents/Uki-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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     { name: 'Mala', maths_marks: 45, english_marks: 53, science_marks: 72},
9     { name: 'Venu', maths_marks: 80, english_marks: 75, science_marks: 85},
10    { name: 'Kala', maths_marks: 32, english_marks: 46, science_marks: 53},
11    { name: 'Aruli', maths_marks: 78, english_marks: 85, science_marks: 80},
12    { name: 'Shayui', maths_marks: 80, english_marks: 76, science_marks: 65},
13    { name: 'Kumaran', maths_marks: 32, english_marks: 73, science_marks: 84},
14    { name: 'Lucky', maths_marks: 66, english_marks: 90, science_marks: 45},
15    { name: 'Gva', maths_marks: 71, english_marks: 75, science_marks: 56},
16    { name: 'Raam', maths_marks: 41, english_marks: 65, science_marks: 88}
17  ];
18  dbo.collection("student_marks").insertMany(myobj, function(err, res) {
19    if (err) throw err;
20    console.log("Number of documents inserted: " + res.insertedCount);
21    db.close();
22  });
23  });
24  });
25
qus3.js 6:29 LF UTF-8 JavaScript 0 Files 1 update
```

4) Increase the maths marks of Mala by 6 marks

```
qus4.js — ~/Documents/Uki-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = {name: "Mala"};
8   var newvalues = {$inc: {maths_marks: 6}};
9   dbo.collection("student_marks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12     db.close();
13   });
14  });
15
qus4.js 7:31 LF UTF-8 JavaScript 0 Files 1 update
```

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

```
qus5.js — ~/Documents/Ukl-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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("student_marks").find({maths_marks: {$gt :50}, {name: true, _id: false}}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
qus5.js 11:6 LF UTF-8 JavaScript 0 Files 1 update
```

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

```
qus6.js — ~/Documents/Ukl-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = {}
8   var newvalues = {$set: {Average: ""}};
9   dbo.collection("student_marks").updateMany(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log(res.result.nModified + "document(s) updated");
12     db.close();
13   });
14 });
15
qus6.js 15:1 LF UTF-8 JavaScript 0 Files 1 update
```

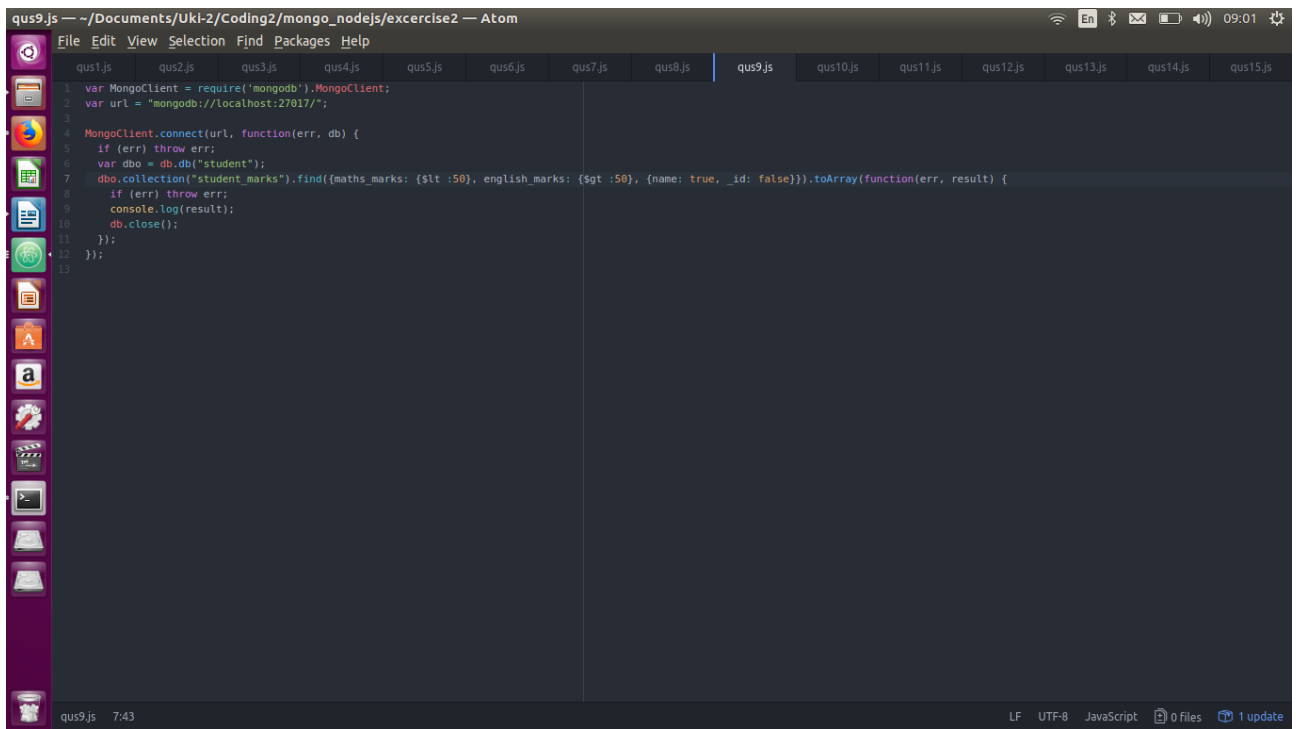
7) Update Marks_Science=75 to Lucky .

```
qus7.js — ~/Documents/Ukl-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = { $set: { science_marks: 75 } };
8   var newvalues = { $set: { science_marks: 75 } };
9   dbo.collection("student_marks").updateMany(myquery, newvalues, function(err, res) {
10    if (err) throw err;
11    console.log("1 document updated");
12    db.close();
13  });
14 });
15
qus7.js 7:19 LF UTF-8 JavaScript 0 Files 1 update
```

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

```
qus8.js — ~/Documents/Ukl-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help
qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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("student_marks").find({maths_marks: { $gt :50}, english_marks: { $gt :50}, science_marks: { $gt :50}, {name: true, _id: false}}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
qus8.js 7:43 LF UTF-8 JavaScript 0 Files 1 update
```

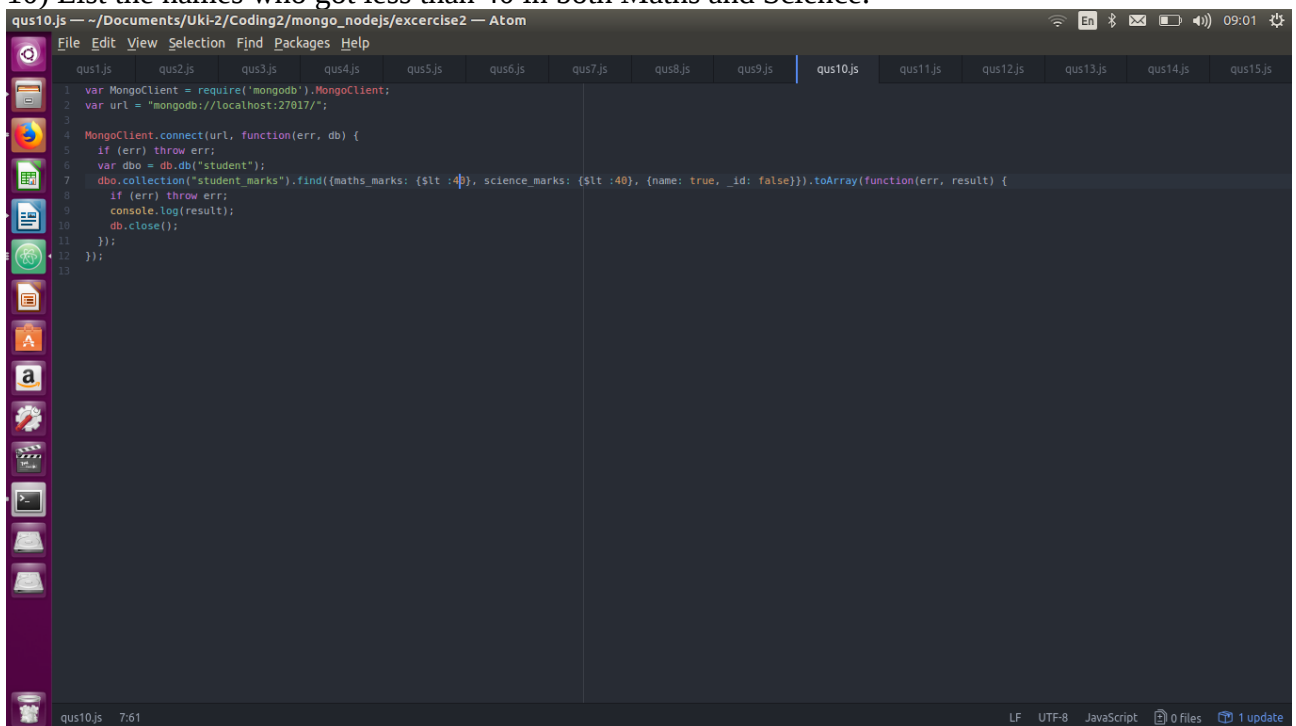
9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

A screenshot of the Atom text editor interface. The title bar shows the file path: qus9.js - ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 - Atom. The menu bar includes File, Edit, View, Selection, Find, Packages, and Help. The file explorer on the left shows a list of files from qus1.js to qus15.js, with qus9.js selected. The main editor area contains the following JavaScript code:

```
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("student_marks").find({maths_marks: {$lt :50}, english_marks: {$gt :50}, (name: true, _id: false)}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```

The status bar at the bottom indicates the current file is qus9.js, the cursor is at line 7, column 43, and the encoding is UTF-8. It also shows 0 files and 1 update.

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

A screenshot of the Atom text editor interface. The title bar shows the file path: qus10.js - ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 - Atom. The menu bar includes File, Edit, View, Selection, Find, Packages, and Help. The file explorer on the left shows a list of files from qus1.js to qus15.js, with qus10.js selected. The main editor area contains the following JavaScript code:

```
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("student_marks").find({maths_marks: {$lt :40}, science_marks: {$lt :40}, (name: true, _id: false)}).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```

The status bar at the bottom indicates the current file is qus10.js, the cursor is at line 7, column 1, and the encoding is UTF-8. It also shows 0 files and 1 update.

11) Remove Science column/field for Raam

```
qus11.js — ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help

qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = {name: 'Raam'};
8   var newvalues = {$set: {science_marks: 75}};
9   dbo.collection("student_marks").updateMany(myquery, newvalues, function(err, res) {
10    if (err) throw err;
11    console.log("1 document updated");
12    db.close();
13  });
14 });
15

qus11.js 13:6 LF UTF-8 JavaScript 0 Files 1 update
```

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

```
qus12.js — ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help

qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = { name: 'Jhon', maths marks: 87, english marks: 27 };
8   dbo.collection("student_marks").insertOne(myobj, function(err, res) {
9     if (err) throw err;
10    console.log("1 documents inserted");
11    db.close();
12  });
13 });
14

qus12.js 7:15 LF UTF-8 JavaScript 0 Files 1 update
```

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

```
qus13.js — ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help

qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = {name: 'Jhon'};
8   var newvalues = {$rename: {english_marks : "science_marks"}};
9   dbo.collection("student_marks").updateOne(myquery, newvalues, function(err, res) {
10    if (err) throw err;
11    console.log("1 document updated");
12    db.close();
13  });
14 });
15

qus13.js 13:6 LF UTF-8 JavaScript 0 Files 1 update
```

14) Remove Kumaran's document from collection

```
qus14.js — ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 — Atom
File Edit View Selection Find Packages Help

qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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 = {name: 'Kumaran'};
8   dbo.collection("student_marks").deleteOne(myquery, newvalues, function(err, res) {
9     if (err) throw err;
10    console.log("1 document deleted");
11    db.close();
12  });
13 });
14

qus14.js 10:36 LF UTF-8 JavaScript 0 Files 1 update
```

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

qus15.js — ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2 — Atom

File Edit View Selection Find Packages Help

qus1.js qus2.js qus3.js qus4.js qus5.js qus6.js qus7.js qus8.js qus9.js qus10.js qus11.js qus12.js qus13.js qus14.js qus15.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("student_marks").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
```

qus15.js 7:117

LF UTF-8 JavaScript 0 Files 1 update