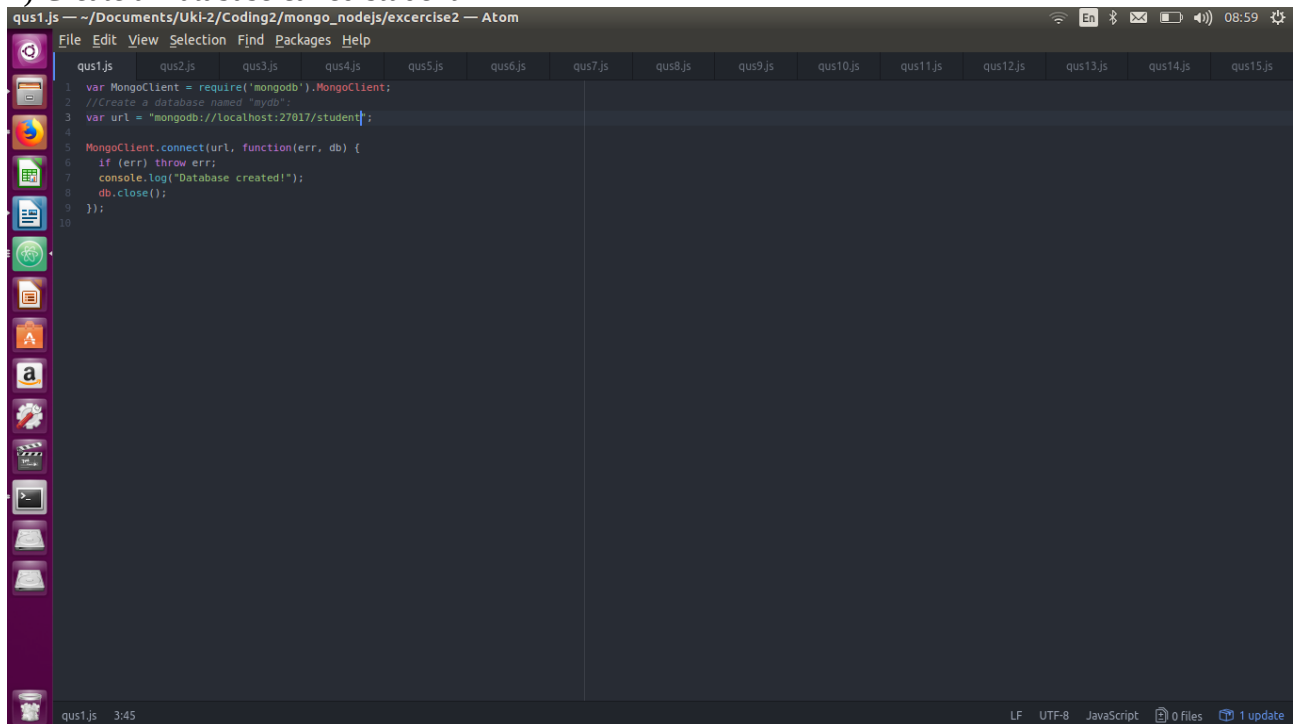


1) Create a Database called student

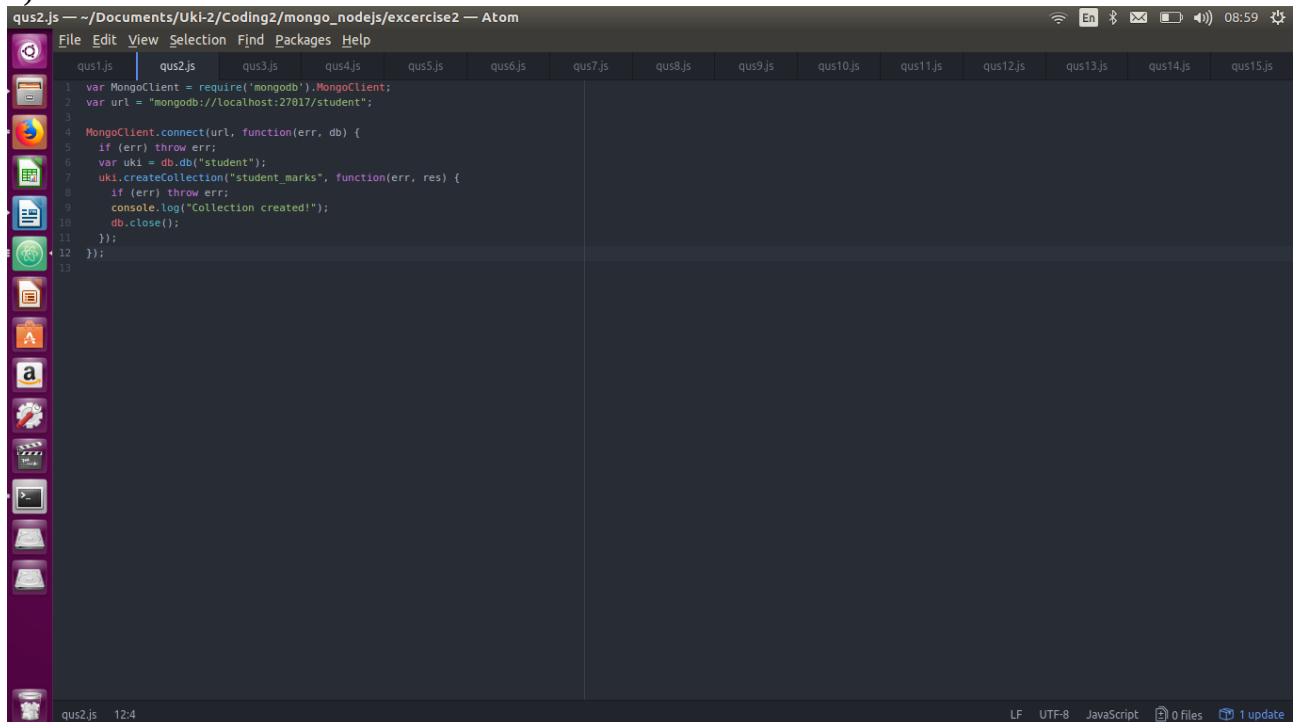


The screenshot shows the Atom text editor with a file named `qus1.js` open. The code in the editor is as follows:

```
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 text 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.

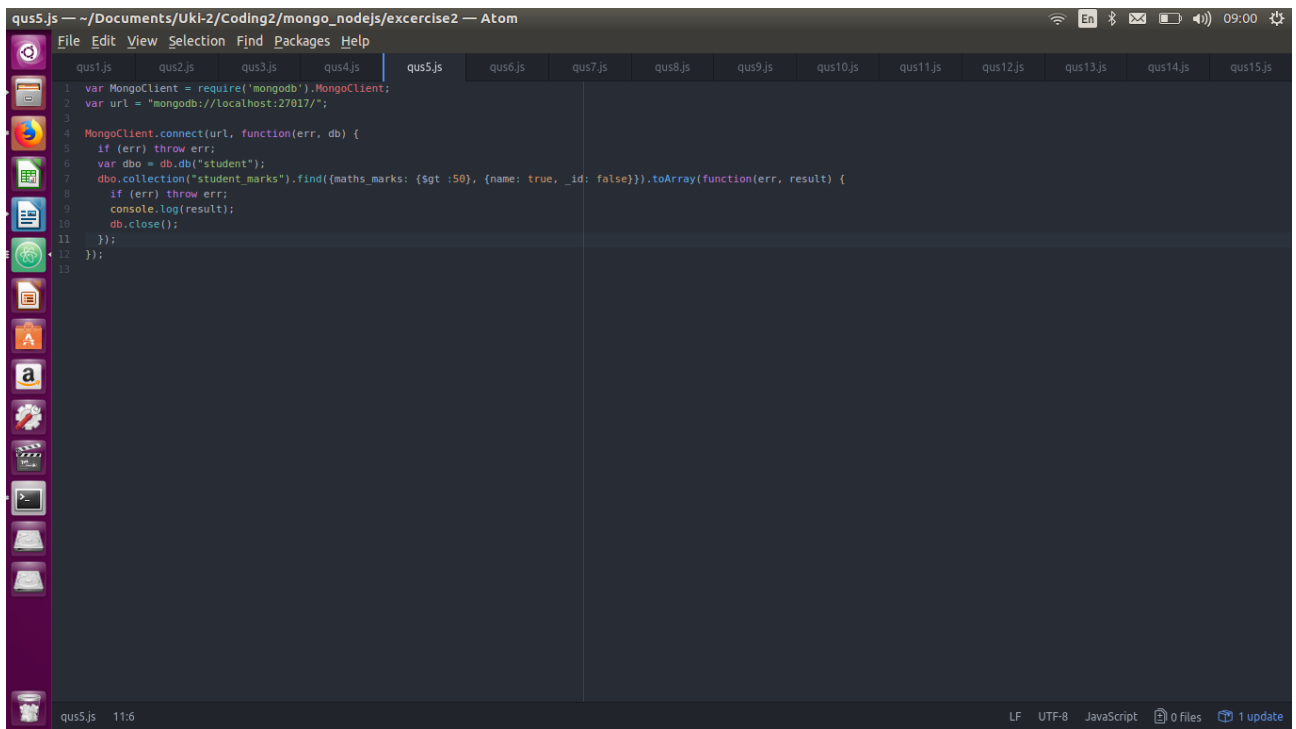
3) Create the documents listed in above table.

```
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.

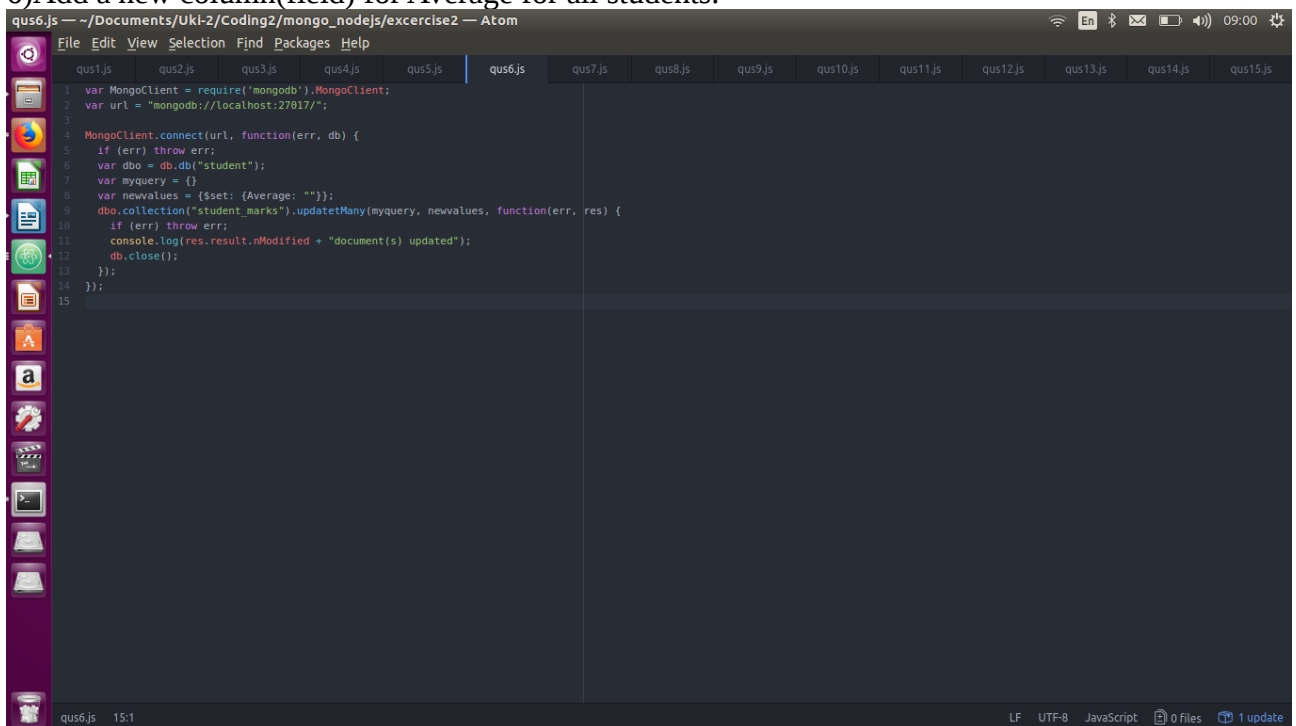


The screenshot shows the Atom editor interface with a file explorer on the left displaying a directory of files named qus1.js through qus15.js. The main editor window is open to qus5.js, which contains the following JavaScript code:

```
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: {$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 file is qus5.js, 11:6 lines, using LF line endings, UTF-8 encoding, JavaScript language, 0 files open, and 1 update available.

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



The screenshot shows the Atom editor interface with the file explorer on the left. The main editor window is open to qus6.js, which 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   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
```

The status bar at the bottom indicates the file is qus6.js, 15:1 lines, using LF line endings, UTF-8 encoding, JavaScript language, 0 files open, and 1 update available.

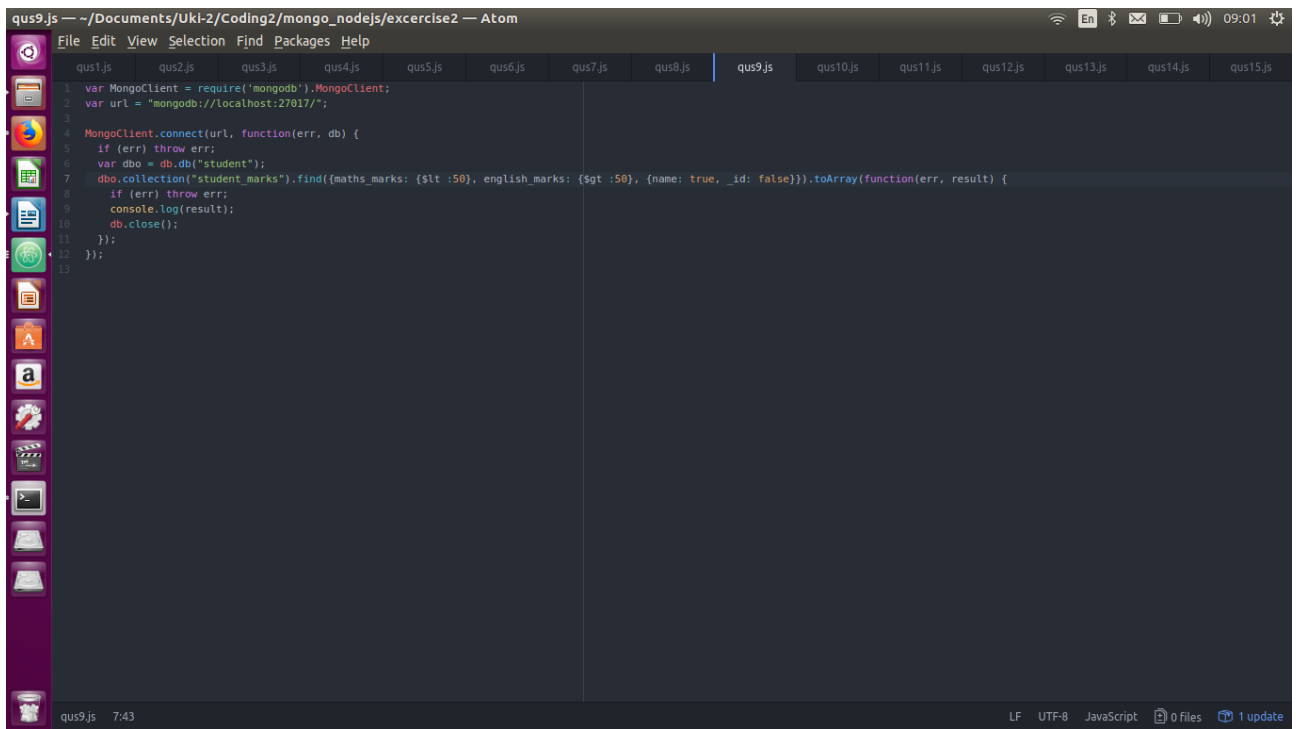
7) Update Marks_Science=75 to Lucky .

```
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
```

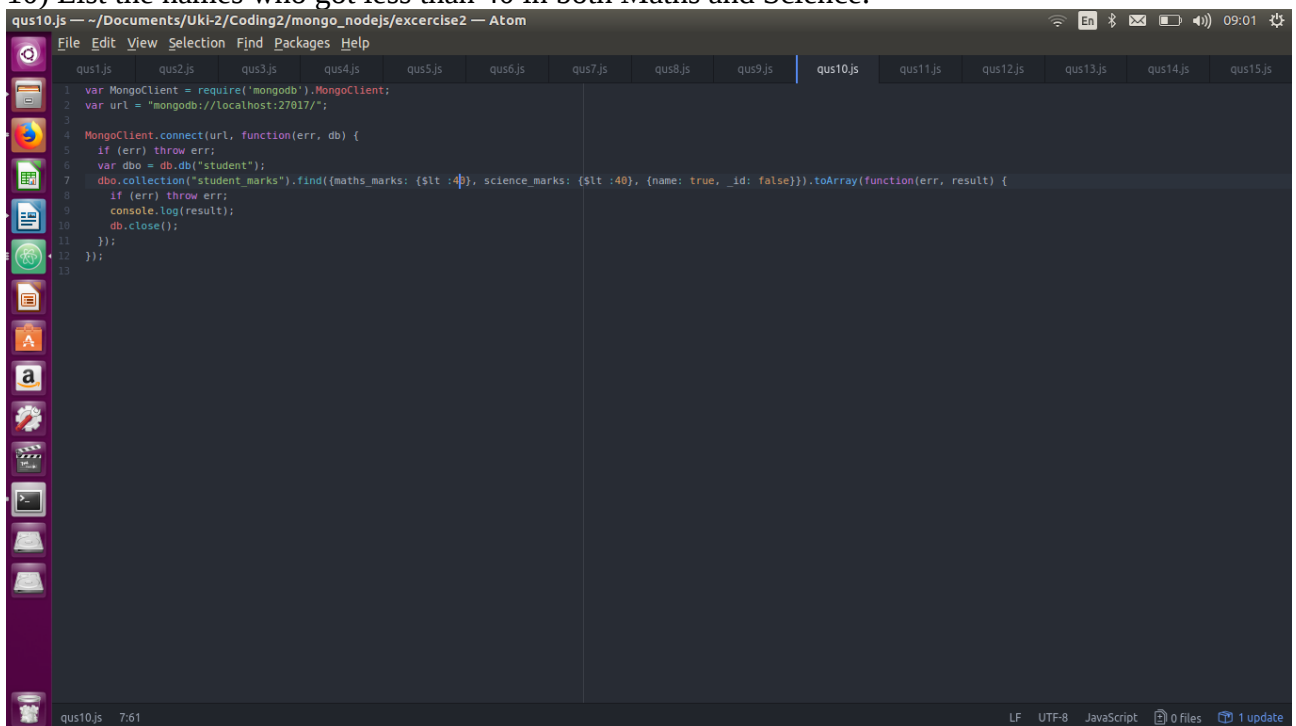
9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

A screenshot of the Atom text editor interface. The title bar shows the file path: ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2. 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 displays 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 time is 7:43, and the encoding is UTF-8.

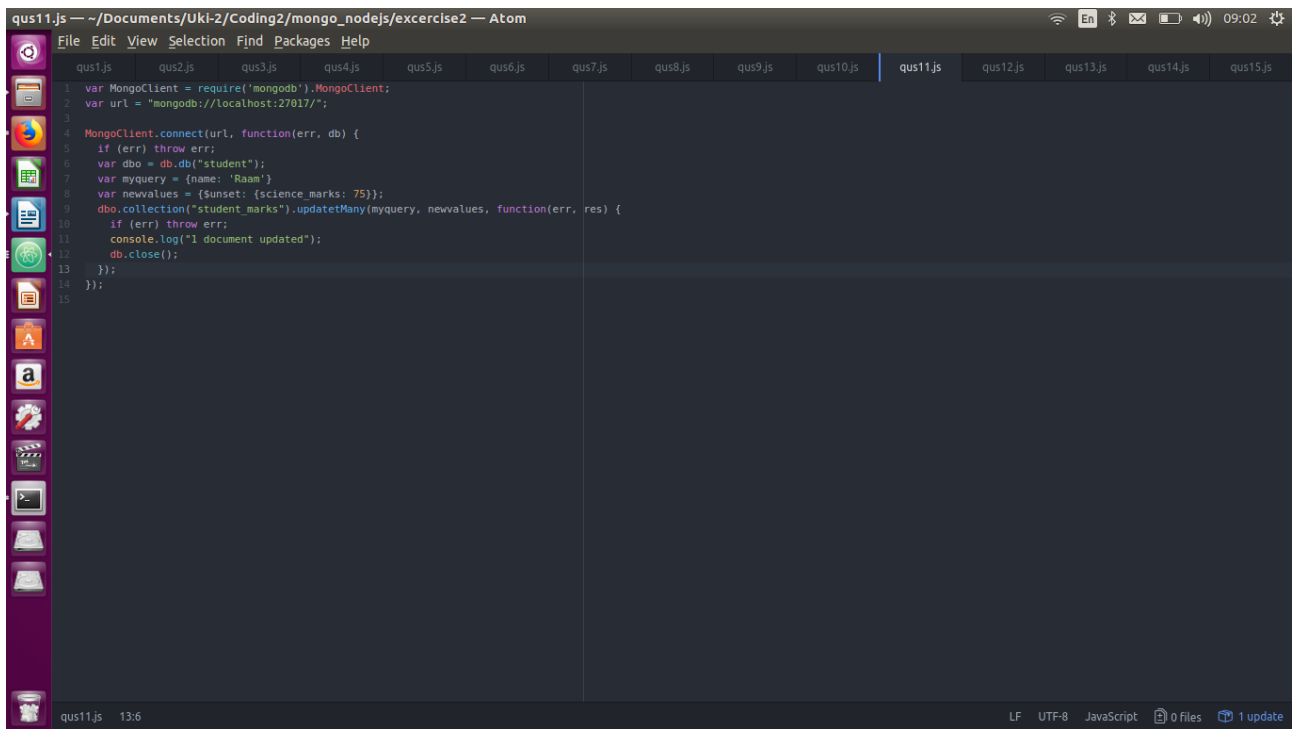
10) List the names who got less than 40 in both Maths and Science.

A screenshot of the Atom text editor interface. The title bar shows the file path: ~/Documents/Ukt-2/Coding2/mongo_nodejs/exercise2. 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 displays 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 time is 7:61, and the encoding is UTF-8.

11) Remove Science column/field for Raam

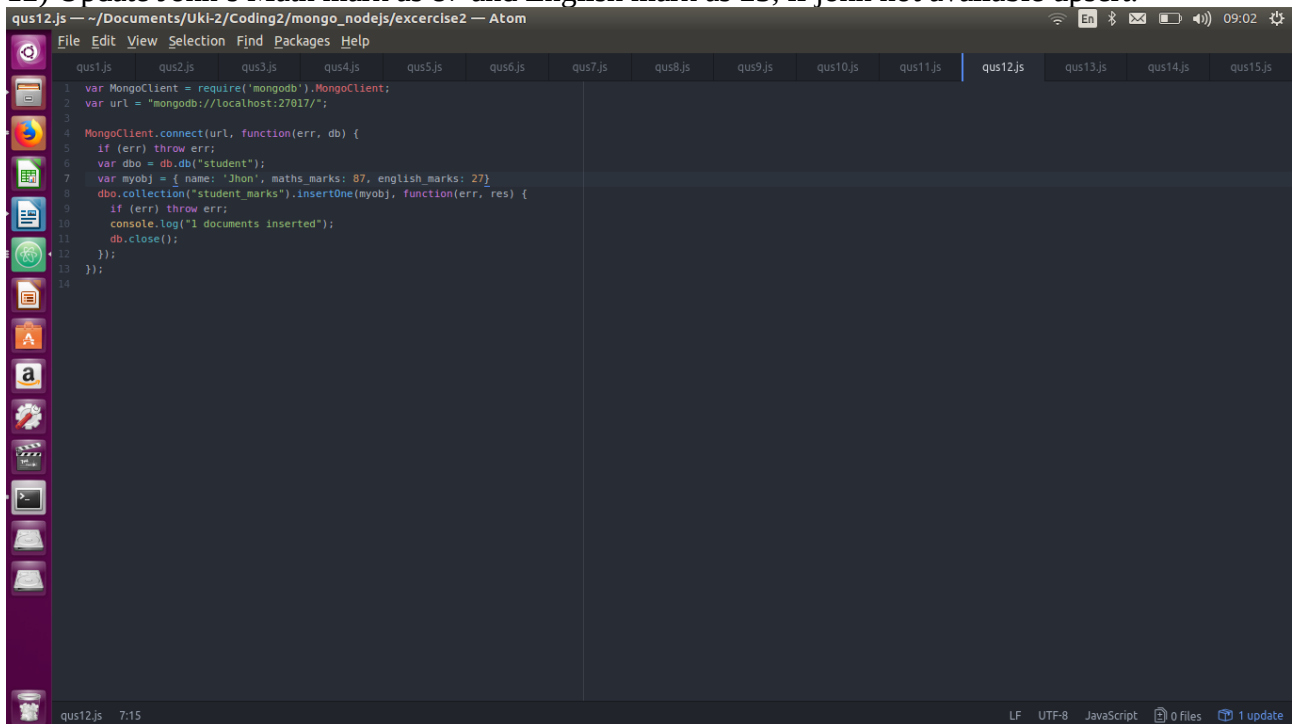


The screenshot shows the Atom editor interface with a file explorer on the left displaying various icons. The main editor window shows the file `qus11.js` with the following JavaScript code:

```
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   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 });
```

The status bar at the bottom indicates the file is `qus11.js`, 13:6, with LF line endings, UTF-8 encoding, JavaScript syntax, 0 files open, and 1 update.

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



The screenshot shows the Atom editor interface with the file `qus12.js` selected. The code is as follows:

```
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 });
```

The status bar at the bottom shows `qus12.js`, 7:15, with LF line endings, UTF-8 encoding, JavaScript syntax, 0 files open, and 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