

Test Documentation

Unit Tests

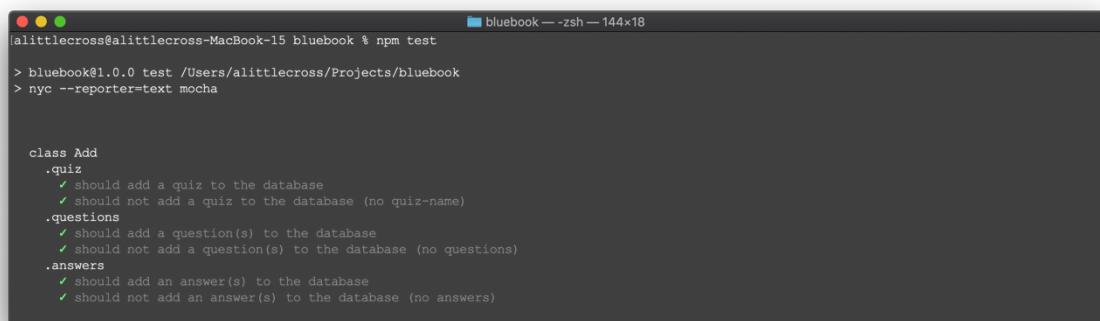
The code was unit tested using Mocha, Chai, and Sinon.

I tested each model used in my MVC approach to the development, stubbing calls to external classes throughout.

Spec files can be found on the test folder in the root of my code folder.

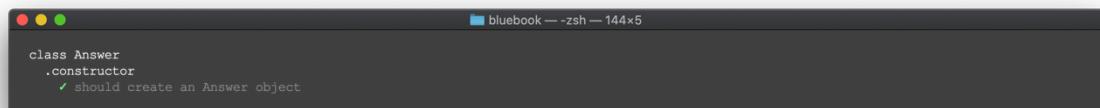
Assuming you have followed the ‘Getting Started’ instructions in the README.md document, these tests can be run, in Terminal:

```
`npm test`
```

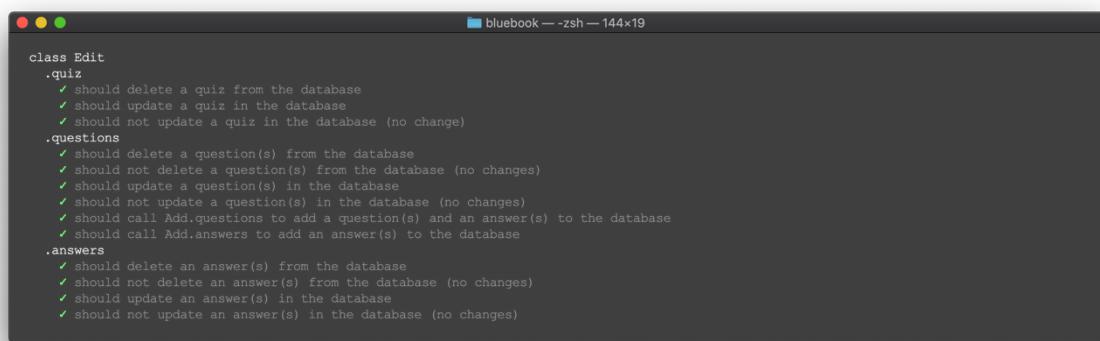


```
[alittlecross@alittlecross-MacBook-15 bluebook % npm test
> bluebook@1.0.0 test /Users/alittlecross/Projects/bluebook
> nyc --reporter=text mocha

  class Add
    .quiz
      ✓ should add a quiz to the database
      ✓ should not add a quiz to the database (no quiz-name)
    .questions
      ✓ should add a question(s) to the database
      ✓ should not add a question(s) to the database (no questions)
    .answers
      ✓ should add an answer(s) to the database
      ✓ should not add an answer(s) to the database (no answers)
```



```
bluebook — zsh — 144x5
  class Answer
    .constructor
      ✓ should create an Answer object
```



```
bluebook — zsh — 144x9
  class Edit
    .quiz
      ✓ should delete a quiz from the database
      ✓ should update a quiz in the database
      ✓ should not update a quiz in the database (no change)
    .questions
      ✓ should delete a question(s) from the database
      ✓ should not delete a question(s) from the database (no changes)
      ✓ should update a question(s) in the database
      ✓ should not update a question(s) in the database (no changes)
      ✓ should call Add.questions to add a question(s) and an answer(s) to the database
      ✓ should call Add.answers to add an answer(s) to the database
    .answers
      ✓ should delete an answer(s) from the database
      ✓ should not delete an answer(s) from the database (no changes)
      ✓ should update an answer(s) in the database
      ✓ should not update an answer(s) in the database (no changes)
```

```
bluebook — zsh — 144x10

class LogIn
  .constructor
    ✓ should create a LogIn object
  .authenticate
    ✓ should query the database for a person with the given username
    ✓ should return a LogIn object (success) (58ms)
    ✓ should return a LogIn object (incorrect username)
    ✓ should return a LogIn object (incorrect password) (58ms)
```

```
bluebook — zsh — 144x5

class Question
  .constructor
    ✓ should create a Question object
```

```
bluebook — zsh — 144x11

class Quiz
  .constructor
    ✓ should create a Quiz object
  .list
    ✓ should query the database for all quizzes
    ✓ should return an array of Quiz objects
  .getOne
    ✓ should query the database for a quiz
    ✓ should return a Quiz object
```

NYC was used to check code coverage and I achieved 100% coverage for each of my models.

```
bluebook — zsh — 144x15

31 passing (250ms)

File | %Stmts | %Branch | %Funcs | %Lines | Uncovered Line #
-----+-----+-----+-----+-----+
All files | 100 | 100 | 100 | 100 |
add.js | 100 | 100 | 100 | 100 |
answer.js | 100 | 100 | 100 | 100 |
edit.js | 100 | 100 | 100 | 100 |
log-in.js | 100 | 100 | 100 | 100 |
question.js | 100 | 100 | 100 | 100 |
quiz.js | 100 | 100 | 100 | 100 |

alittlecross@alittlecross-MacBook-15 bluebook %
```

Feature Testing

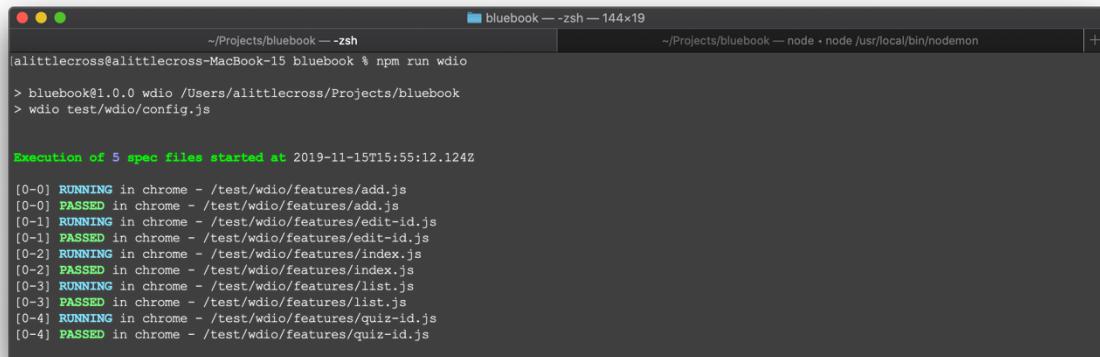
The application was feature tested using Webdriver.io

I checked each page to ensure visibility of expected elements, and tested the functionality of each page to ensure expected behaviour.

Spec files can be found on the test/wdio/features folder in the root of my code folder.

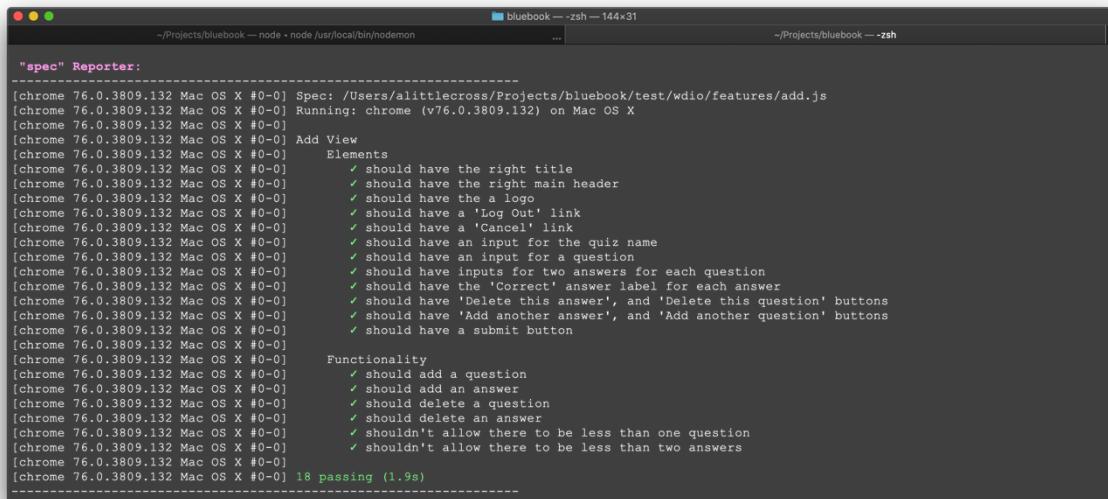
Assuming you have followed the ‘Getting Started’ instructions in the README.md document, and the ‘Running Unit Tests’ instructions, these tests can be run, in Terminal:

```
'npm run wdio'
```



```
bluebook -- zsh -- 144x19
~/Projects/bluebook -- zsh
alittlecross@alittlecross-MacBook-15 bluebook % npm run wdio
> bluebook@1.0.0 wdio /Users/alittlecross/Projects/bluebook
> wdio test/wdio/config.js

Execution of 5 spec files started at 2019-11-15T15:55:12.124Z
[0-0] RUNNING in chrome - /test/wdio/features/add.js
[0-0] PASSED in chrome - /test/wdio/features/add.js
[0-1] RUNNING in chrome - /test/wdio/features/edit-id.js
[0-1] PASSED in chrome - /test/wdio/features/edit-id.js
[0-2] RUNNING in chrome - /test/wdio/features/index.js
[0-2] PASSED in chrome - /test/wdio/features/index.js
[0-3] RUNNING in chrome - /test/wdio/features/list.js
[0-3] PASSED in chrome - /test/wdio/features/list.js
[0-4] RUNNING in chrome - /test/wdio/features/quiz-id.js
[0-4] PASSED in chrome - /test/wdio/features/quiz-id.js
```



```
bluebook -- zsh -- 144x31
~/Projects/bluebook -- node - node /usr/local/bin/nodemon ...
~/Projects/bluebook -- zsh

"spec" Reporter:
-----
[chrome 76.0.3809.132 Mac OS X #0-0] Spec: /Users/alittlecross/Projects/bluebook/test/wdio/features/add.js
[chrome 76.0.3809.132 Mac OS X #0-0] Running: chrome (v76.0.3809.132) on Mac OS X
[chrome 76.0.3809.132 Mac OS X #0-0]
[chrome 76.0.3809.132 Mac OS X #0-0] Add View
[chrome 76.0.3809.132 Mac OS X #0-0] Elements
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have the right title
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have the right main header
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have a logo
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have a 'Log Out' link
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have a 'Cancel' link
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have an input for the quiz name
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have an input for a question
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have inputs for two answers for each question
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have the 'Correct' answer label for each answer
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have 'Delete this answer', and 'Delete this question' buttons
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have 'Add another answer', and 'Add another question' buttons
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should have a submit button
[chrome 76.0.3809.132 Mac OS X #0-0] Functionality
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should add a question
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should add an answer
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should delete a question
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ should delete an answer
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ shouldn't allow there to be less than one question
[chrome 76.0.3809.132 Mac OS X #0-0] ✓ shouldn't allow there to be less than two answers
[chrome 76.0.3809.132 Mac OS X #0-0] 18 passing (1.9s)
```

```
bluebook -- zsh — 144x29
~/Projects/bluebook — node - node /usr/local/bin/nodemon ... ~/Projects/bluebook — zsh +
```

```
[chrome 76.0.3809.132 Mac OS X #0-1] Spec: /Users/alittlecross/Projects/bluebook/test/wdio/features/edit-id.js
[chrome 76.0.3809.132 Mac OS X #0-1] Running: chrome (v76.0.3809.132) on Mac OS X
[chrome 76.0.3809.132 Mac OS X #0-1]
[chrome 76.0.3809.132 Mac OS X #0-1] Edit-id View
[chrome 76.0.3809.132 Mac OS X #0-1] Elements
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the right title
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the right main header
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the a logo
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have a 'Log Out' link
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have a 'Cancel' link
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the right quiz name
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the correct questions
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the correct answers for each question
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have the 'Correct' answer label for each answer
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have 'Delete this answer', 'Delete this question', and 'Delete this quiz' buttons
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have 'Add another answer', and 'Add another question' buttons
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should have a submit button
[chrome 76.0.3809.132 Mac OS X #0-1] Functionality
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should add a question
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should add an answer
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should delete a question
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ should delete an answer
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ shouldn't allow there to be less than one question
[chrome 76.0.3809.132 Mac OS X #0-1]   ✓ shouldn't allow there to be less than two answers
[chrome 76.0.3809.132 Mac OS X #0-1] 18 passing (2.1s)
```

```
bluebook -- zsh — 144x20
~/Projects/bluebook — zsh ... ~/Projects/bluebook — node - node /usr/local/bin/nodemon +
```

```
[chrome 76.0.3809.132 Mac OS X #0-2] Spec: /Users/alittlecross/Projects/bluebook/test/wdio/features/index.js
[chrome 76.0.3809.132 Mac OS X #0-2] Running: chrome (v76.0.3809.132) on Mac OS X
[chrome 76.0.3809.132 Mac OS X #0-2]
[chrome 76.0.3809.132 Mac OS X #0-2] Index View
[chrome 76.0.3809.132 Mac OS X #0-2] Elements
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have the right title
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have the right main header
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have the a logo
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have a 'username' input field
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have a 'password' input field
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should have a submit button
[chrome 76.0.3809.132 Mac OS X #0-2] Functionality
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should display a message if the username is incorrect
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should display a message if the password is incorrect
[chrome 76.0.3809.132 Mac OS X #0-2]   ✓ should log in if the username and password are correct
[chrome 76.0.3809.132 Mac OS X #0-2] 9 passing (1.2s)
```

```
bluebook -- zsh — 144x22
~/Projects/bluebook — zsh ... ~/Projects/bluebook — node - node /usr/local/bin/nodemon +
```

```
[chrome 76.0.3809.132 Mac OS X #0-3] Spec: /Users/alittlecross/Projects/bluebook/test/wdio/features/list.js
[chrome 76.0.3809.132 Mac OS X #0-3] Running: chrome (v76.0.3809.132) on Mac OS X
[chrome 76.0.3809.132 Mac OS X #0-3]
[chrome 76.0.3809.132 Mac OS X #0-3] List View
[chrome 76.0.3809.132 Mac OS X #0-3] Elements
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have the right title
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have the right main header
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have the a logo
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have a 'Log Out' link
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have quiz links
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should not have an 'add' link (restricted access)
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should not have an 'add' link (view access)
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ should have an 'add' link (edit access)
[chrome 76.0.3809.132 Mac OS X #0-3] Functionality
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ the 'Log Out' link should return to the user to the 'Log In' page
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ the quiz links should navigate to a quiz
[chrome 76.0.3809.132 Mac OS X #0-3]   ✓ the 'Add' link should navigate to the 'Add' page
[chrome 76.0.3809.132 Mac OS X #0-3] 11 passing (2.7s)
```

```
bluebook -- zsh — 144x31
~/Projects/bluebook — zsh | ~./Projects/bluebook — node • node /usr/local/bin/nodemon | +
```

```
[chrome 76.0.3809.132 Mac OS X #0-4] Spec: /Users/alittlecross/Projects/bluebook/test/wdio/features/quiz-id.js
[chrome 76.0.3809.132 Mac OS X #0-4] Running: chrome (v76.0.3809.132) on Mac OS X
[chrome 76.0.3809.132 Mac OS X #0-4]
[chrome 76.0.3809.132 Mac OS X #0-4] Quiz-id View
[chrome 76.0.3809.132 Mac OS X #0-4] Elements
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have the right title
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have the right main header
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have a logo
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have a 'Log Out' link
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have a 'Back' link
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have the right sub-header
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have the correct questions
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have the correct answers for each question
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should not have an 'Edit' link (restricted access)
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should not have 'Show correct answer' buttons (restricted access)
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should not have an 'Edit' link (view access)
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have 'Show correct answer' buttons (view access)
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should not have an 'Edit' link (edit access)
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ should have 'Show correct answer' buttons (edit access)
[chrome 76.0.3809.132 Mac OS X #0-4] Functionality
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ the 'Log Out' link should return to the user to the 'Log In' page
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ the 'Back' links should navigate back to the 'List' page
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ clicking an answer should change its color
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ clicking 'Show correct answer' should change the color of the correct answer and 'Show' to 'Hide'
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ clicking 'Hide correct answer' should change the color of the correct answer and 'Hide' to 'Show'
[chrome 76.0.3809.132 Mac OS X #0-4]     ✓ the 'Edit' link should navigate to the 'Edit-id' page
[chrome 76.0.3809.132 Mac OS X #0-4] 20 passing (4.3s)
```

```
bluebook — zsh — 144x5
~/Projects/bluebook — zsh | ~./Projects/bluebook — node • node /usr/local/bin/nodemon | +
```

```
Spec Files:      5 passed, 5 total (100% completed) in 00:00:21
alittlecross@alittlecross-MacBook-15 bluebook %
```