

Backend Test

Instructions

The test should take between one and two hours.

Please create a repo on github containing your solution and send us a link.

Scenario

We are an online retailer specialising in technology books. We have a legacy system which is proving difficult to maintain and currently has no test coverage that we are looking to replace. We are looking to build a RESTful json API. You have been tasked with developing a proof of concept that can demonstrate best practices in modern web development with a focus on designing something which is maintainable and testable.

The proof of concept must allow a user to:

- 1) Filter books by author and/or category
- 2) Create new books

Acceptance Criteria

Background:

There are the following books in the system

ISBN	Title	Author	Category	Price
978-1491918661	Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5	Robin Nixon	PHP, Javascript	9.99 GBP
978-0596804848	Ubuntu: Up and Running: A Power User's Desktop Guide	Robin Nixon	Linux	12.99 GBP
978-1118999875	Linux Bible	Christopher Negus	Linux	19.99 GBP

978-0596517748	JavaScript: The Good Parts	Douglas Crockford	Javascript	8.99 GBP
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Given I am an api consumer
When I filter by author "Robin Nixon"
Then I should receive a 200 response
And the body should contain two results
And the body should contain "978-1491918661"
And the body should contain "978-0596804848"

Given I am an api consumer
When I filter by author "Christopher Negus"
Then I should receive a 200 response
And the body should contain one result
And the body should contain "978-1118999875"

Given I am an api consumer
When I query the api for a list of categories
Then I should receive a 200 response
And the body should contain three results
And the body should contain "PHP"
And the body should contain "Javascript"
And the body should contain "Linux"

Given I am an api consumer
When I filter by category "Linux"
Then I should receive a 200 response
And the body should contain two results
And the body should contain "978-0596804848"
And the body should contain "978-1118999875"

Given I am an api consumer
When I filter by category "PHP"
Then I should receive a 200 response
And the body should contain one result
And the body should contain "978-1491918661"

Given I am an api consumer
When I filter by author "Robin Nixon"
And I filter by category "Linux"
Then I should receive a 200 response
And the body should contain one result
And the body should contain "978-0596804848"

Given I am an api consumer

When I create the following book

ISBN	Title	Author	Category	Price
978-1491905012	Modern PHP: New Features and Good Practices	Josh Lockhart	PHP	18.99 GBP

Then I should receive a 201 response

And the body should contain "978-1491905012"

And the body should contain "Modern PHP: New Features and Good Practices"

And the body should contain "Josh Lockhart"

And the body should contain "PHP"

And the body should contain "18.99"

Given I am an api consumer

When I create the following book

ISBN	Title	Author	Category	Price
978-INVALID-ISBN-1491905012	Modern PHP: New Features and Good Practices	Josh Lockhart	PHP	18.99 GBP

Then I should receive a 400 response

And the body should contain "Invalid ISBN"