

CS4042D Web Programming

RoR Project Report - Book App

Course Instructor: K.S Suvidha

Github Repository Link: <https://github.com/aishsanal/Ruby-on-Rails-Project.git>



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Steps

Step 1: Install the necessary dependencies in a step by step manner. The Gemfile is as shown below.

```
Gemfile
1  source 'https://rubygems.org'
2  git_source(:github) { |repo| "https://github.com/#{repo}.git" }
3
4  ruby '3.0.2'
5  gem 'rails', '~> 6.1.4', '>= 6.1.4.1'
6  gem 'sqlite3', '~> 1.4'
7  gem 'puma', '~> 5.0'
8  gem 'sass-rails', '>= 6'
9  gem 'webpacker', '~> 5.0'
10 gem 'turbolinks', '~> 5'
11 gem 'jbuilder', '~> 2.7'
12 gem 'bootsnap', '>= 1.4.4', require: false
13 group :development, :test do
14   gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
15 end
16 group :development do
17   gem 'web-console', '>= 4.1.0'
18   gem 'rack-mini-profiler', '~> 2.0'
19 end
20 group :test do
21   gem 'capybara', '>= 3.26'
22   gem 'selenium-webdriver'
23   gem 'webdrivers'
24 end
25 gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
26
```

Step 2: Create a new project for 'Book App'

```
ADMIN@Chandralekha MINGW64 /c/railsbooks
$ rails new books
  create
  create  README.md
  create  Rakefile
  create  .ruby-version
  create  config.ru
  create  .gitignore
  create  .gitattributes
  create  Gemfile
   run   git init from "."
Initialized empty Git repository in C:/railsbooks/books/.git/
  create  package.json
  create  app
  create  app/assets/config/manifest.js
  create  app/assets/stylesheets/application.css
  create  app/channels/application_cable/channel.rb
  create  app/channels/application_cable/connection.rb
```

Step3: The initial page is created as shown below and the same is set as the home page by making the required edits in routes.rb file.

```
ADMIN@Chandralekha MINGW64 /c/railsbooks/books (master)
$ rails g controller home index
  create  app/controllers/home_controller.rb
  route   get 'home/index'
  invoke  erb
  create  app/views/home
  create  app/views/home/index.html.erb
  invoke  test_unit
  create  test/controllers/home_controller_test.rb
  invoke  helper
  create  app/helpers/home_helper.rb
  invoke  test_unit
  invoke  assets
  invoke  scss
  create  app/assets/stylesheets/home.scss
```

Step 4: The next task is to create the database. The name of the db is 'Novel' with the columns as shown below. Note that we have another default id attribute in the database which will be used for all the CRUD operations. B_id shown here is a different attribute. After creating the scaffold, the schema is pushed into the database by using the 'rails db:migrate' command.

```
aiswa@DESKTOP-BASFT40 MINGW64 ~/Desktop/railsfriends/book (master)
$ rails g scaffold Novel B_id:string B_title:string Author:string Publisher:string Year:string
  invoke  active_record
  create  db/migrate/20211116045055_create_novels.rb
  create  app/models/novel.rb
  invoke  test_unit
  create  test/models/novel_test.rb
  create  test/fixtures/novels.yml
  invoke  resource_route
  route   resources :novels
  invoke  scaffold_controller
  create  app/controllers/novels_controller.rb
  invoke  erb
  create  app/views/novels
  create  app/views/novels/index.html.erb
  create  app/views/novels/edit.html.erb
  create  app/views/novels/show.html.erb
  create  app/views/novels/new.html.erb
  create  app/views/novels/_form.html.erb
  invoke  resource_route
  invoke  test_unit
  create  test/controllers/novels_controller_test.rb
  create  test/system/novels_test.rb
  invoke  helper
  create  app/helpers/novels_helper.rb
  invoke  test_unit
  invoke  jbuilder
  create  app/views/novels/index.json.jbuilder
```

Step 5: Followed by the initial set up, all the required pages were created.

Step 6: The final routes are as shown below.

```
hiswa@DESKTOP-BASFT40 MINGW64 ~/Desktop/railsfriends/book (master)
$ rails routes
```

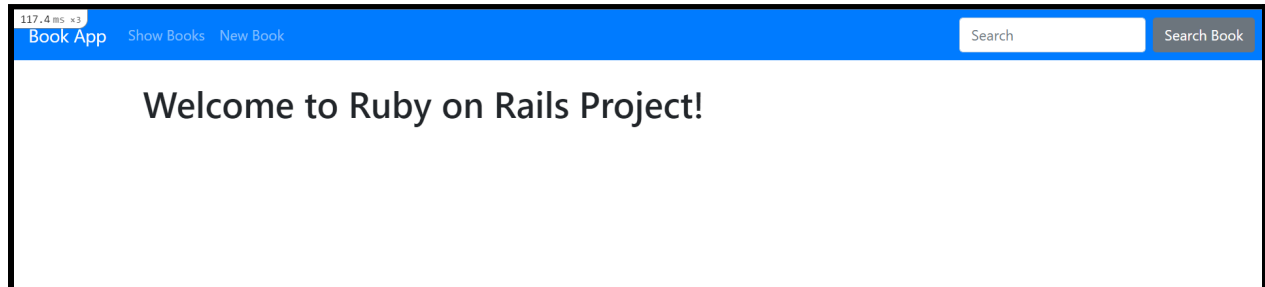
	Prefix	Verb	URI Pattern	Controller#Action
	novels	GET	/novels(.:format)	novels#index
		POST	/novels(.:format)	novels#create
	new_novel	GET	/novels/new(.:format)	novels#new
	edit_novel	GET	/novels/:id/edit(.:format)	novels#edit
	novel	GET	/novels/:id(.:format)	novels#show
		PATCH	/novels/:id(.:format)	novels#update
		PUT	/novels/:id(.:format)	novels#update
		DELETE	/novels/:id(.:format)	novels#destroy
	root	GET	/	home#index
	search	GET	/search(.:format)	home#search
rails_postmark_inbound_emails		POST	/rails/action_mailbox/postmark/inbound_emails(.:format)	action_mailbox/ingresses/postmark/inbound_e
rails#create				
rails_relay_inbound_emails		POST	/rails/action_mailbox/relay/inbound_emails(.:format)	action_mailbox/ingresses/relay/inbound_email
rails#create				
rails_sendgrid_inbound_emails		POST	/rails/action_mailbox/sendgrid/inbound_emails(.:format)	action_mailbox/ingresses/sendgrid/inbound_email
rails#create				
rails_mandrill_inbound_health_check		GET	/rails/action_mailbox/mandrill/inbound_emails(.:format)	action_mailbox/ingresses/mandrill/inbound_email
rails#health_check				
rails_mandrill_inbound_emails		POST	/rails/action_mailbox/mandrill/inbound_emails(.:format)	action_mailbox/ingresses/mandrill/inbound_email
rails#create				
rails_mailgun_inbound_emails		POST	/rails/action_mailbox/mailgun/inbound_emails/mime(.:format)	action_mailbox/ingresses/mailgun/inbound_email
rails#create				
rails_conductor_inbound_emails		GET	/rails/conductor/action_mailbox/inbound_emails(.:format)	rails/conductor/action_mailbox/inbound_email
rails#index				
		POST	/rails/conductor/action_mailbox/inbound_emails(.:format)	rails/conductor/action_mailbox/inbound_email

Step 7: Now boot up the server.

```
ADMIN@Chandralekha MINGW64 /c/railsbooks/books (master)
$ rails s
=> Booting Puma
=> Rails 6.1.4.1 application starting in development
=> Run `bin/rails server --help` for more startup options
*** SIGUSR2 not implemented, signal based restart unavailable!
*** SIGUSR1 not implemented, signal based restart unavailable!
*** SIGHUP not implemented, signal based logs reopening unavailable!
Puma starting in single mode...
* Puma version: 5.5.2 (ruby 3.0.2-p107) ("Zawgyi")
* Min threads: 5
* Max threads: 5
* Environment: development
* PID: 15828
* Listening on http://[::1]:3000
* Listening on http://127.0.0.1:3000
Use Ctrl-C to stop
```

Requests and Responses

1. Home Page



Homepage of the website

2. Creating a new Book

A screenshot of the 'New Book' form in the 'Book App'. The browser's address bar shows 'localhost:3000/novels/new'. The app's header is blue with 'Book App' on the left, 'Show Books' and 'New Book' in the center, and a search bar with 'Search' and 'Search Book' buttons on the right. The main content area is white and displays the title 'New Book' in a large, bold, black font. Below the title are five text input fields labeled 'Book id', 'Book title', 'Author', 'Publisher', and 'Year'. At the bottom of the form are two blue buttons: 'Create Novel' and 'Back'.

Fig1: The form for entering new book details

New Book

4

Harry Potter and The Philosopher's Stone

J.K.Rowling

Bloomsbury

1997

Create Novel

Back

Fig2: New Book details being entered

3. Displaying a particular book from the database based on the input 'id'

Books

B id	B title	Author	Publisher	Year	Show	Edit	Destroy
1	A Thousand Splendid Suns	Khaled Hosaini	ABC Publishers	1993	Show	Edit	Destroy
2	The Alchemist	Paulo Coelho	Harper Collins	2002	Show	Edit	Destroy
3	Clean Code	Robert C.Martin	Springer	2010	Show	Edit	Destroy
4	Harry Potter and The Philosopher's Stone	J.K.Rowling	Bloomsbury	1997	Show	Edit	Destroy

New Book

Fig3: A search bar is provided so as to search for a book with a particular id

Search Results

```
{
  "id": "4",
  "B_id": "3",
  "B_title": "Clean Code",
  "Author": "Robert C.Martin",
  "Publisher": "Springer",
  "Year": "2010"
}
```

Fig4: The book with the corresponding id is displayed in JSON format

96.1 ms x3

Book App

Show Books

New Book

Search

Search Book

Books

B id	B title	Author	Publisher	Year			
1	A Thousand Splendid Suns	Khaled Hosaaaini	ABC Publishers	1993	Show	Edit	Destroy
2	The Alchemist	Paulo Coelho	Harper Collins	2002	Show	Edit	Destroy
3	Clean Code	Robert C.Martin	Springer	2010	Show	Edit	Destroy
4	Harry Potter and The Philosopher's Stone	J.K.Rowling	Bloomsbury	1997	Show	Edit	Destroy

New Book

Fig5 : All the books in the db are displayed. The new book is also displayed.

```
[
  {
    "id": 2,
    "B_id": "1",
    "B_title": "A Thousand Splendid Suns",
    "Author": "Khaled Hosaaaini",
    "Publisher": "ABC Publishers",
    "Year": "1993",
    "created_at": "2021-11-16T08:15:52.235Z",
    "updated_at": "2021-11-16T08:15:52.235Z",
    "url": "http://localhost:3000/novels/2.json"
  },
  {
    "id": 3,
    "B_id": "2",
    "B_title": "The Alchemist",
    "Author": "Paulo Coelho",
    "Publisher": "Harper Collins",
    "Year": "2002",
    "created_at": "2021-11-16T08:23:55.643Z",
    "updated_at": "2021-11-16T08:23:55.643Z",
    "url": "http://localhost:3000/novels/3.json"
  },
  {
    "id": 4,
    "B_id": "3",
    "B_title": "Clean Code",
    "Author": "Robert C.Martin",
    "Publisher": "Springer",
    "Year": "2010",
    "created_at": "2021-11-16T08:24:55.459Z",
    "updated_at": "2021-11-16T08:24:55.459Z",
    "url": "http://localhost:3000/novels/4.json"
  }
]
```

Fig6 : All the books in the db are shown in JSON format

4: On clicking the 'Show' button next to each row:

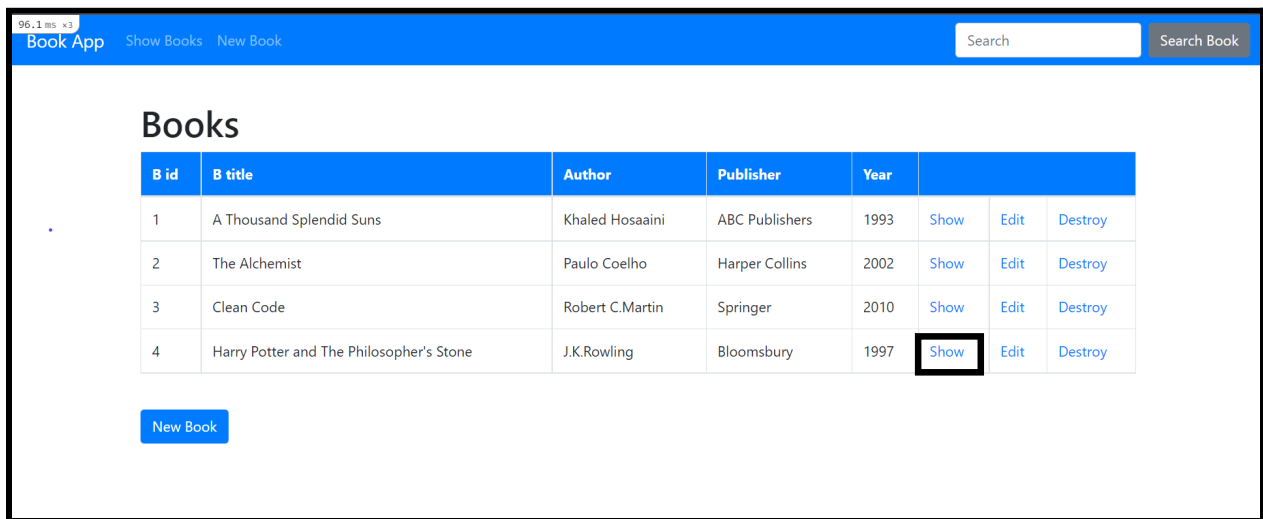


Fig7 : Show button is provided next to each row to view the details of that book

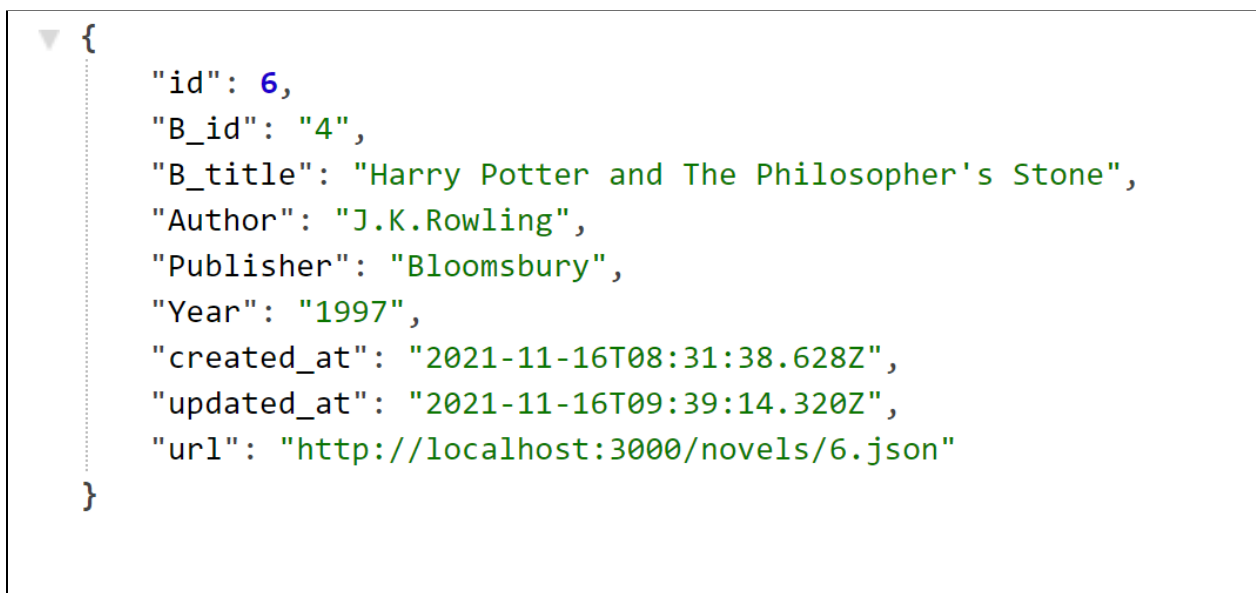


Fig8 : Details of a book in JSON format

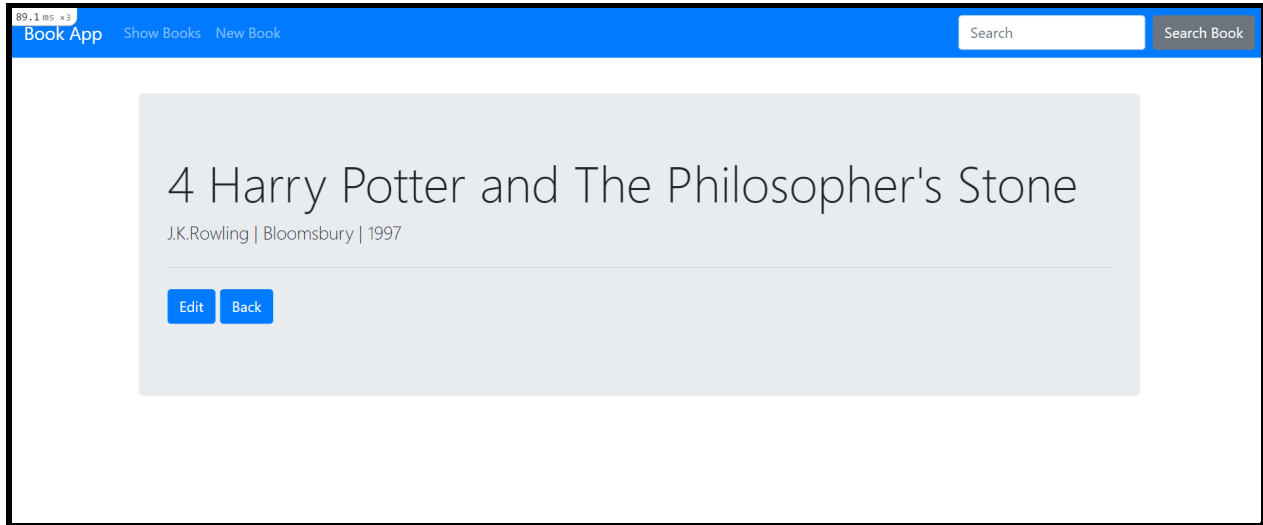


Fig9: Showing a particular Book Entry

5 : Updating a particular book in the database

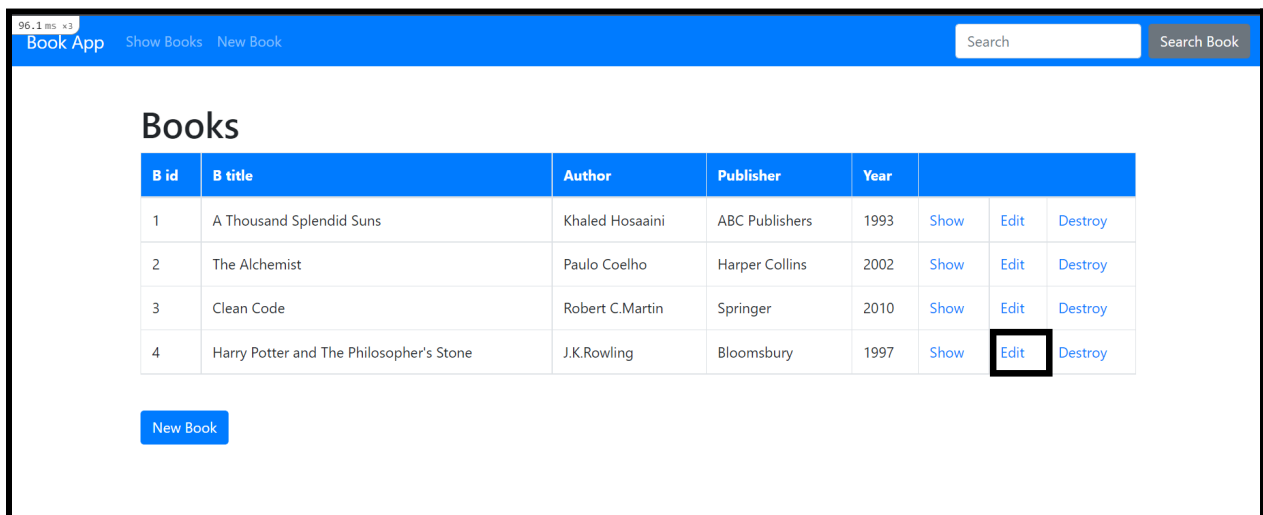


Fig10: 'Edit' option is given in each row to edit a book's details

Book App Show Books New Book Search

Editing Book

4

Harry Potter and The Philosopher's Stone

J.K.Rowling

Penguin

1997

Update Novel

Show Back

Fig11: Editing attributes of a Book

Book App Show Books New Book Search Search Book

Book was successfully updated.

4 Harry Potter and The Philosopher's Stone

J.K.Rowling | Penguin | 1997

Edit Back

Fig12: Showing the Updated Book Entry

```
{
  "id": 6,
  "B_id": "4",
  "B_title": "Harry Potter and The Philosopher's Stone",
  "Author": "J.K.Rowling",
  "Publisher": "Penguin",
  "Year": "1997",
  "created_at": "2021-11-16T08:31:38.628Z",
  "updated_at": "2021-11-16T08:32:00.542Z",
  "url": "http://localhost:3000/novels/6.json"
}
```

Fig13 : Showing the updated Book entry in JSON Format

6 : Deleting a particular book from the database

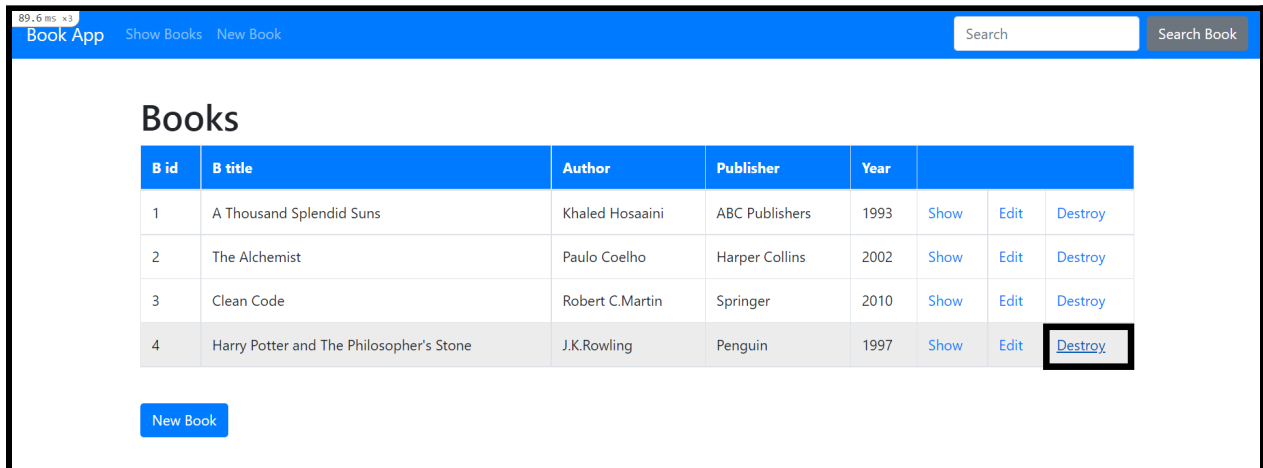


Fig14 : Destroy option is given next to each row to delete a book from db

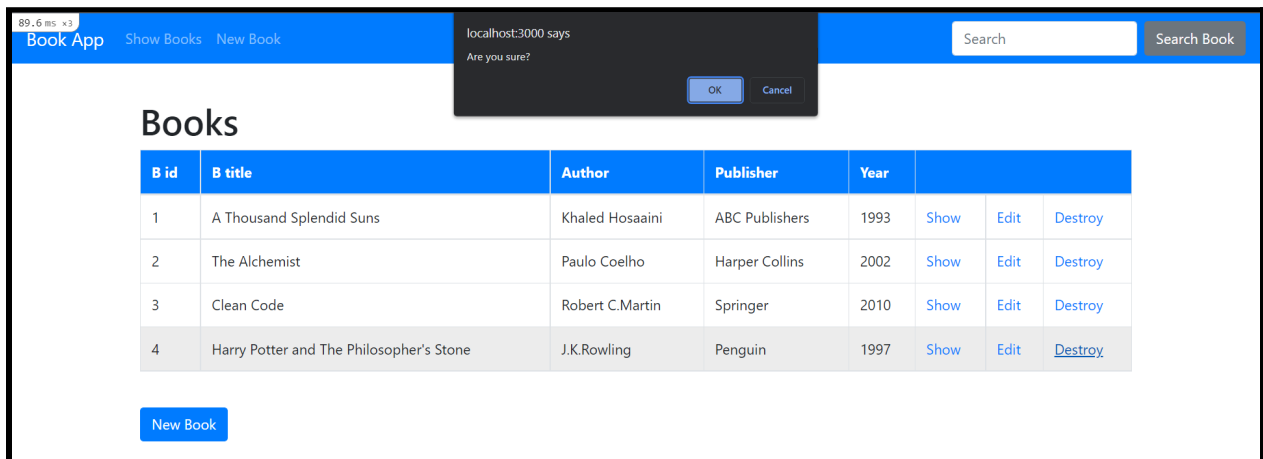


Fig15 : Confirm dialog box for delete

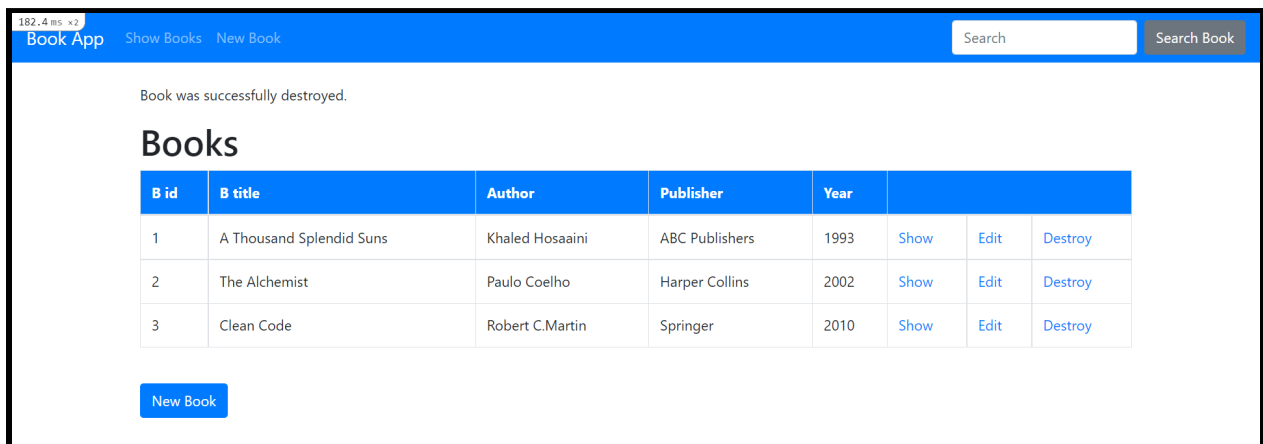


Fig16 : The particular book is deleted from the db