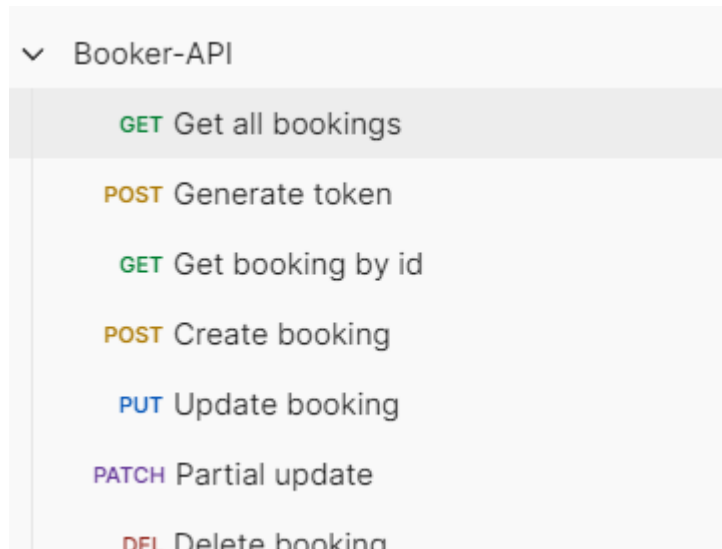


Task implementation

Postman Collection

I have created a Postman collection with all endpoints and I have used it to test APIs.



Test Cases

When creating test cases it depends what functionality you are actually testing. In this case we are testing the entire Booking service and more API calls are combined in one test case. Sometimes when functionality has only one API call and it is important to separate it we can create separate test case.

Happy Path

C1 Verify auth token is created with valid credentials			
Test Cases			
Type Functional	Priority High	Assigned To Me	Estimate None
References None	Automation Type None		
Preconditions			
User has an account already successfully created.			
Steps			
Send request to the API: POST: https://restful-booker.herokuapp.com/auth Content-Type: application/json Example: Body: { "username": "admin", "password": "password123" }			
Expected Result			
Token is generated successfully and status code is 200. Example of token format: { "token": "924922deb0098ed" }			

Unhappy Path

I've also reported a bug with this status code response, it would be better to return other status code for this type of messages.

C2 Verify error response on invalid credentials

Test Cases

Type	Priority	Assigned To	Estimate
Functional	High	Me	None
References	Automation Type		
None	None		

Preconditions

User has correct credentials and already created account.

Steps

Send an API request to the endpoint with invalid credentials
POST: <https://restful-booker.herokuapp.com/auth>
Content-Type: application/json
Body{
 "username": "adminnnnn",
 "password": "password123"
}

Expected Result

Response is:
{
 "reason": "Bad credentials"
}

I have listed several possible test cases for this service. However, there are many additional scenarios that could be considered depending on the specific requirements and edge cases.

Happy Path

View All Bookings, Inspect One in Detail

Steps	Result
Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking	Successfully fetched all bookings and status code 200. [["bookingid": 432], { "bookingid": 79 }]
Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path variable: Id-> id of a booking	Successfully fetched data for one booking and status code 200. Response: { "firstname": "Susan",

	<pre> "lastname": "Jackson", "totalprice": 223, "depositpaid": true, "bookingdates": { "checkin": "2023-10-26", "checkout": "2025-03-29" }, "additionalneeds": "Breakfast" } </pre>
--	---

Happy Path

Verify Partial Update to Correct Name

For example if user create new booking and realise that there is typo in username.

Create->update->review updates

Steps	Result
<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{</p> <pre> "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } </pre>	<p>Booking is successfully created and status code is 200. Response body:</p> <pre> { "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } } </pre>
<p>Send a POST request to the API endpoint https://restful-booker.herokuapp.com/auth Body:{</p> <pre> "username": "admin", "password": "password123" } </pre>	<p>Token is generated successfully and status code is 200.</p> <pre> { token: "1234" } </pre>
<p>Send a PATCH request to the API endpoint: https://restful-booker.herokuapp.com/booking/id</p>	<p>Booking data successfully updated and status code is 200.</p>

Header: Cookie: token=123 Body:{ "firstname": "James" } 	{ "firstname": "James", "lastname": "Jackson", "totalprice": 223, "depositpaid": true, "bookingdates": { "checkin": "2023-10-26", "checkout": "2025-03-29" }, "additionalneeds": "Breakfast" }
Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path variable: Id-> id of a booking 	Successfully fetched data for one booking and status code 200.

Happy Path

Verify update with valid token

Precondition: User has already created an account.

Send a POST request to the API endpoint https://restful-booker.herokuapp.com/auth Body:{ "username": "admin", "password": "password123" } 	Token is generated successfully and status code is 200. Response:{ "token": "1234" }
Send a PATCH request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Header: Cookie: token=123 Body:{ "firstname": "James", "lastname": "Brown" } 	Booking data successfully updated and status code is 200. { "firstname": "James", "lastname": "Brown", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" }

Happy Path

Verify delete of a booking with valid token

Step	Result
Send a POST request to the API endpoint https://restful-booker.herokuapp.com/auth Body: <pre>"username" : "admin", "password" : "password123"</pre> }	Token is generated successfully and status code is 200. Response: {token:"1234"}
Send a DELETE request to the API endpoint: https://restful-booker.herokuapp.com/booking/1 Header: Cookie: token=123	Booking data successfully deleted and status code is 204.

Happy Path

Verify rebook after cancelation

Often users create a booking and delete it and after that create a new one.

Step	Result
Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body: <pre>"firstname" : "Dino", "lastname" : "Merlin", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast"</pre> }	Booking is successfully created and status code is 200. Response body: { "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } }

	<pre> } } </pre>
<p>Send a POST request to the API endpoint https://restful-booker.herokuapp.com/auth Body:{ "username" : "admin", "password" : "password123" }</p>	<p>Token is generated successfully and status code is 200. Response: {token:"1234"}</p>
<p>Send a DELETE request to the API endpoint: https://restful-booker.herokuapp.com/booking/1 Header: Cookie: token=123</p>	<p>Booking data successfully deleted and status code is 204.</p>
<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{ "firstname" : "Merima", "lastname" : "Hodowska", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" }</p>	<p>Booking is successfully created and status code is 200. Response: { "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" }, }</p>

Happy Path

Verify creating multiple bookings and listing all

Step	Result
<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{ "firstname" : "Dino", "lastname" : "Merlin", "totalprice" : 1000, }</p>	<p>Booking is successfully created and status code is 200. Response body: { "bookingid": 1998, "booking": { "firstname": "Dino", </p>

<pre> "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" } </pre>	<pre> "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } </pre>
<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{</p> <pre> "firstname" : "Nadja", "lastname" : "Hodowska", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" } </pre>	<p>Booking is successfully created and status code is 200.</p> <pre> { "bookingid": 1998, "booking": { "firstname": "Nadja", "lastname": "Hodowska", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } } </pre>
<p>Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking</p>	<p>Get a list with new bookings and status code 200. Response body:</p> <pre> [["bookingid": 432 }, { "bookingid": 79 }] </pre>

Happy Path

Get booking using filters

<p>Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking?firstname=Dino&lastname=Merlin</p>	<p>Successfully Booking id and status code 200.</p> <pre> [</pre>
---	---

	<pre>{ "bookingid": 1542 }</pre>
--	------------------------------------

Unhappy Paths

Try to update booking without valid token

<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{</p> <pre>"firstname" : "Dino", "lastname" : "Merlin", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" }</pre>	<p>Booking is successfully created and status code is 200. Response body:</p> <pre>{ "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } }</pre>
<p>Send a DELETE request to the API endpoint: https://restful-booker.herokuapp.com/booking/1 Header: Cookie: token=123</p>	<p>Status code is Forbidden 403.</p>
<p>Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path variable: Id-> id of a booking</p>	<p>Successfully fetched data for booking that user tried to delete and status code 200.</p>

Try to delete booking without valid token

<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{</p>	<p>Booking is successfully created and status code is 200. Response body:</p>
--	--

<pre> "firstname" : "Dino", "lastname" : "Merlin", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" } </pre>	<pre> { "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" }, } </pre>
<p>Send a PATCH/PUT request to the API endpoint: https://restful-booker.herokuapp.com/booking/1 Header: Cookie: token=123</p>	<p>Status code is Forbidden 403.</p>
<p>Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path variable: Id-> id of a booking</p>	<p>Successfully fetched data for booking that user tried to update without any changes and status code 200.</p>

Unhappy Path

Get a booking that does not exist

<p>Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path variable: Id-> id of a booking that does not exist</p>	<p>Status code 404 Not Found.</p>
--	-----------------------------------

Unhappy Path

Creating booking with missing fields

<p>Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{ "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast"</p>	<p>Status code is 500 Internal Server Error.</p>
--	--

}	
---	--

It would be better that error status code is 400 Bad Request, this can also be reported as a bug.

Smoke test

Possible scenario:

A registered user creates a new booking. After creation, the user retrieves the booking details to confirm the reservation. Later, they realize changes are needed, so they update the booking information. Eventually, they decide to cancel the reservation entirely and delete the booking.

I wanted to write all test cases in TestRail but for free version you only get one step in each test case.

Preconditions:

Step:	Result:
Send a POST request to the API endpoint: https://restful-booker.herokuapp.com/booking Body:{ "firstname" : "Dino", "lastname" : "Merlin", "totalprice" : 1000, "depositpaid" : true, "bookingdates" : { "checkin" : "2025-01-01", "checkout" : "2025-01-11" }, "additionalneeds" : "Breakfast" }	Booking is successfully created and status code is 200. Response body: <pre>{ "bookingid": 1998, "booking": { "firstname": "Dino", "lastname": "Merlin", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } }</pre>
Send a GET request to the API endpoint: https://restful-booker.herokuapp.com/booking/id Path Variable: id -> id of a booking	Fetched data for booking with defined id and status code is 200. Response: <pre>{ "firstname": "Susan",</pre>

	<pre> "lastname": "Jackson", "totalprice": 223, "depositpaid": true, "bookingdates": { "checkin": "2023-10-26", "checkout": "2025-03-29" }, "additionalneeds": "Breakfast" } </pre>
<p>Send a POST request to the API endpoint https://restful-booker.herokuapp.com/auth</p> <p>Body:</p> <pre> { "username" : "admin", "password" : "password123" } </pre>	<p>Token is generated successfully and status code is 200.</p> <p>Response:</p> <pre> { token:"1234" } </pre>
<p>Send a PATCH request to the API endpoint: https://restful-booker.herokuapp.com/booking/:id</p> <p>Header:</p> <p>Cookie: token=123</p> <p>Body:</p> <pre> { "firstname" : "James", "lastname" : "Brown" } </pre>	<p>Booking data successfully updated and status code is 200.</p> <p>Response example:</p> <pre> { "firstname": "James", "lastname": "Brown", "totalprice": 1000, "depositpaid": true, "bookingdates": { "checkin": "2025-01-01", "checkout": "2025-01-11" }, "additionalneeds": "Breakfast" } </pre>
<p>Send a DELETE request to the API endpoint:</p> <p>https://restful-booker.herokuapp.com/booking/1998</p>	<p>Booking successfully deleted with status code 204.</p>

Automation testing

Code is on my github: <https://github.com/nejrastr/booking-api-test>

To run tests:

1. Clone the project from GitHub.
2. Open the project in IntelliJ IDEA.
3. Run "Maven Clean Install" to build the project.
4. If some dependencies are missing, synchronize Maven dependencies with the remote repository.

5. Navigate to the BookingSmokeTest class
6. Right-click the class and select "Run 'BookingSmokeTest'" to execute the tests.

Bug report

When creating a bug report, I usually use Jira, which provides a structured format with several predefined fields for describing the issue clearly and thoroughly. Some of the key fields typically included in a bug ticket are:

Device (e.g., PC, mobile, tablet, including model if relevant)

Environment (e.g., production, staging, development, browser version, OS)

Steps to Reproduce (detailed, step-by-step instructions to reproduce the issue)

Actual Result (what is happening)

Expected Result (what should happen)

Logs (relevant backend or frontend logs, console output, API responses if available)

Attachments (screenshots or screen recordings that clearly show the problem)

Severity and Priority (how critical the bug is and how urgently it needs to be fixed)

Build Version (application version number, if applicable)

Test Data (specific user accounts, IDs, or configurations needed to reproduce the bug)

In these bug reports I've only provided steps to reproduce, actual and expected results.

1. Incorrect Status Code Returned for Invalid Credentials

Steps to reproduce:

1. Send a request to the API endpoint :POST
<https://restful-booker.herokuapp.com/auth> with the invalid credentials.

Body: { "username" : "dmin",
"password" : "password123" }

Invalid credentials mean: wrong password, wrong username, missing password, missing username

Expected:

- The API should return a status code 401 Unauthorized.
- The response body should contain message: "Bad credentials."

Actual result:



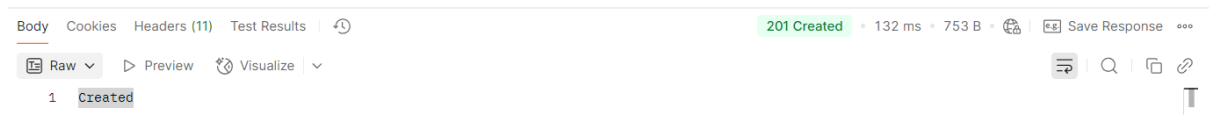
2. Invalid status code returned for booking deletion

Steps to reproduce:

1. Send a POST request to the API endpoint: <https://restful-booker.herokuapp.com/auth>
2. Send a DELETE request to the API endpoint: <https://restful-booker.herokuapp.com/booking/ID>

Actual:

Delete request should not return status code 201 Created.



Expected result:

Status code should be 204 or 200 and message that suggests that booking is successfully deleted.

3. Missing Validation on Date Fields

User is able to enter string on date fields.

Steps to reproduce:

1. Send a POST request to the API endpoint with invalid date format: <https://restful-booker.herokuapp.com/booking>

Body:

```
{  "firstname": "Dinooo",  "lastname": "Merlin",  "totalprice": "111",  "depositpaid": true,  "bookingdates": {    "checkin": "hohoh",    "checkout": "tomorrow"  }
```

```
},  
  "additionalneeds": "Breakfast"  
}
```

Expected:

Error message should be shown here.

Actual:

The screenshot shows a REST client interface with the following elements:

- Body** tab selected, showing a JSON response.
- Headers (11)** tab.
- Test Results** tab.
- 200 OK** status bar with 577 ms and 951 B.
- Save Response** button.
- JSON** format selected.
- Preview** and **Visualize** buttons.
- JSON Body:**

```
1  {  
2    "bookingid": 1263,  
3    "booking": {  
4      "firstname": "Dinooo",  
5      "lastname": "Merlin",  
6      "totalprice": 111,  
7      "depositpaid": true,  
8      "bookingdates": {  
9        "checkin": "0NaN-aN-aN",  
10       "checkout": "0NaN-aN-aN"  
11     },  
12     "additionalneeds": "Breakfast"  
13   }  
14 }
```