

## TEST ASSIGNMENT

Testing a RESTful application like Restful Booker can involve several steps, including functional testing, integration testing, performance testing, security testing, and usability testing. Here are some general steps we can follow to test the Restful Booker application:

Understand the application: Before starting any testing, it is essential to understand the functionality of the application, its endpoints, and the data it processes

Testing objective:

- Main objective is to do exploratory testing as the requirements are not specified and user is not aware of how to use the site

One of the bugs which I found during exploratory testing:

- No limit for booking

Lastname should not be blank

must not be empty

must not be null

size must be between 3 and 18

size must be between 11 and 21

must not be null

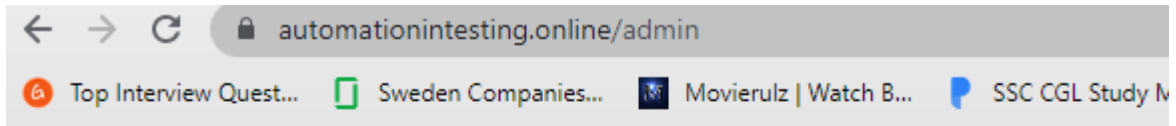
size must be between 3 and 30

Firstname should not be blank

must not be empty

- So when we click on book we are getting these requirements but it is not clear what must be null
- They are not in order. Error Handling is terrible
- If want to duplicate the order. We are directed to blank page and once we refresh it we are getting the home page.
- Its accepting first name in different language.
- Its not checking whether mobile number is number or not.
- In home page as well its not checking whether the name is character or not.
- If possible boundary testing need to be done.
- In email id the shortest character after dot is 2 and it assumes it as a well formed format.

- Its just require @ and dot in email.
- **Security Testing:** To test Restful Booker platform is secure and that sensitive data is protected from unauthorized access. This testing should include:
- **Authentication and Authorization testing:**



## Whitelabel Error Page

This application has no explicit mapping for /error, so you are seeing this as a fallback.

Fri Feb 24 05:54:11 UTC 2023

There was an unexpected error (type=Not Found, status=404).

- /admin page is not available.
- So we login to admin page we can change everything- deleting bookings, update booking, branding.

A comprehensive test strategy for the Restful Booker platform should cover the following areas:

- **Functional Testing:**  
To check whether platform's functionality is working correctly as per given requirements.

This testing should include:

- **Endpoint testing:**  
To Test each API endpoint for expected behavior, input, and output.

ENDPOINTS = [

"/ping",

"/auth",

"/booking",

"/booking/{booking\_id}",

"/booking/{booking\_id}",

"/booking",

"/booking/{booking\_id}",

"/booking/{booking\_id}",

- **Data validation testing:**  
To verify the data input validation correctly with expected and unexpected inputs.
- **Error handling testing:**  
Test the system's ability to detect and handle errors.
- **Integration Testing:**  
Testing whether Restful Platform API interacts correctly with other systems in the software stack.  
This testing should include:
- **Database testing:**  
Test that the platform correctly interacts with database which , including reading and writing data.
- **Performance Testing:**  
To test whether platform can handle expected levels of traffic and perform well under heavy load. This testing should include:
- **Stress testing:**  
To test the system's ability to handle high levels of data processing and transactions.
- **Usability Testing:**  
The platform is easy to use and navigate, and that it meets the end-users' requirements.  
This testing should include:
- **User interface testing:**  
Verify platform's user interface for responsiveness, accessibility, and ease of use.
- **User experience testing:**  
Test the system's ability to provide the end-users with a seamless, intuitive experience.
- **Regression Testing:**  
Verify that the platform's existing functionality continues to work correctly after the addition of new features or updates.
- **Automation Testing:**  
To implement automation testing for repeatable and routine tasks to ensure consistent and reliable testing.

Overall, testing Restful Booker application involves multiple steps to ensure its functionality, performance, security, and usability.

## **TEST SCRIPT**

```
import requests
```

```
# Set the base URL for the Restful Booker API
```

```
BASE_URL = "https://restful-booker.herokuapp.com"
```

```
# Define the endpoints to test
```

```
ENDPOINTS = [
```

```
    "/ping",
```

```
    "/auth",
```

```
    "/booking",
```

```
    "/booking/{booking_id}",
```

```
    "/booking/{booking_id}",
```

```
    "/booking",
```

```
    "/booking/{booking_id}",
```

```
    "/booking/{booking_id}",
```

```
]
```

```
# Define the test data
```

```
auth_data = {"username": "admin", "password": "password123"}
```

```
# Define a function to perform the tests
```

```
def test_endpoint(endpoint, data=None):
```

```
    # Construct the URL for the endpoint
```

```
    url = f"{BASE_URL}{endpoint}"
```

```
# Send the request to the endpoint
```

```
response = requests.get(url, json=data)
```

```
# Assert that the response status code is 200
```

```
assert response.status_code == 200, f"Failed: {endpoint}"
```

```
# Assert that the response content type is JSON
```

```
assert response.headers["Content-Type"] == "application/json"
```

```
# Return the response JSON data
```

```
return response.json()
```

```
# Test the /ping endpoint
```

```
test_endpoint("/ping")
```

```
# Test the /auth endpoint to get a token
```

```
auth_token = test_endpoint("/auth", auth_data)["token"]
```

```
# Test the /booking endpoint to create a new booking
```

```
booking_data = {
```

```
    "firstname": "John",
```

```
    "lastname": "Doe",
```

```
    "totalprice": 100,
```

```
    "depositpaid": True,
```

```
    "bookingdates": {"checkin": "2022-01-01", "checkout": "2022-01-05"},
```

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

```
}
```

```
booking_headers = {"Content-Type": "application/json", "Accept": "application/json", "Cookie":  
f"token={auth_token}"}
```

```
booking_response = test_endpoint("/booking", booking_data)
```

```
booking_id = booking_response["bookingid"]
```

```
# Test the /booking/{booking_id} endpoint to get the booking
```

```
test_endpoint(f"/booking/{booking_id}", headers=booking_headers)
```

```
# Test the /booking/{booking_id} endpoint to update the booking
```

```
update_data = {"additionalneeds": "Lunch"}
```

```
update_response = test_endpoint(f"/booking/{booking_id}", update_data,  
headers=booking_headers)
```

```
# Test the /booking/{booking_id} endpoint to delete the booking
```

```
test_endpoint(f"/booking/{booking_id}", method="DELETE", headers=booking_headers)
```

```
# Test the /booking endpoint to get all bookings
```

```
test_endpoint("/booking", headers=booking_headers)
```

```
# Test the /booking/{booking_id} endpoint to get a deleted booking
```

```
test_endpoint(f"/booking/{booking_id}", headers=booking_headers)
```

## **TEST REPORT:**

A test report for the Restful Booker platform includes the following sections:

**Introduction:** This section provides an overview of the testing objectives, scope, and methodology used during the testing process.

**Testing Approach:** This section details the testing approach used, including the test levels, types of testing, and test environments used.

**Test Results:** This section provides summary of the test results, including the number of tests executed, passed, and failed. It should also provide details on the bugs or defects found during testing, including their severity level and status.

**Test Coverage:** This section outlines the test coverage achieved during testing, including the percentage of code or functionality covered.

**Test Execution Timeline:** This section provides a timeline of the testing process, including the test planning, execution, and bug-fixing cycles.

**Conclusion:** This section provides an overall conclusion on the test results, highlighting any significant findings or issues encountered during the testing process. It should also provide recommendations for future testing improvements.

**Appendices:** This section includes any additional information relevant to the testing process, such as test scripts, test cases, and test data.

Overall, the test report provides a clear and concise summary of the testing process and results, with a focus on identifying any areas for improvement and ensuring that the Restful Booker platform is functioning correctly, efficiently, and securely.