

REST Assured

Testing and validating REST services in Java

Lennart Hallenberger, Florian Siepe

Fachbereich Mathematik und Informatik
Philipps Universität Marburg

June 14, 2021

Philipps



Universität
Marburg

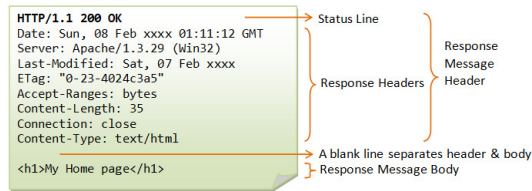
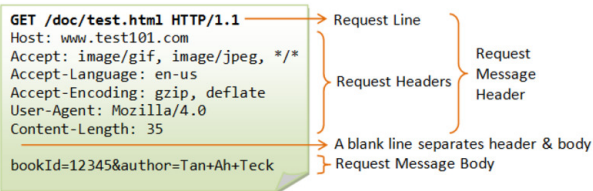
1. REST API
2. Einführung REST-assured
3. Praxisbeispiel

{REST:API}

- **REST** stands for **RE**presentational **S**tate **T**ransfer
- Applications designed around REST principles are often called RESTful
- Client calls need URI of the resource and HTTP operation
- REST is stateless, request must contain necessary to be understood by the server
- Each resource has its unique identifier (URI — Unique Resource Identifier)
 - <https://uni-marburg.de/matrnr/123456>
- Response in form of JSON, XML, YAML, Key-Value pairs, or a custom format
 - { "Name": "Monika", "Nachname": "Mustermann", "Fachbereich": "12", "Semester": "4" }
 - Response should be cacheable

- Create → **POST**
- Read → **GET**

- Update → **PUT**
- Delete → **DELETE**



- **200 OK**
- **204 No Content**
- **400 Bad Request**

- Testing REST-APIs within Java
- supports HTML, XML and JSON
- Validate response
 - status code
 - headers
 - cookies
 - content type
 - body
 - authentication (basic, OAuth and certificates)
- mapping a request body and response body to and from a Java object

- Resource from host:port/lotto/5
- Example test request

```
1  {
2    "lotto":{
3      "lottoId":5,
4      "winning-numbers":[2,45,34,23,7,5,3],
5      "winners":[
6        {
7          "winnerId":23,
8          "numbers":[2,45,34,23,3,5]
9        }
10     ]
11   }
12 }
```

```
1  @Test public void
2    lotto_resource_returns_200_with_expected_id_and_winners() {
3
4      when().
5        get("/lotto/{id}", 5).
6      then().
7        statusCode(200).
8        body("lotto.lottoId", equalTo(5),
9            "lotto.winners.winnerId", hasItems(23, 54));
10
11 }
12
```

- <https://rest-assured.io>
- <https://www.javadoc.io/doc/io.rest-assured/rest-assured/latest/io/restassured/RestAssured.html>
- <https://www.redhat.com/de/topics/api/what-is-a-rest-api>

Praxisbeispiel