

REST Assured

Testing and validating REST services in Java

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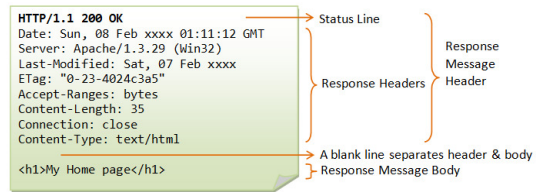
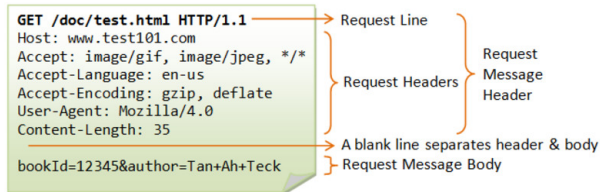
1. REST API
2. Einführung REST-assured
3. Praxisbeispiel

{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 infos 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, etc. or a custom format
 - { "Name": "Monika", "Nachname": "Mustermann", "Fachbereich": "12", "Semester": "4" }
 - Response should be cacheable

- Create → **POST**
- Read → **GET**

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



- | | | |
|--------------------------|----------------------------|----------------------------|
| • 1XX Information | • 3XX Redirects | • 5XX Server errors |
| • 2XX Success | • 4XX Client errors | • 9XX Proprietary |

- 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