



# Best scenarios to automate your API using rest-assured

- **Testing API endpoints:** One of the most common scenarios for using REST Assured is to test API endpoints to ensure that they are functioning correctly. This involves sending HTTP requests (such as GET, POST, PUT, DELETE) to the API endpoints and verifying the response.
- **Authentication testing:** Another common scenario is to test the authentication of an API endpoint. This involves sending requests with different authentication methods (such as basic authentication, OAuth, JWT) to the API endpoint and verifying that only authenticated users can access protected resources.
- **Input validation testing:** It's important to test that your API endpoint can handle invalid input data. This involves sending requests with different invalid input data (such as incorrect data types, missing required fields, or invalid data formats) and verifying that the API endpoint returns the expected error response.
- **Large input values:** Sending requests with very large input values can help test the API's ability to handle large data sets. For example, you can test the maximum allowed length of a text field or the maximum size of a file that can be uploaded.
- **Special characters:** Testing the API's ability to handle special characters, such as Unicode characters or non-ASCII characters, can help identify any issues with the API's ability to handle character encoding and decoding.
- **Testing for data accuracy:** Automated tests can be used to ensure that the data returned by the API is accurate and matches the data stored in the backend database. This can be achieved by comparing the response data with the expected data stored in the database.

- Verify the HTTP status code, Body response, Headers, Cookies, and response time.
- Get the particular data from the API using Jsonpath or Xmlpath.
- Validate the response body data against the XML/JSON Schemas.
- Test the API with different sets of usernames & passwords to ensure that it responds correctly in each scenario.
- **Testing for API compatibility with different clients:** Rest assured can be used to test if the API is compatible with different types of clients, such as mobile apps, web browsers, or desktop applications.
- **Testing for API compatibility with different platforms:** Rest assured can be used to test if the API is compatible with different platforms, such as testing if the API works properly on different operating systems or with different browsers.
- **API pagination:** If the API supports pagination, it is important to test the pagination process to ensure that the API returns the correct data for each page. Rest Assured provides a way to automate the testing of pagination by sending requests with different page numbers and checking the response data.
- **API load testing:** Rest Assured can also be used to automate the load testing of APIs. You can send multiple requests simultaneously and check the response time and status codes to ensure that the API can handle high traffic.
- **API security testing:** Rest Assured can also be used to automate security testing of APIs by sending requests with various security vulnerabilities, such as SQL injection, cross-site scripting, and input validation attacks. This helps to identify potential security vulnerabilities and ensure that the API is secure.