What is Automated Testing?

Tests are automated by creating test suites that can run again and again. Postman can be used to automate many types of tests including unit tests, functional tests, integration tests, end-to-end tests, regression tests, mock tests, etc. Automated testing prevents human error and streamlines testing.

Postman’s Collections let you organize requests you make in Postman. They also form the basis of other useful features like mocks, monitors and documentation.

Diagram

Description automatically generated

### What is a test in Postman?

With Postman, you can add scripts to your request to use [dynamic variables](https://learning.postman.com/docs/postman/scripts/postman-sandbox-api-reference/#dynamic-variables), [pass data between requests](https://www.postman.com/docs/postman/scripts/postman_sandbox#environment-and-global-variables), and [write tests](https://learning.postman.com/docs/postman/scripts/test-scripts/). Code added under the **Pre-request Script** tab will execute before your request is sent, and code added under the **Tests** tab will execute after your response is received.

Diagram

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Tests are scripts written in JavaScript that are executed after a response is received. Tests can be run as part of a single request or run with a collection of requests.

In the Postman app, the request builder at the top contains the **Tests** tab where you write your tests. The response viewer at the bottom contains a corresponding **Test Results** tab where you can view the results of your tests.

A screenshot of a computer

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### Testing automation

You can automate your tests by integrating Postman’s command line tool Newman with your favorite Continuous Integration. Once you have built a collection, Collection runs allow you to automate your API testing, and you can schedule runs using monitors. You can integrate collection runs to your CI/CD pipeline using Postman's CLI Newman.

**API testing pipeline needs 2 key stages:**

1. **Well-defined tests for your APIs.**
2. **Ability to run your tests on-demand and on a schedule.**

Writing good tests

When it comes to testing APIs, you need to assert on the responses sent by the application. You can test for the response data-structure, presence (or absence) of specific parameters in the response, response timing, response headers, cookies and response status. This is where Postman Collections come in. A collection is a group of API requests that can be executed at a go. You can write tests for each request and for group of requests. Postman tells you how many of these tests pass or fail when you run the collection. You would have collections for each of your test suites.

Running tests

Integrate newman, Postman’s command-line collection runner, in your CI systems and run your collections on-demand as part of your CI pipeline. These run on your setup. On the other hand, Monitors in Postman let you schedule collection runs on pre-defined intervals.

<https://www.postman.com/automated-testing/>

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