

API TEST CASE

FakeStoreAPI — REST API Testing | TC-FAKESTORE-001

Prepared by: Ivona Dzijan
March 2026 | Version: 1.0

1. Test Case Information

Test Case ID	TC-FAKESTORE-001
Application	FakeStoreAPI (fakestoreapi.com)
Feature / Module	Products, Carts, Users, Authentication
Test Type	API / Functional / Integration
Priority	High
Test Environment	Postman v11+ / FakeStoreAPI Public Endpoint
Prepared By	Ivona Dzijan
Date	March 2026

2. Test Objective

Verify the functionality, reliability, and correctness of the FakeStoreAPI REST endpoints. Testing covers the complete CRUD lifecycle (Create, Read, Update, Delete) across the Products, Carts, and Users resources, as well as category filtering, query parameters, and the simulated JWT authentication endpoint.

3. Preconditions

- Postman (v11 or later) is installed and configured
- Internet connection is available and stable
- FakeStoreAPI base URL is accessible and returning HTTP 200
- No authentication or API key is required for any endpoint
- Environment variable baseUrl is set to fakestoreapi.com in Postman

4. Test Data

Data Item	Value	Notes
Product ID (valid)	1	Pre-seeded product: Fjallraven backpack
Product ID (invalid)	99999	Non-existent ID for negative testing
New Product (POST)	JSON with title, price, description, image, category	Used for create operations

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Updated Product (PUT)	JSON with title, price, description, image, category	Full replacement update
Category (valid)	electronics	One of 4 available categories
Login Credentials	username: mor_2314, password: 83r5^_	From pre-seeded user dataset
Sort Parameter	?sort=desc	Descending sort on results
Limit Parameter	?limit=5	Restricts result count to 5

5. Test Steps — Products (Read)

#	Action / Step	Test Data	Expected Result	Status
5.1.1	GET all products: /products	N/A	Status 200. JSON array of 20 products with all fields	PASS
5.1.2	GET single product: /products/1	Product ID: 1	Status 200. Single JSON object with id=1, correct data types	PASS
5.1.3	GET product with invalid ID: /products/99999	Product ID: 99999	Response returns null/empty. Status should indicate not found (e.g. 404)	FAIL
5.1.4	GET all categories: /products/categories	N/A	Status 200. Array of 4 category strings	PASS
5.1.5	GET products by category: /products/category/electronics	Category: electronics	Status 200. All products have category = "electronics"	PASS
5.1.6	GET products with limit: /products?limit=5	Limit: 5	Status 200. Exactly 5 product objects	PASS
5.1.7	GET products sorted desc: /products?sort=desc	Sort: desc	Status 200. 20 products sorted by ID descending	PASS

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6. Test Steps — Products (Create / Update / Delete)

#	Action / Step	Test Data	Expected Result	Status
5.2.1	POST new product: /products	JSON body with title, price, description, image, category	Status 200. Response includes all fields plus id=21	PASS
5.2.2	Verify response schema	Response from 5.2.1	All fields present with correct data types	PASS
5.3.1	PUT full update: /products/1	Complete JSON body	Status 200. id=1 with all fields updated	PASS
5.3.2	PATCH partial update: /products/1	Partial JSON body	Status 200. Title updated, other fields unchanged	PASS
5.4.1	DELETE product: /products/1	Product ID: 1	Status 200. Deleted product object returned	PASS
5.4.2	Verify simulation: GET after DELETE	Product ID: 1	Status 200. Product still exists (writes are simulated)	PASS

7. Expected Results Summary

Endpoint Group	GET	POST	PUT/PATCH	DELETE	Key Validations
Products	200 OK	200 OK	200 OK	200 OK	Schema, data types, category filter, sort, limit
Carts	200 OK	200 OK	200 OK	200 OK	User-cart relation, date range, products array
Users	200 OK	200 OK	200 OK	200 OK	Nested name/address objects, field validation
Auth/Login	N/A	200 OK	N/A	N/A	JWT token format, invalid credentials handling

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8. Test Steps — Products (Negative Cases)

#	Action / Step	Test Data	Expected Result	Status
6.1.1	POST /products with empty body	{}	Error response indicating missing required fields	PASS
6.1.2	POST /products with missing required fields	{"title": "Test"} (no price, description, image, category)	Error response or partial object returned	PASS
6.1.3	POST /products with wrong data types	{"title": 12345, "price": "not-a-number"}	Error response indicating invalid data types	PASS
6.1.4	PUT /products/99999 with valid body	Complete JSON body, non-existent ID	Error response or indication that product does not exist	PASS
6.1.5	PUT /products/1 with empty body	{}	Error response indicating missing fields for full replacement	PASS

9. Test Steps — Response Header Validation

#	Action / Step	Test Data	Expected Result	Status
7.1.1	GET /products and inspect Content-Type header	N/A	Header includes application/json	PASS
7.1.2	GET /products and inspect CORS headers	N/A	Access-Control-Allow-Origin in header is present (e.g. *)	PASS
7.1.3	GET /products and verify response time	N/A	Response time is under 2000ms	PASS
7.1.4	GET /products with Accept: text/xml header	Accept: text/xml	API still returns JSON (or returns 406 Not Acceptable)	PASS

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10. Test Steps — Authentication (Login)

#	Action / Step	Test Data	Expected Result	Status
8.1.1	POST /auth/login with valid credentials	{"username": "mor_2314", "password": "83r5^_"}	Status 200. Response contains a token field with a JWT string	PASS
8.1.2	Verify JWT token format	Token from 8.1.1	Token has 3 dot-separated Base64 segments (header.payload.signature)	PASS
8.1.3	POST /auth/login with wrong password	{"username": "mor_2314", "password": "wrongpass"}	Error response indicating invalid credentials	PASS
8.1.4	POST /auth/login with missing username	{"password": "83r5^_"}	Error response indicating missing username field	PASS
8.1.5	POST /auth/login with empty body	{}	Error response indicating missing credentials	PASS
8.1.6	POST /auth/login with non-existent user	{"username": "fakeuser999", "password": "test"}	Error response indicating user not found or invalid credentials	PASS

11. Notes and Observations

FakeStoreAPI is a free, open-source REST API for prototyping and testing. All write operations are simulated — data is not persisted.

The dataset contains 20 products, 10 users, and 7 carts across 4 categories.

POST requests always return id=21 for products (N+1 of 20 existing), regardless of request count.

The simulated authentication endpoint (/auth/login) returns a JWT token not required by other endpoints.

Postman assertions validate status codes, response time under 2000ms, JSON schema, data types, and business logic.

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Sign-Off

Role	Name	Role / Title	Date
Prepared By	Ivona Dzijan	QA Tester	March 2026
Reviewed By			
Approved By			